



Chemical Resistance  
according to  
ISO/TR 10358  
Issue 1993-06-01

| Agressive Medium         | Concentration      | Temperature | Material |     |    |
|--------------------------|--------------------|-------------|----------|-----|----|
|                          |                    |             | PP       | PVC | PE |
| acetaldehyde             | technically pure   | 20          | ⊙        | ○   | ●  |
|                          |                    | 40          | ○        |     | ⊙  |
|                          |                    | 60          |          |     |    |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
| acetaldehyde             | 40%, hydrous       | 20          | ●        | ⊙   | ●  |
|                          |                    | 40          | ●        | ○   | ●  |
|                          |                    | 60          | ●        |     | ⊙  |
|                          |                    | 80          | ⊙        |     |    |
|                          |                    | 100         | ○        |     |    |
| acetone                  | technically pure   | 20          | ●        | ○   | ●  |
|                          |                    | 40          | ●        |     | ●  |
|                          |                    | 60          | ●        |     | ●  |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
|                          | up to 10% hydrous  | 20          | ●        | ○   | ●  |
|                          |                    | 40          | ●        |     | ●  |
|                          |                    | 60          | ●        |     | ●  |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
| acetonitrile             |                    | 20          |          | ○   |    |
|                          |                    | 40          |          |     |    |
|                          |                    | 60          |          |     |    |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
| acetophenone             |                    | 20          |          | ○   |    |
|                          |                    | 40          |          |     |    |
|                          |                    | 60          |          |     |    |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
| acrylonitrile            | technically pure   | 20          | ●        | ○   | ●  |
|                          |                    | 40          | ⊙        |     | ●  |
|                          |                    | 60          |          |     | ●  |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
| crylic acid ethyl ester  | technically pure   | 20          | ○        | ○   |    |
|                          |                    | 40          |          |     |    |
|                          |                    | 60          |          |     |    |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
| crylic acid methyl ester | technically pure   | 20          |          | ○   |    |
|                          |                    | 40          |          |     |    |
|                          |                    | 60          |          |     |    |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |
| adipic acid              | saturated, hydrous | 20          | ●        | ●   | ●  |
|                          |                    | 40          | ●        | ●   | ●  |
|                          |                    | 60          | ●        | ○   | ●  |
|                          |                    | 80          | ●        |     |    |
|                          |                    | 100         |          |     |    |
| allyl alcohol            | 96%                | 20          | ●        | ⊙   | ●  |
|                          |                    | 40          | ●        | ○   | ●  |
|                          |                    | 60          | ●        |     | ●  |
|                          |                    | 80          |          |     |    |
|                          |                    | 100         |          |     |    |

  

| Agressive Medium           | Concentration             | Temperature | Material |     |    |
|----------------------------|---------------------------|-------------|----------|-----|----|
|                            |                           |             | PP       | PVC | PE |
| aluminium chloride         | 10%, hydrous              | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ●   | ●  |
|                            |                           | 80          |          |     |    |
|                            |                           | 100         |          |     |    |
|                            | saturated                 | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ●   | ●  |
|                            |                           | 80          | ●        |     |    |
|                            |                           | 100         | ⊙        |     |    |
| aluminium sulphate         | 10%, hydrous              | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ⊙   | ●  |
|                            |                           | 80          | ●        |     |    |
|                            |                           | 100         | ●        |     |    |
|                            | cold saturated, hydrous   | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ●   | ●  |
|                            |                           | 80          | ●        |     |    |
|                            |                           | 100         | ●        |     |    |
| formic acid*               | up to 50% hydrous         | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ⊙        | ⊙   | ●  |
|                            |                           | 80          |          |     |    |
|                            |                           | 100         |          |     |    |
| ammonia*                   | gaseous, technically pure | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ●   | ●  |
|                            |                           | 80          |          |     |    |
|                            |                           | 100         |          |     |    |
| ammonium acetate           | each, hydrous             | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ⊙   | ●  |
|                            |                           | 80          | ●        |     |    |
|                            |                           | 100         | ●        |     |    |
| ammonium carbonate         | 50%, hydrous              | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ⊙   | ●  |
|                            |                           | 80          | ●        |     |    |
|                            |                           | 100         | ●        |     |    |
| ammonium chloride          | 10%, hydrous              | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ⊙   | ●  |
|                            |                           | 80          | ●        |     |    |
|                            |                           | 100         | ●        |     |    |
|                            | cold saturated, hydrous   | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ⊙   | ●  |
|                            |                           | 80          | ●        |     |    |
|                            |                           | 100         | ●        |     |    |
| ammonium hydrogen fluoride | 50%, hydrous              | 20          | ●        | ●   | ●  |
|                            |                           | 40          | ●        | ●   | ●  |
|                            |                           | 60          | ●        | ⊙   | ●  |
|                            |                           | 80          |          |     |    |
|                            |                           | 100         |          |     |    |

  

| Agressive Medium    | Concentration           | Temperature | Material |     |    |
|---------------------|-------------------------|-------------|----------|-----|----|
|                     |                         |             | PP       | PVC | PE |
| ammonium hydroxide  | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ⊙   | ●  |
|                     |                         | 80          |          |     |    |
|                     |                         | 100         |          |     |    |
| ammonium nitrate    | 10%, hydrous            | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ⊙   | ⊙  |
|                     |                         | 80          | ⊙        |     |    |
|                     |                         | 100         |          |     |    |
|                     | saturated, hydrous      | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ●   | ⊙  |
|                     |                         | 80          | ⊙        |     |    |
|                     |                         | 100         |          |     |    |
| ammonium phosphate  | each, hydrous           | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ●   | ●  |
|                     |                         | 80          | ●        |     |    |
|                     |                         | 100         | ●        |     |    |
| ammonium sulphate   | 10%, hydrous            | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ⊙   | ●  |
|                     |                         | 80          | ●        |     |    |
|                     |                         | 100         | ●        |     |    |
|                     | saturated, hydrous      | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ●   | ●  |
|                     |                         | 80          | ●        |     |    |
|                     |                         | 100         | ●        |     |    |
| ammonium sulphide   | each, hydrous           | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ⊙   | ●  |
|                     |                         | 80          |          |     |    |
|                     |                         | 100         |          |     |    |
| amyl acetate        | technically pure        | 20          | ⊙        | ○   | ●  |
|                     |                         | 40          | ⊙        |     | ●  |
|                     |                         | 60          | ○        |     | ●  |
|                     |                         | 80          |          |     |    |
|                     |                         | 100         |          |     |    |
| amyl alcohol*       | technically pure        | 20          | ●        | ●   | ●  |
|                     |                         | 40          | ●        | ●   | ●  |
|                     |                         | 60          | ●        | ⊙   | ●  |
|                     |                         | 80          | ●        |     |    |
|                     |                         | 100         |          |     |    |
| aniline             | technically pure        | 20          | ⊙        | ○   | ⊙  |
|                     |                         | 40          |          |     |    |
|                     |                         | 60          |          |     |    |
|                     |                         | 80          |          |     |    |
|                     |                         | 100         |          |     |    |
| anile hydrochloride | saturated, hydrous      | 20          | ●        | ○   | ●  |
|                     |                         | 40          | ●        |     | ●  |
|                     |                         | 60          | ⊙        |     | ⊙  |
|                     |                         | 80          |          |     |    |
|                     |                         | 100         |          |     |    |

| Agressive Medium      | Concentration                         | Temperature | Material |     |    |
|-----------------------|---------------------------------------|-------------|----------|-----|----|
|                       |                                       |             | PP       | PVC | PE |
| antimony-trichloride* | 90%, hydrous                          | 20          | ●        | ●   | ●  |
|                       |                                       | 40          | ●        | ●   | ●  |
|                       |                                       | 60          | ●        |     | ●  |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |
| arsenic acid          | 80%, hydrous                          | 20          | ●        | ●   | ●  |
|                       |                                       | 40          | ●        | ●   | ●  |
|                       |                                       | 60          | ●        | ⊙   | ●  |
|                       |                                       | 80          | ●        |     |    |
|                       |                                       | 100         |          |     |    |
| barium hydroxide      | hydrous, saturated                    | 20          | ●        | ●   | ●  |
|                       |                                       | 40          | ●        | ●   | ●  |
|                       |                                       | 60          | ●        | ⊙   | ●  |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |
| barium salts          | each, hydrous                         | 20          | ●        | ●   | ●  |
|                       |                                       | 40          | ●        | ●   | ●  |
|                       |                                       | 60          | ●        | ●   | ●  |
|                       |                                       | 80          | ●        |     |    |
|                       |                                       | 100         |          |     |    |
| benzaldehyde          | saturated, hydrous                    | 20          | ●        | ○   | ●  |
|                       |                                       | 40          |          |     | ●  |
|                       |                                       | 60          |          |     | ●  |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |
| gas*                  | free from lead and aromatic compounds | 20          | ⊙        | ●   | ●  |
|                       |                                       | 40          |          | ●   | ●  |
|                       |                                       | 60          | ○        | ●   | ⊙  |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |
| benzoic acid          | each, hydrous                         | 20          | ●        | ●   | ●  |
|                       |                                       | 40          | ●        | ●   | ●  |
|                       |                                       | 60          | ●        | ⊙   | ●  |
|                       |                                       | 80          | ●        |     |    |
|                       |                                       | 100         | ●        |     |    |
| benzol                | technically pure                      | 20          | ⊙        | ○   | ⊙  |
|                       |                                       | 40          | ○        |     | ⊙  |
|                       |                                       | 60          |          |     |    |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |
| benzyl alcohol*       | technically pure                      | 20          | ●        | ⊙   | ●  |
|                       |                                       | 40          | ●        |     | ●  |
|                       |                                       | 60          | ⊙        |     | ⊙  |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |
| amber salt            | each, hydrous                         | 20          | ●        | ●   | ●  |
|                       |                                       | 40          | ●        | ●   | ●  |
|                       |                                       | 60          | ●        | ●   | ●  |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |
| beer                  | usual                                 | 20          | ●        | ●   | ●  |
|                       |                                       | 40          | ●        | ●   | ●  |
|                       |                                       | 60          | ●        | ●   | ●  |
|                       |                                       | 80          |          |     |    |
|                       |                                       | 100         |          |     |    |

