



## CHEMICAL RESISTANCE

| Chemicals            | °C         | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|----------------------|------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                      | Conc %     | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Acetaldehyde         | 40%        | 3   | 3  | -  | 1    | -  | -   | 1  | 1  | 2  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | 2   | 3  | 3  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Acetaldehyde         | 100%       | -   | -  | -  | 1    | -  | -   | 1  | 2  | 2  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | 3  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Acetic achydride     | Techn.pure | 3   | 3  | -  | 2    | -  | -   | 3  | 3  | -  | 1  | -  | -   | 1   | 1  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Acetic, acid         | 10%        | 1   | 3  | -  | 3    | 3  | -   | 1  | 1  | 1  | 1  | 1  | -   | 1   | 3  | -   | 1  | 1  | -  | 2   | 2  | 2  | 1    | 1  | 1    | -  | 2   | -  | 2    | 2  |
| Acetic, acid         | 50%        | -   | -  | -  | 3    | 3  | -   | 1  | 1  | 1  | 1  | 1  | 2   | 3   | 3  | -   | 1  | 1  | -  | 2   | -  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Acetic, acid         | 100%       | 3   | 3  | -  | 3    | 3  | -   | -  | -  | -  | 1  | 2  | 3   | 3   | 3  | -   | -  | -  | -  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Acetone              | 10%        | 3   | 3  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | 3  | -   | 3  | 3  | -  | 3   | 3  | 3  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Acetone              | 100%       | -   | -  | -  | 1    | -  | -   | 2  | 2  | -  | 1  | 3  | 3   | 2   | 3  | -   | 3  | 3  | -  | 3   | 3  | 3  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Acetonitrile         |            | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 2  | 3  | -   | 3   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 2    | -  | 2   | -  | 3    | 3  |
| Acetophenone         | 100%       | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 2  | -   | 1   | -  | -   | -  | 3  | -  | 3   | 3  | 3  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Acetylene            |            | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | 2   | -  | -  | 1    | -  | 1    | -  | 1   | -  | 1    | -  |
| Acetylsalicylic acid |            | 3   | 3  | -  | 1    | -  | -   | -  | -  | -  | 1  | 2  | -   | 3   | -  | -   | 1  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | -    | -  |
| Acrylonitrile        | 100%       | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 2  | 3  | -   | 2   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Adipic, acid         | Saturated  | -   | -  | -  | -    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 2  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Almond oil           |            | 1   | 1  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | 2  | 3  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Aluminum chloride    | Saturated  | 1   | 1  | -  | 2    | 3  | 3   | 1  | 1  | -  | 1  | 1  | 1   | 3   | 3  | 3   | -  | -  | -  | 1   | 1  | -  | 1    | -  | 1    | -  | 1   | -  | 1    | -  |
| aminoethanol         | 100%       | 3   | 3  | -  | 2    | -  | -   | -  | -  | -  | 1  | -  | -   | 2   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Ammonium acetate     | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | 1  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | 2  | 1    | 1  | 1    | -  | 2   | -  | 1    | 1  |
| Ammonium bicarbonate | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | -  |
| Ammonium Chloride    | Aqueous    | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | 2  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Ammonium fluoride    | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 2  | 1    | 1  |
| Ammonium fluoride    | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | 1  | 1  | -  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 2  | 2  | 1    | 1  | 1    | -  | 1   | 2  | 1    | 1  |
| Ammonium Hydroxide   | 5%         | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 2  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 2  |
| Ammonium Hydroxide   | 30%        | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 2  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 1    | 2  |
| Ammonium nitrate     | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | 2  | 1  | 1  | 1   | 1   | 3  | -   | 1  | -  | -  | 1   | 1  | 1  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Ammonium sulfate     | Saturated  | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | 1  | 1  | 1  | 1   | 1   | -  | -   | 1  | -  | -  | 1   | 1  | 2  | 1    | 1  | 1    | -  | 1   | 2  | 1    | 1  |
| Amyl acetate         | 100%       | 3   | 3  | -  | 1    | -  | -   | 1  | 2  | -  | 2  | 3  | -   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | -  | 1    | 1  | 2    | 3  | 3   | 3  | 3    | 3  |
| Amyl alcohol         | 100%       | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | 1  | 2  | -  | 2   | -  | -  | 1    | 1  | 2    | -  | 1   | 3  | 2    | -  |
| Amyl chloride        |            | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 1   | -  | 3    | 3  |
| Aniline              | 100%       | 3   | 3  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | 2  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 1   | 3  | 3    | 3  |