| Agressive Medium | Concentration      | Temperature | Material |     |    |
|------------------|--------------------|-------------|----------|-----|----|
|                  |                    |             | PP       | PVC | PE |
| lead acetate     | hydrous, saturated | 20          | ●        | ●   | ●  |
|                  |                    | 40          | ●        | ●   | ●  |
|                  |                    | 60          | ●        | ●   | ●  |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| lead tetraethyl* | technically pure   | 20          | ●        | ●   | ●  |
|                  |                    | 40          |          |     |    |
|                  |                    | 60          |          |     |    |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| borax            | each, hydrous      | 20          | ●        | ●   | ●  |
|                  |                    | 40          | ●        | ●   | ●  |
|                  |                    | 60          | ●        | ⊙   | ●  |
|                  |                    | 80          | ●        |     |    |
|                  |                    | 100         | ●        |     |    |
| boric acid       | each, hydrous      | 20          | ●        | ●   | ●  |
|                  |                    | 40          | ●        | ●   | ●  |
|                  |                    | 60          | ●        | ⊙   | ●  |
|                  |                    | 80          | ●        |     |    |
|                  |                    | 100         | ●        |     |    |
| wine spirits*    | usual              | 20          | ●        | ●   | ●  |
|                  |                    | 40          | ●        | ●   | ●  |
|                  |                    | 60          | ●        | ●   | ●  |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| bromine benzol   | high               | 20          | ○        | ○   | ○  |
|                  |                    | 40          |          |     |    |
|                  |                    | 60          |          |     |    |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| bromine          | technically pure   | 20          | ○        | ○   | ○  |
|                  |                    | 40          |          |     |    |
|                  |                    | 60          |          |     |    |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| bromine water    | saturated, hydrous | 20          | ○        | ●   | ○  |
|                  |                    | 40          |          |     |    |
|                  |                    | 60          |          |     |    |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| bromhydric acid* | 50%, hydrous       | 20          | ●        | ●   | ●  |
|                  |                    | 40          | ●        | ●   | ●  |
|                  |                    | 60          | ●        | ●   | ●  |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| butadiene°       | technically pure   | 20          | ●        | ●   | ●  |
|                  |                    | 40          | ●        |     |    |
|                  |                    | 60          | ●        |     |    |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |
| butane           | technically pure   | 20          | ●        | ●   | ●  |
|                  |                    | 40          |          |     |    |
|                  |                    | 60          |          |     |    |
|                  |                    | 80          |          |     |    |
|                  |                    | 100         |          |     |    |

| Agressive Medium        | Concentration                   | Temperature | Material |     |    |
|-------------------------|---------------------------------|-------------|----------|-----|----|
|                         |                                 |             | PP       | PVC | PE |
| butandiol*              | 10%, hydrous                    | 20          | ●        | ●   | ●  |
|                         |                                 | 40          | ●        | ⊙   | ●  |
|                         |                                 | 60          | ●        |     | ●  |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |
| butanol*                | technically pure                | 20          | ●        | ●   | ●  |
|                         |                                 | 40          | ●        | ●   | ●  |
|                         |                                 | 60          | ⊙        | ⊙   | ●  |
|                         |                                 | 80          | ○        |     |    |
|                         |                                 | 100         |          |     |    |
| butanoic acid*          | technically pure                | 20          | ●        | ●   | ●  |
|                         |                                 | 40          |          |     | ●  |
|                         |                                 | 60          |          |     | ⊙  |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |
| butyl acetate           | technically pure                | 20          | ⊙        | ○   | ●  |
|                         |                                 | 40          |          |     |    |
|                         |                                 | 60          |          |     |    |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |
| butylene (liquid)       | technically pure                | 20          | ○        | ●   | ○  |
|                         |                                 | 40          |          |     |    |
|                         |                                 | 60          |          |     |    |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |
| butylene glycole*       | technically pure                | 20          | ●        | ●   | ●  |
|                         |                                 | 40          | ●        | ●   | ●  |
|                         |                                 | 60          | ●        | ⊙   | ●  |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |
| butylphenol, p-tertiary | technically pure                | 20          | ●        | ⊙   | ⊙  |
|                         |                                 | 40          |          | ○   |    |
|                         |                                 | 60          |          |     |    |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |
| calcium toulfit         | cold saturated, hydrous         | 20          |          | ●   |    |
|                         |                                 | 40          |          | ●   |    |
|                         |                                 | 60          |          | ⊙   |    |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |
| calcium chloride        | saturated, hydrous (each)       | 20          | ●        | ●   | ●  |
|                         |                                 | 40          | ●        | ●   | ●  |
|                         |                                 | 60          | ●        | ⊙   | ●  |
|                         |                                 | 80          | ●        |     |    |
|                         |                                 | 100         | ●        |     |    |
| calcium hydroxide       | saturated, hydrous (suspension) | 20          | ●        | ●   | ●  |
|                         |                                 | 40          | ●        | ●   | ●  |
|                         |                                 | 60          | ●        | ●   | ●  |
|                         |                                 | 80          | ●        |     |    |
|                         |                                 | 100         |          |     |    |
| calcium hypochlorite*   | cold saturated, hydrous         | 20          | ●        | ●   | ●  |
|                         |                                 | 40          | ●        | ●   | ●  |
|                         |                                 | 60          | ●        |     | ●  |
|                         |                                 | 80          |          |     |    |
|                         |                                 | 100         |          |     |    |

| Agressive Medium          | Concentration            | Temperature | Material |     |    |
|---------------------------|--------------------------|-------------|----------|-----|----|
|                           |                          |             | PP       | PVC | PE |
| calcium nitrate           | 50%, hydrous             | 20          | ●        | ●   | ●  |
|                           |                          | 40          | ●        | ●   | ●  |
|                           |                          | 60          | ●        |     | ●  |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
| chlorine                  | 97%, gas, moist          | 20          | ○        | ○   | ○  |
|                           |                          | 40          |          |     |    |
|                           |                          | 60          |          |     |    |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
|                           | technically pure, dry    | 20          | ○        | ○   | ⊙  |
|                           |                          | 40          |          |     | ⊙  |
|                           |                          | 60          |          |     | ○  |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
|                           | technically pure, liquid | 20          | ○        | ○   | ○  |
|                           |                          | 40          |          |     |    |
|                           |                          | 60          |          |     |    |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
| chloral hydrate           | technically pure         | 20          | ⊙        | ○   | ●  |
|                           |                          | 40          |          |     | ●  |
|                           |                          | 60          | ○        |     | ●  |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
| chloroethanol             | technically pure         | 20          | ●        | ○   | ●  |
|                           |                          | 40          | ●        |     | ●  |
|                           |                          | 60          | ●        |     | ●  |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
| chlorobenzene             | technically pure         | 20          | ●        | ○   | ⊙  |
|                           |                          | 40          |          |     |    |
|                           |                          | 60          |          |     |    |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
| chloroacetic acid, mono-* | 50%, hydrous             | 20          | ●        | ●   | ●  |
|                           |                          | 40          | ●        | ●   | ●  |
|                           |                          | 60          | ●        |     | ●  |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
|                           | technically pure         | 20          | ●        | ●   | ●  |
|                           |                          | 40          | ●        | ●   | ●  |
|                           |                          | 60          | ●        | ⊙   | ●  |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
| chloroethanol             | technically pure         | 20          |          | ○   |    |
|                           |                          | 40          |          |     |    |
|                           |                          | 60          |          |     |    |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |
| chloroform                | technically pure         | 20          | ⊙        | ○   | ○  |
|                           |                          | 40          |          |     |    |
|                           |                          | 60          |          |     |    |
|                           |                          | 80          |          |     |    |
|                           |                          | 100         |          |     |    |

  

| Agressive Medium     | Concentration             | Temperature | Material |     |    |
|----------------------|---------------------------|-------------|----------|-----|----|
|                      |                           |             | PP       | PVC | PE |
| cloric acid*         | 10%, hydrous              | 20          | ○        | ●   | ●  |
|                      |                           | 40          |          | ●   | ●  |
|                      |                           | 60          |          | ⊙   |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
|                      | 20%, hydrous              | 20          | ○        | ●   | ⊙  |
|                      |                           | 40          |          | ●   |    |
|                      |                           | 60          |          | ⊙   |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| cloric acid          | < 20%                     | 20          | ○        | ●   | ⊙  |
|                      |                           | 40          |          | ●   |    |
|                      |                           | 60          |          | ⊙   |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| chlorosulphonic acid | technically pure          | 20          | ○        | ⊙   | ○  |
|                      |                           | 40          |          |     |    |
|                      |                           | 60          |          |     |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| chlorine water*      | saturated                 | 20          | ⊙        | ●   | ⊙  |
|                      |                           | 40          |          | ●   | ⊙  |
|                      |                           | 60          |          | ⊙   |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| hydrochloric acid*   | technically pure, gaseous | 20          | ●        | ●   | ●  |
|                      |                           | 40          | ●        | ●   | ●  |
|                      |                           | 60          | ●        | ⊙   | ●  |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| chrom alum           | cold saturated, hydrous   | 20          | ●        | ●   | ●  |
|                      |                           | 40          | ●        | ●   | ●  |
|                      |                           | 60          | ●        | ●   | ●  |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| chromate*            | up to 50%, hydrous        | 20          | ⊙        | ⊙   | ⊙  |
|                      |                           | 40          | ○        | ⊙   | ○  |
|                      |                           | 60          |          | ○   |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
|                      | each, hydrous             | 20          | ⊙        | ⊙   | ⊙  |
|                      |                           | 40          |          |     |    |
|                      |                           | 60          |          |     |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| clophen              | technically pure          | 20          |          | ○   |    |
|                      |                           | 40          |          |     |    |
|                      |                           | 60          |          |     |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |
| crotonaldehyde       | technically pure          | 20          | ●        | ○   | ●  |
|                      |                           | 40          |          |     |    |
|                      |                           | 60          |          |     |    |
|                      |                           | 80          |          |     |    |
|                      |                           | 100         |          |     |    |

  

| Agressive Medium  | Concentration    | Temperature | Material |     |    |
|-------------------|------------------|-------------|----------|-----|----|
|                   |                  |             | PP       | PVC | PE |
| hydrocyanic acid  | technically pure | 20          | ●        | ●   | ●  |
|                   |                  | 40          | ●        | ●   | ●  |
|                   |                  | 60          | ●        | ⊙   | ●  |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| cyclohexane*      | technically pure | 20          | ●        | ○   | ●  |
|                   |                  | 40          |          |     | ●  |
|                   |                  | 60          |          |     | ●  |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| cyclohexanone*    | technically pure | 20          | ●        | ●   | ●  |
|                   |                  | 40          | ●        | ●   | ●  |
|                   |                  | 60          | ⊙        | ●   | ●  |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| cyclohexanone     | technically pure | 20          | ●        | ○   | ●  |
|                   |                  | 40          | ⊙        |     | ⊙  |
|                   |                  | 60          | ⊙        |     | ⊙  |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| densodrin         |                  | 20          |          | ●   |    |
|                   |                  | 40          |          | ●   |    |
|                   |                  | 60          |          | ●   |    |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| dextrin           | usual            | 20          | ●        | ●   | ●  |
|                   |                  | 40          |          | ●   | ●  |
|                   |                  | 60          |          | ●   | ●  |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| dibutyl ether     | technically pure | 20          | ⊙        | ○   | ⊙  |
|                   |                  | 40          | ○        |     | ○  |
|                   |                  | 60          |          |     |    |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| dibutyl phthalate | technically pure | 20          | ●        | ○   | ●  |
|                   |                  | 40          | ⊙        |     | ⊙  |
|                   |                  | 60          | ⊙        |     | ⊙  |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| dibutyl sebazate  | technically pure | 20          | ●        | ○   | ●  |
|                   |                  | 40          |          |     |    |
|                   |                  | 60          |          |     |    |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| dichlorethylene   | technically pure | 20          | ⊙        | ○   | ○  |
|                   |                  | 40          |          |     |    |
|                   |                  | 60          |          |     |    |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |
| dichlorbenzene    | technically pure | 20          | ⊙        | ○   | ⊙  |
|                   |                  | 40          |          |     |    |
|                   |                  | 60          |          |     |    |
|                   |                  | 80          |          |     |    |
|                   |                  | 100         |          |     |    |

| Agressive Medium  | Concentration | Temperature | Material |     |    |
|---|---------------|-------------|----------|-----|----|
|   |               |             | PP       | PVC | PE |
| dichloroacetic*<br>technically pure                     |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ⊙        | ⊙   | ⊙  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| 50%,<br>hydrous   |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| dichloroacetic acid methyl esters<br>technically pure   |               | 20          | ●        | ○   | ●  |
|   |               | 40          | ●        |     | ●  |
|   |               | 60          | ●        |     | ●  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| diesel **   |               | 20          | ⊙        | ●   | ●  |
|   |               | 40          |          | ●   |    |
|   |               | 60          |          |     | ⊙  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| diethylamine<br>technically pure                        |               | 20          | ●        | ⊙   |    |
|   |               | 40          |          |     |    |
|   |               | 60          |          |     |    |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| diethyl ether<br>technically pure                       |               | 20          | ●        | ○   | ⊙  |
|   |               | 40          |          |     |    |
|   |               | 60          |          |     |    |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| diglycolic acid aqueous*<br>30%,<br>hydrous             |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| diisobutylketone<br>technically pure                    |               | 20          | ●        | ○   | ●  |
|   |               | 40          |          |     |    |
|   |               | 60          | ○        |     | ○  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| N,N- dimethylaniline<br>technically pure                |               | 20          |          | ○   |    |
|   |               | 40          |          |     |    |
|   |               | 60          |          |     |    |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| dimethylformamide<br>technically pure                   |               | 20          | ●        | ○   | ●  |
|   |               | 40          | ●        |     | ●  |
|   |               | 60          | ●        |     | ⊙  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| dimethylamine<br>technically pure                       |               | 20          | ●        | ⊙   | ●  |
|   |               | 40          |          |     |    |
|   |               | 60          |          |     | ⊙  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| dinonylphthalate<br>technically pure                    |               | 20          | ●        | ○   | ⊙  |
|   |               | 40          |          |     |    |
|   |               | 60          |          |     |    |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| dioctylphthalate*<br>technically pure                   |               | 20          | ●        | ○   | ⊙  |
|   |               | 40          |          |     |    |
|   |               | 60          | ○        |     |    |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| dioxane<br>technically pure                             |               | 20          | ⊙        | ○   | ●  |
|   |               | 40          | ⊙        |     | ●  |
|   |               | 60          | ⊙        |     | ●  |
|   |               | 80          | ○        |     |    |
|   |               | 100         |          |     |    |
| fertilizer salts<br>hydrous                             |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| iron salts<br>each,<br>hydrous                          |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| acetic acid*<br>technically pure, (glacial acetic acid) |               | 20          | ●        | ⊙   | ●  |
|   |               | 40          | ●        | ○   | ●  |
|   |               | 60          | ⊙        |     | ⊙  |
|   |               | 80          | ○        |     |    |
|   |               | 100         |          |     |    |
| 50%,<br>hydrous   |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| 10%,<br>hydrous   |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         | ●        |     |    |
| acetic unhydride*<br>technically pure                   |               | 20          | ●        | ○   | ●  |
|   |               | 40          | ⊙        |     | ⊙  |
|   |               | 60          |          |     |    |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| ethyl acetate<br>technically pure                       |               | 20          | ●        | ○   | ●  |
|   |               | 40          | ⊙        |     | ⊙  |
|   |               | 60          | ⊙        |     | ⊙  |
|   |               | 80          |          |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure 96%                  |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |
|   |               | 80          | ●        |     |    |
|   |               | 100         |          |     |    |
| ethyl alcohol*<br>technically pure                      |               | 20          | ●        | ●   | ●  |
|   |               | 40          | ●        | ●   | ●  |
|   |               | 60          | ●        | ⊙   | ●  |

| Aggressive Medium   | Concentration    | Temperature | Material |     |    |
|---------------------|------------------|-------------|----------|-----|----|
|                     |                  |             | PP       | PVC | PE |
| hydrofluoric acids* | 50% hydrous      | 20          | ●        | ●   | ●  |
|                     |                  | 40          | ●        |     | ●  |
|                     |                  | 60          | ●        |     | ⊙  |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
|                     | 70%, hydrous     | 20          | ●        | ●   | ●  |
|                     |                  | 40          |          |     |    |
|                     |                  | 60          |          |     | ⊙  |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| formaldehyde*       | 40%, hydrous     | 20          | ●        | ●   | ●  |
|                     |                  | 40          | ●        | ●   | ●  |
|                     |                  | 60          |          |     | ●  |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| formamide           | technically pure | 20          | ●        | ○   | ●  |
|                     |                  | 40          | ●        |     | ●  |
|                     |                  | 60          | ●        |     | ●  |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| photo emulsion*     | usual            | 20          | ●        | ●   | ●  |
|                     |                  | 40          | ●        | ●   | ●  |
|                     |                  | 60          |          |     |    |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| film developer*     | usual            | 20          | ●        | ●   | ●  |
|                     |                  | 40          | ●        | ●   | ●  |
|                     |                  | 60          |          | ⊙   | ⊙  |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| photo fixing baths* | usual            | 20          | ●        | ●   | ●  |
|                     |                  | 40          | ●        | ●   | ●  |
|                     |                  | 60          |          | ⊙   |    |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| frigen 12-          | technically pure | 20          | ○        | ●   | ○  |
|                     |                  | 40          |          |     |    |
|                     |                  | 60          |          |     |    |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| fruit juices*       | usual            | 20          | ●        | ●   | ●  |
|                     |                  | 40          | ●        | ●   | ●  |
|                     |                  | 60          | ●        | ●   | ●  |
|                     |                  | 80          | ●        |     |    |
|                     |                  | 100         |          |     |    |
| furfuryl alcohol*   | technically pure | 20          | ●        | ○   | ●  |
|                     |                  | 40          |          |     | ●  |
|                     |                  | 60          | ⊙        |     | ●  |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |
| gelatin             | each, hydrous    | 20          | ●        | ●   | ●  |
|                     |                  | 40          | ●        | ●   | ●  |
|                     |                  | 60          | ●        |     | ●  |
|                     |                  | 80          |          |     |    |
|                     |                  | 100         |          |     |    |