| Anisole              | 100%       | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 3  | 3  | -   | 2   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Apple juice          |            | 1   | 1  | 1  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Aqua regia           |            | -   | -  | -  | 3    | 3  | -   | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Arsenic acid         |            | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | 1  | 1  | -  | 2   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Ascorbic acid        |            | 3   | 3  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
|                      |            |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Barium carbonate     | Saturated  | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Barium chloride      | Saturated  | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Barium Hydroxide     | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Barium sulfide       | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Beer                 |            | 1   | 1  | 1  | 1    | 1  | -   | 1  | 1  | 1  | 1  | 1  | 1   | 1   | 1  | -   | 1  | -  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Benzaldehyde         |            | 1   | -  | -  | 2    | -  | -   | 2  | 2  | -  | 1  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | 3  | 3   | 3  | 3    | 3  |
| Benzene              | 100%       | 3   | 3  | -  | 1    | -  | -   | 3  | 3  | -  | 2  | 3  | 3   | 1   | 1  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 2   | 2  | 3    | 3  |
| Benzoic, acid        | Saturated  | 1   | 1  | 1  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 2  | -   | 1   | 3  | 3   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 2    | -  | 1   | 1  | 2    | -  |
| Benzoyl chloride     | 100%       | -   | -  | -  | 3    | 3  | 3   | 2  | 2  | -  | 2  | 3  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 3    | 3  |
| Benzyl alcohol       | 100%       | -   | -  | -  | 3    | 3  | 3   | 3  | 3  | 3  | 3  | 3  | -   | 1   | -  | -   | 3  | 3  | 3  | 2   | 2  | -  | 1    | 1  | 2    | -  | 1   | -  | 3    | 3  |



## CHEMICAL RESISTANCE

| Chemicals                | °C<br>Conc % | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|--------------------------|--------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                          |              | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Benzyl chloride          | 100%         | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | 3   | 2   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Benzyl ether             |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Boric, acid              | 10%          | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 2   | 2  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Boric, acid              | Aqueous      | 1   | 1  | -  | 2    | 2  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | 2  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Brackish water           |              | 1   | 1  | 1  | 1    | 1  | 1   | 1  | 1  | 1  | 1  | 1  | 1   | 1   | 1  | 1   | 1  | 1  | 1  | 1   | 1  | 1  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Bromic acid              | Saturated    | -   | -  | -  | 2    | 2  | -   | -  | -  | -  | 2  | -  | -   | 3   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | -  | 1   | -  | 3    | 3  |
| Bromine, liquid          | 100%         | 1   | 1  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 2  | 3    | 3  | 1   | 2  | 3    | 3  |
| Bromine, steams          |              | -   | -  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | 3   | 3   | 3  | 3   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | 2  | 3    | 3  |
| Bromobenzene             |              | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Butane                   | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | -  | -   | 3  | 3  | -  | 2   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Butanol                  | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | 2   | 1   | 1  | -   | 1  | 2  | 3  | 2   | 3  | -  | 1    | 1  | 1    | -  | 2   | 3  | 1    | -  |
| Butene                   |              | -   | -  | -  | 1    | -  | -   | 2  | 2  | -  | 3  | 3  | 3   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 2    | -  |
| Butter                   |              | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 1    | 1  |
| Butyl acetate            | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 2  | 3  | 3   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | 3  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Butyl acrilate           |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 2  | -  | -   | 1   | 2  | -   | 2  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Butyl ether              |              | -   | -  | -  | 1    | -  | -   | 2  | 3  | 3  | 2  | 3  | 3   | 1   | -  | -   | -  | -  | -  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Butylene glycol          | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 3   | 3  | 1    | -  |
| Butylphenol              | Saturated    | -   | -  | -  | 2    | -  | -   | 1  | -  | -  | 1  | 1  | -   | 3   | 3  | -   | -  | -  | -  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 2   | -  | 3    | 3  |