| Aggressive Medium            | Concentration             | Temperature | Material |     |    |
|------------------------------|---------------------------|-------------|----------|-----|----|
|                              |                           |             | PP       | PVC | PE |
| tanner extracts* (vegetable) | usual                     | 20          | ●        | ●   | ●  |
|                              |                           | 40          |          |     |    |
|                              |                           | 60          |          |     |    |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| tannic acid (tannin)         | each, hydrous             | 20          | ●        | ●   | ●  |
|                              |                           | 40          | ●        |     | ●  |
|                              |                           | 60          | ●        |     | ●  |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| glucose (dextrose)           | each, hydrous             | 20          | ●        | ●   | ●  |
|                              |                           | 40          | ●        | ●   | ●  |
|                              |                           | 60          | ●        | ⊙   | ●  |
|                              |                           | 80          | ●        |     |    |
|                              |                           | 100         | ●        |     |    |
| glycerin                     | technically pure          | 20          | ●        | ●   | ●  |
|                              |                           | 40          | ●        | ●   | ●  |
|                              |                           | 60          | ●        | ●   | ●  |
|                              |                           | 80          | ●        |     |    |
|                              |                           | 100         | ●        |     |    |
| aminoacetic acid*            | 10%, hydrous              | 20          | ●        | ●   | ●  |
|                              |                           | 40          | ●        | ●   | ●  |
|                              |                           | 60          |          |     |    |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| glycolic acid                | 37% hydrous               | 20          | ●        | ●   | ●  |
|                              |                           | 40          |          |     | ●  |
|                              |                           | 60          |          |     | ●  |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| urea*                        | up to 30% hydrous         | 20          | ●        | ●   | ●  |
|                              |                           | 40          | ●        | ●   | ●  |
|                              |                           | 60          | ●        | ⊙   | ●  |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| yeast                        | each, hydrous, suspension | 20          | ●        | ●   | ●  |
|                              |                           | 40          | ●        | ●   | ●  |
|                              |                           | 60          | ●        |     | ●  |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| fuil oil                     | usual                     | 20          | ⊙        | ●   | ⊙  |
|                              |                           | 40          | ○        | ⊙   | ○  |
|                              |                           | 60          |          |     |    |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| n-heptane*                   | technically pure          | 20          | ●        | ●   | ●  |
|                              |                           | 40          |          |     |    |
|                              |                           | 60          | ⊙        |     | ⊙  |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |
| n-hexane*                    | technically pure          | 20          | ●        | ●   | ●  |
|                              |                           | 40          |          |     |    |
|                              |                           | 60          | ⊙        |     | ⊙  |
|                              |                           | 80          |          |     |    |
|                              |                           | 100         |          |     |    |

| Aggressive Medium                   | Concentration          | Temperature | Material |     |    |
|-------------------------------------|------------------------|-------------|----------|-----|----|
|                                     |                        |             | PP       | PVC | PE |
| hydracine hydrate*                  | hydrous                | 20          | ●        | ●   | ●  |
|                                     |                        | 40          | ●        |     | ●  |
|                                     |                        | 60          | ●        |     | ●  |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| hydroquinone                        | GL                     | 20          |          | ●   |    |
|                                     |                        | 40          |          | ●   |    |
|                                     |                        | 60          |          |     |    |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| hydroxylamine sulphate              | each, hydrous          | 20          | ●        | ●   | ●  |
|                                     |                        | 40          | ●        | ●   | ●  |
|                                     |                        | 60          | ●        |     | ●  |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| iso butyl acetate                   | technically pure       | 20          |          | ○   |    |
|                                     |                        | 40          |          |     |    |
|                                     |                        | 60          |          |     |    |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| isooctane*                          | technically pure       | 20          | ●        | ●   | ●  |
|                                     |                        | 40          |          |     |    |
|                                     |                        | 60          | ⊙        |     | ⊙  |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| isopropanol*                        | technically pure       | 20          | ●        | ●   | ●  |
|                                     |                        | 40          | ●        |     | ●  |
|                                     |                        | 60          | ●        |     | ●  |
|                                     |                        | 80          | ●        |     |    |
|                                     |                        | 100         | ●        |     |    |
| isopropyl-ether                     | technically pure       | 20          | ⊙        | ○   | ⊙  |
|                                     |                        | 40          |          |     |    |
|                                     |                        | 60          | ○        |     | ○  |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| tincture of iodine                  | 6,5% iodine in ethanol | 20          | ●        | ○   | ●  |
|                                     |                        | 40          |          |     |    |
|                                     |                        | 60          |          |     | ○  |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| potassium acetate*                  | GL                     | 20          |          | ●   |    |
|                                     |                        | 40          |          | ●   |    |
|                                     |                        | 60          |          | ●   |    |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |
| potassium hydroxide                 | 50% hydrous            | 20          | ●        | ●   | ●  |
|                                     |                        | 40          | ●        | ●   | ●  |
|                                     |                        | 60          | ●        | ⊙   | ●  |
|                                     |                        | 80          | ●        |     |    |
|                                     |                        | 100         | ●        |     |    |
| potassium-aluminium sulphate (alum) | 50% hydrous            | 20          | ●        | ●   | ●  |
|                                     |                        | 40          | ●        | ●   | ●  |
|                                     |                        | 60          | ●        | ⊙   | ●  |
|                                     |                        | 80          |          |     |    |
|                                     |                        | 100         |          |     |    |

| Aggressive Medium     | Concentration           | Temperature | Material |     |    |
|-----------------------|-------------------------|-------------|----------|-----|----|
|                       |                         |             | PP       | PVC | PE |
| potassium bichromate* | saturated, hydrous      | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ⊙   | ●  |
|                       |                         | 80          | ●        |     |    |
|                       |                         | 100         | ●        |     |    |
| potassium borat       | 10% hydrous             | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ⊙   | ●  |
|                       |                         | 80          |          |     |    |
|                       |                         | 100         |          |     |    |
| potassium bromate     | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ⊙   | ⊙  |
|                       |                         | 80          | ●        |     |    |
|                       |                         | 100         | ●        |     |    |
| potassium bromide     | each, hydrous           | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ⊙   | ●  |
|                       |                         | 80          |          |     |    |
|                       |                         | 100         |          |     |    |
| potassium chlorate*   | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ●   | ●  |
|                       |                         | 80          |          |     |    |
|                       |                         | 100         |          |     |    |
| potassium chloride    | each, hydrous           | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ●   | ●  |
|                       |                         | 80          | ●        |     |    |
|                       |                         | 100         | ●        |     |    |
| potassium chromate*   | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   |    |
|                       |                         | 60          | ●        | ●   |    |
|                       |                         | 80          |          |     |    |
|                       |                         | 100         |          |     |    |
| potassium cyanide     | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ●   | ●  |
|                       |                         | 80          |          |     |    |
|                       |                         | 100         |          |     |    |
| potassium iodide      | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ●   | ●  |
|                       |                         | 80          |          |     |    |
|                       |                         | 100         |          |     |    |
| potassium nitrate     | 50%, hydrous            | 20          | ●        | ●   | ●  |
|                       |                         | 40          | ●        | ●   | ●  |
|                       |                         | 60          | ●        | ●   | ●  |
|                       |                         | 80          |          |     |    |
|                       |                         | 100         |          |     |    |

  

| Aggressive Medium       | Concentration               | Temperature | Material |     |    |
|-------------------------|-----------------------------|-------------|----------|-----|----|
|                         |                             |             | PP       | PVC | PE |
| potassium perchlorate*  | cold saturated, hydrous     | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ●  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| potassium permanganate* | cold saturated, hydrous     | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ⊙  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| potassium persulphate*  | each, hydrous               | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ●  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| potassium phosphate     | each, hydrous               | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ●  |
|                         |                             | 80          | ●        |     |    |
|                         |                             | 100         |          |     |    |
| potassium sulphate      | each, hydrous               | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ●  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| hexafluorosilic acid*   | 32% hydrous                 | 20          | ●        | ●   | ●  |
|                         |                             | 40          |          | ●   | ●  |
|                         |                             | 60          |          | ●   | ●  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| carbon dioxide          | technically pure, dry       | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ●   | ●  |
|                         |                             | 80          | ●        |     |    |
|                         |                             | 100         | ●        |     |    |
| carbonic acid           | technically pure, moist     | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ●  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| coconut oil alcohol*    | technically pure            | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ●  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| coconut oil*            | technically pure            | 20          | ●        | ●   | ●  |
|                         |                             | 40          | ●        | ●   | ●  |
|                         |                             | 60          | ●        | ⊙   | ⊙  |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |
| nitrohydrochloric acid* | concentration 1:3 up to 1:6 | 20          | ○        | ●   | ○  |
|                         |                             | 40          |          | ⊙   |    |
|                         |                             | 60          |          |     |    |
|                         |                             | 80          |          |     |    |
|                         |                             | 100         |          |     |    |

  

| Aggressive Medium             | Concentration           | Temperature | Material |     |    |
|-------------------------------|-------------------------|-------------|----------|-----|----|
|                               |                         |             | PP       | PVC | PE |
| cresols                       | cold saturated, hydrous | 20          | ●        | ⊙   | ●  |
|                               |                         | 40          | ●        |     | ●  |
|                               |                         | 60          |          |     |    |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |
| cuprous salts                 | each, hydrous           | 20          | ●        | ●   | ●  |
|                               |                         | 40          | ⊙        | ●   | ●  |
|                               |                         | 60          | ○        | ⊙   | ●  |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |
| lanolin* (wool fat)           | technically pure        | 20          | ●        | ●   | ●  |
|                               |                         | 40          | ●        | ⊙   | ●  |
|                               |                         | 60          | ●        |     | ●  |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |
| linseed oil*                  | technically pure        | 20          | ●        | ●   | ●  |
|                               |                         | 40          | ●        | ●   | ●  |
|                               |                         | 60          | ●        | ⊙   | ●  |
|                               |                         | 80          | ●        |     |    |
|                               |                         | 100         | ●        |     |    |
| illuminating gas, benzol free |                         | 20          | ●        | ●   | ●  |
|                               |                         | 40          |          |     |    |
|                               |                         | 60          |          |     |    |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |
| liquers                       |                         | 20          | ●        | ●   | ●  |
|                               |                         | 40          |          | ●   | ●  |
|                               |                         | 60          |          |     |    |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |
| magnesium salts               | each hydrous            | 20          | ●        | ●   | ●  |
|                               |                         | 40          | ●        | ●   | ●  |
|                               |                         | 60          | ●        | ⊙   | ●  |
|                               |                         | 80          | ●        |     |    |
|                               |                         | 100         | ●        |     |    |
| corn oil*                     | technically pure        | 20          | ●        | ⊙   | ●  |
|                               |                         | 40          | ●        |     | ●  |
|                               |                         | 60          | ⊙        |     | ⊙  |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |
| maleic acid*                  | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                               |                         | 40          | ●        | ●   | ●  |
|                               |                         | 60          | ●        | ⊙   | ●  |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |
| marmelade                     |                         | 20          | ●        | ●   | ●  |
|                               |                         | 40          | ●        | ●   | ●  |
|                               |                         | 60          | ●        | ⊙   | ●  |
|                               |                         | 80          | ●        |     |    |
|                               |                         | 100         | ●        |     |    |
| molasses                      |                         | 20          | ●        | ●   | ●  |
|                               |                         | 40          | ●        | ●   | ●  |
|                               |                         | 60          | ●        | ⊙   | ●  |
|                               |                         | 80          |          |     |    |
|                               |                         | 100         |          |     |    |

| Aggressive Medium          | Concentration    | Temperature | Material |     |    |
|----------------------------|------------------|-------------|----------|-----|----|
|                            |                  |             | PP       | PVC | PE |
| molasses flavour           |                  | 20          | ●        | ●   | ●  |
|                            |                  | 40          | ●        | ●   | ●  |
|                            |                  | 60          | ●        | ●   | ●  |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methane (natural gas)      | technically pure | 20          | ●        | ●   | ●  |
|                            |                  | 40          |          |     |    |
|                            |                  | 60          |          |     |    |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methanol* (methyl alcohol) | each             | 20          | ●        | ●   | ●  |
|                            |                  | 40          | ●        | ●   | ●  |
|                            |                  | 60          | ●        | ⊙   | ●  |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methyl acetate             | technically pure | 20          | ●        | ○   | ●  |
|                            |                  | 40          | ●        |     |    |
|                            |                  | 60          | ⊙        |     |    |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methylamine                | 32%, hydrous     | 20          | ●        | ⊙   | ●  |
|                            |                  | 40          |          |     |    |
|                            |                  | 60          |          |     |    |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methyl bromide             | technically pure | 20          | ○        | ○   | ⊙  |
|                            |                  | 40          |          |     |    |
|                            |                  | 60          |          |     |    |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methyl chloride            | technically pure | 20          | ○        | ○   | ⊙  |
|                            |                  | 40          |          |     |    |
|                            |                  | 60          |          |     |    |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methylene chloride         | technically pure | 20          | ⊙        | ○   | ⊙  |
|                            |                  | 40          |          |     |    |
|                            |                  | 60          |          |     |    |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| methyl ethyl ketone        | technically pure | 20          | ●        | ○   | ●  |
|                            |                  | 40          | ⊙        |     | ⊙  |
|                            |                  | 60          | ⊙        |     | ○  |
|                            |                  | 80          |          |     |    |
|                            |                  | 100         |          |     |    |
| milk*                      |                  | 20          | ●        | ●   | ●  |
|                            |                  | 40          | ●        | ●   | ●  |
|                            |                  | 60          | ●        | ●   | ●  |
|                            |                  | 80          | ●        |     |    |
|                            |                  | 100         | ●        |     |    |
| lactic acid*               | 10%, hydrous     | 20          | ●        | ●   | ●  |
|                            |                  | 40          | ●        | ⊙   | ●  |
|                            |                  | 60          | ●        | ○   | ●  |
|                            |                  | 80          | ●        |     |    |
|                            |                  | 100         | ●        |     |    |

| Aggressive Medium                          | Concentration    | Temperature | Material |     |    |
|--|------------------|-------------|----------|-----|----|
|  |                  |             | PP       | PVC | PE |
| mineral oils, free from aromatic compounds |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ⊙        | ●   | ⊙  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| mineral water                              |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ●   | ●  |
|  |                  | 80          | ●        |     |    |
|  |                  | 100         | ●        |     |    |
| mixed acid                                 |                  | 20          | ○        | ●   | ○  |
|  |                  | 40          |          | ⊙   |    |
|  |                  | 60          |          | ○   |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -acid sulphur                              | 48%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          | ⊙   |    |
|  |                  | 60          |          | ○   |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -nitric acid                               | 49%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          | ⊙   |    |
|  |                  | 60          |          | ○   |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -water                                     | 3%               | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          | ⊙   |    |
|  |                  | 60          |          | ○   |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 50%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          | ○   |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 10%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 87%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 3%               | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 50%              | 20          | ○        | ●   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 31%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 19%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 50%              | 20          | ○        | ●   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 33%              | 20          | ○        | ●   | ○  |
|  |                  | 40          |          | ⊙   |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 17%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 10%              | 20          | ○        | ●   | ⊙  |
|  |                  | 40          |          | ●   |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 20%              | 20          | ○        | ●   | ⊙  |
|  |                  | 40          |          | ●   |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 70%              | 20          | ○        | ●   | ⊙  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| mixed acid                                 |                  | 20          | ○        | ⊙   | ⊙  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -nitric acid                               | 3 parts          | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -hydrofluoric acid                         | 1 part           | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -acid sulphur                              | 2 parts          | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| mixed acid                                 |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ⊙        | ●   | ⊙  |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -acid sulphur                              | 30%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -phosphoric acid                           | 60%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| -water                                     | 10%              | 20          | ○        | ⊙   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| mono chlorine acetic acid ethyl ester      | technically pure | 20          | ●        | ○   | ●  |
|  |                  | 40          | ●        |     | ●  |
|  |                  | 60          | ●        |     | ●  |
|  |                  | 80          | ●        |     | ●  |
|  |                  | 100         | ●        |     | ●  |

| Aggressive Medium                      | Concentration           | Temperature | Material |     |    |
|--|-------------------------|-------------|----------|-----|----|
|  |                         |             | PP       | PVC | PE |
| mono chlorine acetic acid methyl ester | technically pure        | 20          | ●        | ○   | ●  |
|  |                         | 40          | ●        |     | ●  |
|  |                         | 60          | ●        |     | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| Morpholene                             | technically pure        | 20          | ●        | ○   | ●  |
|  |                         | 40          | ●        |     | ●  |
|  |                         | 60          | ●        |     | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| Mowilith D                             | usual                   | 20          | ●        | ●   | ●  |
|  |                         | 40          |          |     |    |
|  |                         | 60          |          |     |    |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| naphthalene                            | technically pure        | 20          | ●        | ○   | ●  |
|  |                         | 40          |          |     |    |
|  |                         | 60          |          |     | ⊙  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| sodium acetate                         | each, hydrous           | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ●   | ●  |
|  |                         | 80          | ●        |     |    |
|  |                         | 100         | ●        |     |    |
| sodium benzoate                        | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| sodium bromate                         | each, hydrous           | 20          | ●        | ●   | ●  |
|  |                         | 40          | ⊙        | ⊙   | ⊙  |
|  |                         | 60          |          |     |    |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| sodium bromide                         | each, hydrous           | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| sodium carbonate (soda)                | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| sodium chlorate*                       | each, hydrous           | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| sodium chloride (table salt)           | each, hydrous           | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          | ●        |     |    |
|  |                         | 100         | ●        |     |    |