| Butyric acid             |              | -   | -  | -  | 2    | 2  | -   | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 2   | 3  | 3    | 3  |
| Calcium acetate          |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Calcium bicarbonate      | Saturated    | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Calcium carbonate        | Saturated    | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Calcium chloride         | Saturated    | 1   | 1  | 1  | 2    | -  | -   | -  | -  | -  | 1  | 1  | -   | 2   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 2   | -  | 2    | -  |
| Calcium chloride aqueous |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 2   | -  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Calcium hydroxyde        |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Calcium hydroxyde        | Aqueous      | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Calcium Hypochlorite     | Saturated    | -   | -  | -  | 1    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 2  | -  | 1   | 3  | -  | 1    | 1  | 1    | -  | 1   | 2  | 3    | 3  |
| Calcium Hypochlorite     | Aqueous      | -   | -  | -  | 3    | 3  | 3   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 2  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 2  | 3    | 3  |
| Calcium nitrate          | 50%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 3    | 3  |
| Calcium nitrate aqueous  |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Calcium phosphate        |              | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Calcium sulfate          | Saturated    | 1   | 1  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Calcium sulfide          |              |     |    |    | 1    | -  | -   | 2  | 2  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | 2  |
| Camphor oil              |              | 1   | 1  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | 3   | 1   | -  | -   | -  | -  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | -  | 1    | -  |
| Carbon dioxide           | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Carbon dioxide           |              |     |    |    | 1    | -  | -   | 1  | 2  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Carbon dioxide, dry      |              | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Carbon dioxide, dump     |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Carbon disulfide         | 100%         | 3   | 3  | -  | 3    | -  | -   | 3  | 3  | -  | 3  | 3  | -   | 3   | 3  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Carbon tetrachloride     |              | -   | -  | -  | 3    | 3  | 3   | 3  | 3  | 3  | 3  | 3  | -   | 1   | 2  | -   | 3  | 3  | -  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Castor oil               | 100%         | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 1    | -  |
| Chlorine                 | 10%          | 1   | 1  | -  | 3    | 3  | -   | 2  | 3  | -  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 1   | 1  | -  | 1    | 1  | 1    | -  | 2   | -  | 3    | 3  |
| Chlorine                 | 97%          | -   | -  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Chloroacetic acid        | 50%          | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 1  | -   | 3   | 3  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 3    | 3  |
| Chloroacetophenone       |              | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 3  | 3  | -  | 3   | 3  | 3  | 2    | -  | 2    | -  | 3   | 3  | 3    | 3  |



## CHEMICAL RESISTANCE

| Chemicals             | °C<br>Conc % | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|-----------------------|--------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                       |              | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Chlorobenzene         |              | -   | -  | -  | 3    | 3  | -   | 2  | 3  | 3  | 2  | 3  | 3   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Chloroethane          | 100%         | -   | -  | -  | 1    | -  | -   | 2  | 3  | 3  | 2  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Chloroethanol         | 100%         | -   | -  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | -  | -   | 2   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Chloroform            | 100%         | 3   | 3  | -  | 2    | 3  | -   | 3  | 3  | -  | 2  | 3  | 3   | 3   | 3  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | 3  | 3    | 3  |
| Chlorosulfonic acid   | 100%         | 3   | 3  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Chlorotoluene         |              | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 2  | -  | -   | -   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Chromic acid          | ≤ 40%        | 1   | 3  | -  | 3    | 3  | 3   | 1  | -  | -  | 2  | 2  | 3   | 3   | 3  | -   | 1  | -  | -  | 1   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Chromic acid          | 50%          | -   | -  | -  | 3    | 3  | 3   | 2  | 3  | -  | 2  | 2  | 3   | 3   | 3  | -   | 2  | 2  | -  | 1   | 2  | -  | 1    | 1  | 3    | 3  | 1   | -  | 3    | 3  |