| Aggressive Medium                            | Concentration                 | Temperature | Material |     |    |
|--|-------------------------------|-------------|----------|-----|----|
|  |                               |             | PP       | PVC | PE |
| sodium chlorite*                             | diluted, hydrous              | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        |     |    |
|  |                               | 60          | ⊙        |     |    |
|  |                               | 80          |          |     |    |
| sodium chromate*                             | diluted, hydrous              | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   |    |
|  |                               | 60          |          | ⊙   |    |
|  |                               | 80          |          |     |    |
| sodium disulphite                            | each, hydrous                 | 20          | ●        | ●   | ●  |
|  |                               | 40          |          | ●   |    |
|  |                               | 60          |          | ⊙   |    |
|  |                               | 80          |          |     |    |
| sodium dithionite (-hydrosulfit)             | 10%, hydrous                  | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| sodium fluoride                              | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          |          | ●   |    |
|  |                               | 60          |          |     |    |
|  |                               | 80          |          |     |    |
| sodium bicarbonate                           | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ●   | ●  |
|  |                               | 80          | ●        |     |    |
| sodium hydrogen sulphate (Natriumup toulfat) | each, hydrous                 | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| sodium hydrogen sulphite (Natriumup toulfit) | each, hydrous                 | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ⊙   | ●  |
|  |                               | 60          | ●        | ○   | ●  |
|  |                               | 80          |          |     |    |
| sodium hypochloride* (bleaching liquor)      | 12,5% activ chlorine, hydrous | 20          | ⊙        | ●   | ⊙  |
|  |                               | 40          | ○        | ●   | ○  |
|  |                               | 60          |          | ⊙   |    |
|  |                               | 80          |          |     |    |
| sodium iodide                                | each, hydrous                 | 20          | ●        | ●   | ●  |
|  |                               | 40          |          | ●   |    |
|  |                               | 60          |          | ⊙   |    |
|  |                               | 80          |          |     |    |
| sodium nitrate (salpeter)                    | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| sodium nitrite                               | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          |          |     |    |
|  |                               | 60          |          |     |    |
|  |                               | 80          |          |     |    |
| sodium oxalate                               | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          |          | ●   |    |
|  |                               | 60          |          | ⊙   |    |
|  |                               | 80          |          |     |    |
| sodium perborate                             | GL                            | 20          | ng       | ng  | ng |
|  |                               | 40          |          |     |    |
|  |                               | 60          |          |     |    |
|  |                               | 80          |          |     |    |
| sodium perchlorate                           | GL                            | 20          | ng       | ng  | ng |
|  |                               | 40          |          |     |    |
|  |                               | 60          |          |     |    |
|  |                               | 80          |          |     |    |
| sodium persulphate*                          | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| sodium phosphate                             | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          | ●        |     |    |
| sodium silicate                              | each, hydrous                 | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| sodium sulphate (Glauber's salt)             | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          | ●        |     |    |
| sodium sulphide                              | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| sodium sulphite                              | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| sodium thiosulphate (fixing salt)            | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| caustic soda                                 | up to 10%, hydrous            | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| caustic soda                                 | up to 40%, hydrous            | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| caustic soda                                 | up to 50%, hydrous            | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| surfactants*                                 | up to 5%, hydrous             | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   |    |
|  |                               | 60          | ●        | ⊙   |    |
|  |                               | 80          |          |     |    |
| nickel salt                                  | cold saturated, hydrous       | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| nitrobenzene                                 | technically pure              | 20          | ●        | ○   | ●  |
|  |                               | 40          | ●        |     | ●  |
|  |                               | 60          | ●        |     | ⊙  |
|  |                               | 80          |          |     |    |
| nitrous fumes                                | diluted, moist, dry           | 20          | ●        | ●   | ●  |
|  |                               | 40          | ⊙        |     | ●  |
|  |                               | 60          | ○        | ⊙   | ●  |
|  |                               | 80          |          |     |    |
| nitrotoluene (o-,m-,p-)                      | technically pure              | 20          | ●        | ○   | ●  |
|  |                               | 40          | ●        |     | ●  |
|  |                               | 60          | ⊙        |     | ⊙  |
|  |                               | 80          |          |     |    |
| fruit pulp                                   |                               | 20          | ●        | ●   | ●  |
|  |                               | 40          | ●        | ●   | ●  |
|  |                               | 60          | ●        | ●   | ●  |
|  |                               | 80          |          |     |    |

| Aggressive Medium           | Concentration           | Temperature | Material |     |    |
|-----------------------------|-------------------------|-------------|----------|-----|----|
|                             |                         |             | PP       | PVC | PE |
| fruit wine                  |                         | 20          | ●        | ●   | ●  |
|                             |                         | 40          |          |     |    |
|                             |                         | 60          |          |     |    |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| fats and oils*, vegetale    |                         | 20          | ●        | ●   | ●  |
|                             |                         | 40          | ●        | ⊙   | ⊙  |
|                             |                         | 60          | ⊙        |     |    |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| oleum vapours*              | low                     | 20          | ○        | ●   | ○  |
|                             |                         | 40          |          |     |    |
|                             |                         | 60          |          |     |    |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| olive oil*                  |                         | 20          | ●        | ●   | ●  |
|                             |                         | 40          | ●        | ●   | ●  |
|                             |                         | 60          | ●        | ●   | ⊙  |
|                             |                         | 80          | ●        |     |    |
|                             |                         | 100         |          |     |    |
| oleic acid                  | technically pure        | 20          | ●        | ●   | ●  |
|                             |                         | 40          | ●        | ●   | ●  |
|                             |                         | 60          | ⊙        | ●   | ⊙  |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| oxalic acid*                | cold saturated, hydrous | 20          | ●        | ●   | ●  |
|                             |                         | 40          | ●        | ●   | ●  |
|                             |                         | 60          | ●        | ●   | ●  |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| oxygen*                     | up to 2%, in air        | 20          | ⊙        | ●   | ⊙  |
|                             |                         | 40          | ○        |     | ○  |
|                             |                         | 60          |          |     |    |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
|                             | cold saturated, hydrous | 20          | ⊙        | ●   | ⊙  |
|                             |                         | 40          | ○        | ●   | ○  |
|                             |                         | 60          |          |     |    |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| palmitic acid*              | technically pure        | 20          | ⊙        | ●   | ⊙  |
|                             |                         | 40          |          |     |    |
|                             |                         | 60          | ○        |     |    |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| palm oil* (palm kernel oil) |                         | 20          | ●        | ●   | ●  |
|                             |                         | 40          | ●        | ○   | ●  |
|                             |                         | 60          | ⊙        |     | ⊙  |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |
| paraffin emulsion           | usual, hydrous          | 20          | ●        | ●   | ●  |
|                             |                         | 40          | ●        | ●   | ●  |
|                             |                         | 60          | ⊙        |     | ⊙  |
|                             |                         | 80          |          |     |    |
|                             |                         | 100         |          |     |    |

| Aggressive Medium                       | Concentration            | Temperature | Material |     |    |
|---|--------------------------|-------------|----------|-----|----|
|   |                          |             | PP       | PVC | PE |
| paraffin oil                            |                          | 20          | ●        | ●   | ●  |
|   |                          | 40          | ●        | ●   | ●  |
|   |                          | 60          | ⊙        | ⊙   | ●  |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| perchloroethylene (tetrachloroethylene) | technically pure         | 20          | ⊙        | ○   | ⊙  |
|   |                          | 40          |          |     |    |
|   |                          | 60          |          |     |    |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| perchloric acid*                        | 10%, hydrous             | 20          | ●        | ●   | ●  |
|   |                          | 40          | ●        | ●   | ●  |
|   |                          | 60          | ●        | ⊙   | ●  |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| petroleum ether*                        | technically pure         | 20          | ●        | ●   | ●  |
|   |                          | 40          | ●        | ●   | ⊙  |
|   |                          | 60          | ⊙        | ●   | ⊙  |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| petroleum                               | technically pure         | 20          | ●        | ●   | ●  |
|   |                          | 40          | ⊙        |     | ●  |
|   |                          | 60          | ⊙        |     | ⊙  |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| phenol*                                 | up to 10%, hydrous       | 20          | ●        | ●   | ●  |
|   |                          | 40          | ●        | ⊙   | ●  |
|   |                          | 60          | ●        |     | ⊙  |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
|   | up to 90%, hydrous       | 20          | ●        | ⊙   | ●  |
|   |                          | 40          | ●        |     | ●  |
|   |                          | 60          | ●        |     | ⊙  |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| phenylhydrazine                         | technically pure         | 20          | ⊙        | ○   | ⊙  |
|   |                          | 40          |          |     |    |
|   |                          | 60          |          |     |    |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| phenylhydrazine-hydrochloride           | hydrous                  | 20          | ●        | ⊙   |    |
|   |                          | 40          | ⊙        |     |    |
|   |                          | 60          | ⊙        |     |    |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |
| phosgene*                               | technically pure, liquid | 20          | ⊙        | ○   |    |
|   |                          | 40          |          |     |    |
|   |                          | 60          |          |     |    |
|   |                          | 80          |          |     |    |
|   |                          | 100         |          |     |    |

| Aggressive Medium            | Concentration             | Temperature      | Material |     |    |
|------------------------------|---------------------------|------------------|----------|-----|----|
|                              |                           |                  | PP       | PVC | PE |
| phosgene*                    | technically pure, gaseous | 20               | ⊙        | ●   | ⊙  |
|                              |                           | 40               |          | ⊙   |    |
|                              |                           | 60               |          | ⊙   |    |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |
| phosphor chloride:*          |                           | 20               | ●        | ○   | ●  |
|                              | -phosphor-tri-chloride    | technically pure | 40       |     |    |
|                              | -phosphor-penta-chloride  |                  | 60       | ⊙   | ⊙  |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |
| -phosphoryl chloride         |                           | 20               | ng       | ng  | ng |
|                              |                           | 40               |          |     |    |
|                              |                           | 60               |          |     |    |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |
| phosphoric acid              | up to 30%, hydrous        | 20               | ●        | ●   | ●  |
|                              |                           | 40               | ●        | ●   | ●  |
|                              |                           | 60               | ●        | ⊙   | ●  |
|                              |                           | 80               | ●        |     |    |
|                              |                           | 100              |          |     |    |
|                              | up to 50%, hydrous        | 20               | ●        | ●   | ●  |
|                              |                           | 40               | ●        | ●   | ●  |
|                              |                           | 60               | ●        | ●   | ●  |
|                              |                           | 80               | ●        | ●   | ●  |
|                              |                           | 100              |          |     |    |
| 85%, hydrous                 |                           | 20               | ●        | ●   | ●  |
|                              |                           | 40               | ●        | ●   | ●  |
|                              |                           | 60               | ●        | ●   | ⊙  |
|                              |                           | 80               | ●        |     |    |
|                              |                           | 100              | ●        |     |    |
| phthalic acid*               | saturated, hydrous        | 20               | ●        | ●   | ●  |
|                              |                           | 40               | ●        | ⊙   | ●  |
|                              |                           | 60               | ●        | ○   | ●  |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |
| picric acid*                 | 1%, hydrous               | 20               | ●        | ●   | ●  |
|                              |                           | 40               |          |     |    |
|                              |                           | 60               |          |     |    |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |
| potassium carbonate          | cold saturated, hydrous   | 20               | ●        | ●   | ●  |
|                              |                           | 40               | ●        | ●   | ●  |
|                              |                           | 60               | ●        |     |    |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |
| compressed air, oil emulsive |                           | 20               | ⊙        | ⊙   | ●  |
|                              |                           | 40               |          |     | ●  |
|                              |                           | 60               |          |     |    |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |
| propane                      | technically pure, liquid  | 20               | ●        | ●   | ●  |
|                              |                           | 40               |          |     |    |
|                              |                           | 60               |          |     |    |
|                              |                           | 80               |          |     |    |
|                              |                           | 100              |          |     |    |

| Aggressive Medium              | Concentration             | Temperature | Material |     |    |
|--------------------------------|---------------------------|-------------|----------|-----|----|
|                                |                           |             | PP       | PVC | PE |
| propane                        | technically pure, gaseous | 20          | ●        | ●   | ●  |
|                                |                           | 40          |          |     |    |
|                                |                           | 60          |          |     |    |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| propanol,*<br>n- and iso-      | technically pure          | 20          | ●        | ●   | ●  |
|                                |                           | 40          | ●        | ⊙   | ●  |
|                                |                           | 60          | ●        | ⊙   | ●  |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| propargyl alcohol*             | 7%, hydrous               | 20          | ●        | ●   | ●  |
|                                |                           | 40          | ●        | ●   | ●  |
|                                |                           | 60          | ●        | ●   | ●  |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| propanoic acid*                | 50%, hydrous              | 20          | ●        | ●   | ●  |
|                                |                           | 40          | ●        | ●   | ●  |
|                                |                           | 60          | ●        | ⊙   | ●  |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
|                                | technically pure          | 20          | ●        | ●   | ●  |
|                                |                           | 40          | ⊙        | ⊙   | ⊙  |
|                                |                           | 60          | ⊙        |     | ⊙  |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| propylene glycol*              | technically pure          | 20          | ●        | ●   | ●  |
|                                |                           | 40          | ●        | ●   | ●  |
|                                |                           | 60          | ●        | ●   | ●  |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| pyridine                       | technically pure          | 20          | ⊙        | ○   | ●  |
|                                |                           | 40          | ⊙        |     | ⊙  |
|                                |                           | 60          | ⊙        |     | ⊙  |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| quicksilver                    | rein                      | 20          | ●        | ●   | ●  |
|                                |                           | 40          |          |     |    |
|                                |                           | 60          |          |     |    |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| quicksilver salts              | cold, saturated, hydrous  | 20          | ●        | ●   | ●  |
|                                |                           | 40          | ●        | ●   | ●  |
|                                |                           | 60          | ●        | ⊙   | ●  |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| ramasit                        | usual                     | 20          |          | ●   |    |
|                                |                           | 40          |          | ●   |    |
|                                |                           | 60          |          | ●   |    |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |
| suet-emulsion,*<br>sulphurized | usual                     | 20          | ●        | ●   | ●  |
|                                |                           | 40          |          |     |    |
|                                |                           | 60          |          |     |    |
|                                |                           | 80          |          |     |    |
|                                |                           | 100         |          |     |    |

  

| Aggressive Medium  | Concentration      | Temperature | Material |     |    |
|--|--------------------|-------------|----------|-----|----|
|  |                    |             | PP       | PVC | PE |
| nitric acid*   | 6,3%, hydrous      | 20          | ●        | ●   | ●  |
|  |                    | 40          |          | ●   | ●  |
|  |                    | 60          | ⊙        | ●   | ●  |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |
| Attention:<br>regarding PVC-U glued connections<br>please see introduction 2.3.1 |                    |             |          |     |    |
|  | up to 40%, hydrous | 20          | ⊙        | ●   | ⊙  |
|  |                    | 40          |          | ●   |    |
|  |                    | 60          | ○        | ⊙   | ○  |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |
|  | 65%, hydrous       | 20          | ○        | ⊙   | ⊙  |
|  |                    | 40          |          | ⊙   | ○  |
|  |                    | 60          |          | ○   |    |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |
|  | 85%                | 20          |          | ○   |    |
|  |                    | 40          |          |     |    |
|  |                    | 60          |          |     |    |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |
|  | 100%               | 20          | ○        | ○   | ○  |
|  |                    | 40          |          |     |    |
|  |                    | 60          |          |     |    |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |
| salt acid °-   | 5%, hydrous        | 20          | ●        | ●   | ●  |
|  |                    | 40          | ●        | ●   | ●  |
|  |                    | 60          | ●        | ⊙   | ●  |
|  |                    | 80          | ⊙        |     |    |
|  |                    | 100         |          |     |    |
| Attention:<br>regarding PVC-U glued connections<br>please see introduction 2.3.1 |                    |             |          |     |    |
|  | 10%, hydrous       | 20          | ●        | ●   | ●  |
|  |                    | 40          | ●        | ●   | ●  |
|  |                    | 60          | ⊙        | ⊙   | ●  |
|  |                    | 80          | ⊙        |     |    |
|  |                    | 100         |          |     |    |
|  | up to 30%, hydrous | 20          | ●        | ●   | ●  |
|  |                    | 40          | ⊙        | ●   | ●  |
|  |                    | 60          | ⊙        | ⊙   | ●  |
|  |                    | 80          | ○        |     |    |
|  |                    | 100         |          |     |    |
|  | 36%, hydrous       | 20          | ●        | ●   | ●  |
|  |                    | 40          | ⊙        | ●   | ●  |
|  |                    | 60          | ○        | ⊙   | ●  |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |
| dioxigen   | technically pure   | 20          | ●        | ●   | ●  |
|  |                    | 40          |          | ●   | ●  |
|  |                    | 60          | ⊙        | ●   | ⊙  |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |
| lubricating grease*  |                    | 20          | ⊙        | ●   | ●  |
|  |                    | 40          |          | ●   | ●  |
|  |                    | 60          |          | ●   | ⊙  |
|  |                    | 80          |          |     |    |
|  |                    | 100         |          |     |    |

  

| Aggressive Medium  | Concentration           | Temperature | Material |     |    |
|--|-------------------------|-------------|----------|-----|----|
|  |                         |             | PP       | PVC | PE |
| sulphur  | technically pure        | 20          | ●        | ⊙   | ●  |
|  |                         | 40          | ●        | ○   | ●  |
|  |                         | 60          | ●        |     | ●  |
|  |                         | 80          | ●        |     |    |
|  |                         | 100         |          |     |    |
| sulphur dioxide  | technically pure, dry   | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ●   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
|  | each, moist             | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
|  | technically pure liquid | 20          | ○        | ○   | ○  |
|  |                         | 40          |          |     |    |
|  |                         | 60          |          |     |    |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| carbon disulphide  | technically pure        | 20          | ⊙        | ○   | ⊙  |
|  |                         | 40          |          |     |    |
|  |                         | 60          |          |     |    |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| sodium sulphide  |                         | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| acid sulfur*   | up to 40%, hydrous      | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ⊙   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
| Attention:<br>regarding PVC-U glued connections<br>please see introduction 2.3.1 |                         |             |          |     |    |
|  | up to 60%,* hydrous     | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ●        | ●   | ●  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
|  | up to 80%, hydrous      | 20          | ●        | ●   | ●  |
|  |                         | 40          | ●        | ●   | ●  |
|  |                         | 60          | ⊙        | ●   | ⊙  |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
|  | 90%, hydrous*           | 20          | ⊙        | ●   | ⊙  |
|  |                         | 40          |          | ●   |    |
|  |                         | 60          |          |     |    |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |
|  | 96%, hydrous*           | 20          | ○        | ●   | ○  |
|  |                         | 40          |          | ●   |    |
|  |                         | 60          |          | ⊙   |    |
|  |                         | 80          |          |     |    |
|  |                         | 100         |          |     |    |

| Aggressive Medium                               | Concentration                       | Temperature | Material |     |    |
|---|-------------------------------------|-------------|----------|-----|----|
|   |                                     |             | PP       | PVC | PE |
| hydrogen sulphide                               | technically pure                    | 20          | ●        | ●   | ●  |
|   |                                     | 40          | ●        | ●   | ●  |
|   |                                     | 60          | ●        | ●   | ⊙  |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
|   | saturated, hydrous                  | 20          | ●        | ●   | ●  |
|   |                                     | 40          | ●        | ●   | ●  |
|   |                                     | 60          | ●        | ⊙   | ●  |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
| sulfurous acid                                  | saturated, hydrous                  | 20          | ●        | ●   | ●  |
|   |                                     | 40          | ●        | ●   | ●  |
|   |                                     | 60          | ●        | ⊙   | ●  |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
| seawater  |                                     | 20          | ●        | ●   | ●  |
|   |                                     | 40          | ●        | ●   | ●  |
|   |                                     | 60          | ●        | ⊙   | ●  |
|   |                                     | 80          | ●        |     |    |
|   |                                     | 100         | ●        |     |    |
| soap solution*                                  | each, hydrous                       | 20          | ●        | ●   | ●  |
|   |                                     | 40          | ●        | ●   | ●  |
|   |                                     | 60          | ●        | ⊙   | ●  |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
| silver salt                                     | cold, saturated, hydrous suspension | 20          | ●        | ●   | ●  |
|   |                                     | 40          | ●        | ●   | ●  |
|   |                                     | 60          | ●        | ⊙   | ●  |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
| silicone oil                                    |                                     | 20          | ●        | ●   | ●  |
|   |                                     | 40          | ●        | ⊙   | ●  |
|   |                                     | 60          | ●        | ○   | ●  |
|   |                                     | 80          | ●        |     |    |
|   |                                     | 100         | ●        |     |    |
| spindle oil                                     |                                     | 20          | ●        | ⊙   | ⊙  |
|   |                                     | 40          | ⊙        |     |    |
|   |                                     | 60          | ○        |     | ⊙  |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
| spinning bath acids* containing CS <sub>2</sub> | 100 mg CS <sub>2</sub> /l           | 20          | ●        | ●   | ●  |
|   |                                     | 40          |          | ●   |    |
|   |                                     | 60          |          |     |    |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
|   | 200 mg CS <sub>2</sub> /l           | 20          | ●        | ⊙   | ●  |
|   |                                     | 40          |          |     |    |
|   |                                     | 60          |          |     |    |
|   |                                     | 80          |          |     |    |
|   |                                     | 100         |          |     |    |
| 700 mg CS <sub>2</sub> /l                       | 20                                  | ●           | ○        | ●   |    |
|   | 40                                  |             |          |     |    |
|   | 60                                  |             |          |     |    |
|   | 80                                  |             |          |     |    |
|   | 100                                 |             |          |     |    |