| Citric acid           | 10%          | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 3  | 3   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Citric acid           | 50%          | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Citric acid           | Saturated    | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Chlorine water        | Saturated.   | -   | -  | -  | 3    | 3  | -   | 3  | -  | -  | 2  | 3  | -   | 3   | 3  | -   | 3  | 3  | -  | 2   | 2  | -  | 1    | 1  | 2    | -  | 1   | -  | 3    | 3  |
| Coconut oil           |              | 1   | 1  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | 1  |
| Cod-liver oil         |              | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 1    | -  |
| Colza oil             |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 2  |
| Copper acetate        |              | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | 2  |
| Copper sulfate        | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Cotton oil            |              | 1   | 1  | -  | 1    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 1    | -  |
| Cresol                | > 90%        |     |    |    | 3    | 3  | 3   | 3  | 3  | 3  | 1  | 2  | -   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 1   | -  | 3    | 3  |
| Cupric chloride       | Saturated    | -   | -  | -  | 2    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Cupric nitrate        | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | 1  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Cuprous chloride      |              | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Cuprous cyanide       | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Cyclohexane           | 100%         | 3   | 3  | -  | 1    | -  | -   | 2  | 3  | 3  | 2  | 3  | -   | 1   | 1  | -   | 3  | 3  | -  | 1   | 2  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Cyclohexanol          | 100%         | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 2  | -   | 1   | -  | -   | 2  | 2  | -  | 2   | 3  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 2    | 2  |
| Cyclohexanone         | 100%         | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 2  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
|                       |              |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Decahydronaphthalene  | 100%         | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 2   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Decane                |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 2    | 2  |
| dextrin               | Aqueous      | -   | -  | -  | 1    | 1  | 1   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Detergent:            |              |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| - Brightener          |              | -   | -  |    | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| - Cleaning agents     |              | -   |    |    | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | -   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| - Washingup liquid    |              | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Dibutyl phthalate     | 100%         | -   | -  | -  | 1    | -  | -   | 2  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 2    | -  | 1   | 2  | 3    | 3  |
| Dichloraacetic acid   | 50%          | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | -  | -  | -  | 2   | 2  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Dichloraacetic acid   | 100%         | -   | -  | -  | 3    | 3  | -   | 2  | 2  | -  | 1  | 2  | -   | 3   | 3  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Dichlorobenzene       |              | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 2  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Dichloroethane        | 100%         | -   | -  | -  | 2    | -  | -   | 2  | 2  | -  | 2  | 2  | -   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 2   | -  | 3    | 3  |
| dichloroethylene      | 100%         | -   | -  | -  | 2    | -  | -   | 3  | 3  | 3  | 2  | -  | -   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 2   | 3  | 3    | 3  |
| Dichloropropane       |              | -   | -  | -  | 3    | -  | -   | -  | -  | -  | 3  | 3  | 3   | 2   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Dicycloexyl amine     |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Dicycloexyl phthalate |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 2  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Diesel fuel           |              | -   | -  | -  | 1    | 1  | -   | 1  | 2  | -  | 1  | 3  | -   | 1   | 1  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | 1  |
| Diethanolamine        | 100%         | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | 1  | -   | 1  | -  | -  | 1   | -  | -  | 1    | -  | 2    | -  | 2   | -  | 3    | 3  |
| Diethyl ether         | 100%         | -   | -  | -  | 1    | 1  | -   | 3  | 3  | -  | 3  | 3  | -   | 1   | 2  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |



## CHEMICAL RESISTANCE

| Chemicals                        | °C<br>Conc % | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|----------------------------------|--------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                                  |              | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Diethylamine                     |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 3   | 3  | 3    | 3  |