| Aggressive Medium    | Concentration           | Temperature | Material |     |    |
|----------------------|-------------------------|-------------|----------|-----|----|
|                      |                         |             | PP       | PVC | PE |
| spirituous beverages | ca. 40% (ethyl alcohol) | 20          | ●        | ●   | ●  |
|                      |                         | 40          |          |     |    |
|                      |                         | 60          |          |     |    |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| starch solution      | each, hydrous           | 20          | ●        | ●   | ●  |
|                      |                         | 40          | ●        | ●   | ●  |
|                      |                         | 60          | ●        | ●   | ●  |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| starch syrup         | usual                   | 20          | ●        | ●   | ●  |
|                      |                         | 40          | ●        | ●   | ●  |
|                      |                         | 60          | ●        | ●   | ●  |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| stearic acid*        | technically pure        | 20          | ●        | ●   | ●  |
|                      |                         | 40          |          | ●   |    |
|                      |                         | 60          | ⊙        | ●   | ⊙  |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| sebum*               | technically pure        | 20          | ●        | ●   | ●  |
|                      |                         | 40          | ●        | ●   | ●  |
|                      |                         | 60          | ●        | ●   | ●  |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| oil of turpentine*   | technically pure        | 20          | ○        | ●   | ⊙  |
|                      |                         | 40          |          | ⊙   | ⊙  |
|                      |                         | 60          |          |     |    |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| tetrachloromethane   | technically pure        | 20          | ○        | ○   | ○  |
|                      |                         | 40          |          |     |    |
|                      |                         | 60          |          |     |    |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| tetrahydrofuran      | technically pure        | 20          | ○        | ○   | ⊙  |
|                      |                         | 40          |          |     |    |
|                      |                         | 60          |          |     |    |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| tetrahydronaphthalin | technically pure        | 20          | ○        | ○   | ⊙  |
|                      |                         | 40          |          |     |    |
|                      |                         | 60          |          |     |    |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| toluol               | technically pure        | 20          | ⊙        | ○   | ⊙  |
|                      |                         | 40          | ○        |     |    |
|                      |                         | 60          |          |     | ○  |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |
| triethanolamine*     | technically pure        | 20          | ●        | ⊙   | ●  |
|                      |                         | 40          |          |     | ●  |
|                      |                         | 60          |          |     | ●  |
|                      |                         | 80          |          |     |    |
|                      |                         | 100         |          |     |    |

| Aggressive Medium                                      | Concentration    | Temperature | Material |     |    |
|--|------------------|-------------|----------|-----|----|
|  |                  |             | PP       | PVC | PE |
| tributyl phosphate                                     | technically pure | 20          | ●        | ○   | ●  |
|  |                  | 40          | ●        |     | ●  |
|  |                  | 60          | ●        |     | ●  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| trichloroethane  | technically pure | 20          | ⊙        | ○   | ⊙  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| trichloroethylene                                      | technically pure | 20          | ⊙        | ○   | ○  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| trichloroacetic acid*                                  | technically pure | 20          | ●        | ⊙   | ●  |
|  |                  | 40          | ●        |     | ⊙  |
|  |                  | 60          | ●        |     | ○  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 50%, hydrous     | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ⊙   | ●  |
|  |                  | 60          | ●        |     | ○  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| 1, 1, 2-trichloro-1, 2, 2-trifluoroethane* (freon 113) | technically pure | 20          |          | ●   |    |
|  |                  | 40          |          | ●   |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| tri-kresyl phosphate*                                  | technically pure | 20          | ●        | ○   | ●  |
|  |                  | 40          |          |     | ●  |
|  |                  | 60          | ⊙        |     | ●  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| tri-octyl phosphate*                                   | technically pure | 20          | ●        | ○   | ⊙  |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| urine  |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ⊙   | ●  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| vaseline   | technically pure | 20          | ●        | ⊙   | ⊙  |
|  |                  | 40          |          | ○   |    |
|  |                  | 60          | ⊙        |     | ○  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| vinyl acetate  | technically pure | 20          | ●        | ○   |    |
|  |                  | 40          |          |     |    |
|  |                  | 60          | ⊙        |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |

| Agressive Medium                                     | Concentration    | Temperature | Material |     |    |
|--|------------------|-------------|----------|-----|----|
|  |                  |             | PP       | PVC | PE |
| vinyl chloride                                       | technically pure | 20          |          | ○   |    |
|  |                  | 40          |          |     |    |
|  |                  | 60          |          |     |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| viscose-spinning solution                            |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ●   | ●  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| wax alcohol*   | technically pure | 20          | ⊙        | ●   | ⊙  |
|  |                  | 40          | ○        | ●   | ○  |
|  |                  | 60          |          | ●   |    |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
| detergent*   | for suds usual   | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ⊙   | ●  |
|  |                  | 80          | ●        |     |    |
|  |                  | 100         |          |     |    |
| water (distilled, deionized, completely desalinated) |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ●   | ●  |
|  |                  | 80          | ●        |     |    |
|  |                  | 100         | ●        |     |    |
| water, drinking water chlorinated                    |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ●   | ●  |
|  |                  | 80          | ●        |     |    |
|  |                  | 100         | ●        |     |    |
| water, sewage water without organic solvents         |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        |     | ●  |
|  |                  | 80          | ●        |     |    |
|  |                  | 100         |          |     |    |
| water, condensation                                  |                  | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ⊙   | ●  |
|  |                  | 80          | ●        |     |    |
|  |                  | 100         |          |     |    |
| hydrogen   | technically pure | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ●   | ●  |
|  |                  | 80          |          |     |    |
|  |                  | 100         | ○        |     |    |
| hydrogen peroxide*                                   | 10%, hydrous     | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ●        | ⊙   | ●  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |
|  | 30%, hydrous     | 20          | ●        | ●   | ●  |
|  |                  | 40          | ●        | ●   | ●  |
|  |                  | 60          | ⊙        |     | ●  |
|  |                  | 80          |          |     |    |
|  |                  | 100         |          |     |    |

| Agressive Medium        | Concentration    | Temperature | Material |     |    |
|-------------------------|------------------|-------------|----------|-----|----|
|                         |                  |             | PP       | PVC | PE |
|                         | 50%, hydrous     | 20          |          | ●   | ●  |
|                         |                  | 40          |          |     |    |
|                         |                  | 60          |          |     |    |
|                         |                  | 80          |          |     |    |
|                         |                  | 100         |          |     |    |
|                         | 90%, hydrous     | 20          | ○        | ●   | ●  |
|                         |                  | 40          |          |     |    |
|                         |                  | 60          |          |     | ○  |
|                         |                  | 80          |          |     |    |
|                         |                  | 100         |          |     |    |
| wine, red and white     | usual            | 20          | ●        | ●   | ●  |
|                         |                  | 40          | ●        |     | ●  |
|                         |                  | 60          | ●        |     | ●  |
|                         |                  | 80          |          |     |    |
|                         |                  | 100         |          |     |    |
| wine vinegar* (vinegar) | usual            | 20          | ●        | ●   | ●  |
|                         |                  | 40          | ●        | ●   | ●  |
|                         |                  | 60          | ●        | ●   | ●  |
|                         |                  | 80          | ●        |     |    |
|                         |                  | 100         |          |     |    |
| acidity of wine         | each, hydrous    | 20          | ●        | ●   | ●  |
|                         |                  | 40          | ●        | ●   | ●  |
|                         |                  | 60          | ●        | ⊙   | ●  |
|                         |                  | 80          |          |     |    |
|                         |                  | 100         |          |     |    |
| xylol                   | technically pure | 20          | ○        | ○   | ○  |
|                         |                  | 40          |          |     |    |
|                         |                  | 60          |          |     |    |
|                         |                  | 80          |          |     |    |
|                         |                  | 100         |          |     |    |
| zinc salts              | each, hydrous    | 20          | ●        | ●   | ●  |
|                         |                  | 40          | ●        | ●   | ●  |
|                         |                  | 60          | ●        | ⊙   | ●  |
|                         |                  | 80          |          |     |    |
|                         |                  | 100         |          |     |    |
| citric acid             | 10%, hydrous     | 20          | ●        | ●   | ●  |
|                         |                  | 40          | ●        | ●   | ●  |
|                         |                  | 60          | ●        | ⊙   | ●  |
|                         |                  | 80          | ●        |     |    |
|                         |                  | 100         | ●        |     |    |
| sugar syrup             | usual            | 20          | ●        | ●   | ●  |
|                         |                  | 40          | ●        | ●   | ●  |
|                         |                  | 60          | ●        | ⊙   | ●  |
|                         |                  | 80          | ●        |     |    |
|                         |                  | 100         | ●        |     |    |

## Key

|    |                              |
|----|------------------------------|
| ●  | resistant                    |
| ⊙  | limited resistant            |
| ○  | not resistant                |
| ng | not tested                   |
| *  | stress cracking              |
| GL | saturated solution           |
| °  | moisture expansion/softening |