| Diethylbenzene                   |              | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Diethylene glycol                | 100%         | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 2   | 3  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | -  |
| Diglycolic acid                  | 30%          | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Diisopropyl ether                |              | -   | -  | -  | 3    | 3  | -   | 3  | 3  | -  | 2  | 3  | -   | -   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Dimethyl ether                   |              | -   | -  | -  | 1    | -  | -   | 2  | -  | -  | 3  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Dimethyl fthtalate               |              | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 1   | -  | 3    | 3  |
| Dimethyl formamide               | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 1  | -   | 1   | 1  | -   | 3  | 3  | -  | 2   | 3  | -  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| dimethylamine                    | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 2   | -  | -   | -  | -  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Diocetyl phthalate               | 100%         | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | -   | 2   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 2    | -  | 1   | 2  | 3    | 3  |
| Dioxane                          | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 2  | 2  | -   | 1   | 1  | -   | 3  | 3  | 3  | 3   | 3  | -  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Diphenyl ether                   |              | -   | -  | -  | 2    | -  | -   | 2  | -  | -  | 3  | 3  | -   | 1   | 1  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Ethyl acetate                    | 100%         | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 1  | 2  | 3   | 1   | 1  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Ethyl alcohol                    | 40%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 2  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Ethyl alcohol                    | 50%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Ethyl alcohol                    | 96%          | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 1  | 1   | 1   | 1  | -   | 2  | 3  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | 2  |
| Ethyl benzoate                   |              | -   | -  | -  | 2    | -  | -   | 2  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | -  | 1    | -  | 2    | -  | 2   | -  | 3    | 3  |
| Ethyl chloroacetate              |              | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 3  | 3  | 3  | 2   | 3  | 3  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Ethylbenzene                     |              | -   | -  | -  | 2    | -  | -   | 2  | 3  | -  | 2  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Ethylene glycol                  | 100%         | 1   | 1  | -  | 2    | 2  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Ethylene oxide                   |              | -   | -  | -  | 2    | -  | -   | 2  | 3  | 3  | 2  | 2  | -   | 1   | -  | -   | 3  | 3  | 3  | 2   | 3  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Etylene                          |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 2   | -  | 2    | 2  |
| Fluorine                         |              | 3   | 3  | -  | 3    | 3  | 3   | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 1   | -  | -  | 1    | 1  | 3    | 3  | 2   | -  | 3    | 3  |
| Fluorobenzene                    |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Formaldehyde solution            | 10%          | -   | -  | -  | 2    | 2  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 3  | 3  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 2   | -  | 1    | -  |
| Formaldehyde solution            | 30%          | -   | -  | -  | 2    | 2  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 3  | 3  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 1    | -  |
| Formaldehyde solution            | 40%          | 1   | 1  | -  | 2    | 2  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | 1  | -   | 3  | 3  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | -  |
| Formamide                        | Techn.pure   | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 1   | 2  | 3    | 3  |
| Formic acid                      | 3%           | 1   | 1  | -  | 2    | 3  | -   | 1  | 1  | -  | 1  | 1  | 2   | 1   | 3  | 3   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 2   | -  | 3    | 3  |
| Formic acid                      | 50%          | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | 3   | 2  | 2  | -  | 1   | 2  | -  | 1    | 1  | 2    | 3  | 3   | 3  | 3    | 3  |
| Formic acid                      | 100%         | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 2  | 2   | 3   | 3  | 3   | 2  | 3  | 3  | 2   | 3  | 3  | 1    | 1  | 2    | 3  | 3   | 3  | 3    | 3  |
| Fructosw                         | Sol.         | -   | -  | -  | 1    | 1  | 1   | 1  | 1  | 1  | 1  | 1  | 1   | 1   | 1  | 1   | 1  | 1  | 1  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Fruit juice                      |              | 1   | 1  | 1  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Furan                            |              |     |    |    | 2    | -  | -   | -  | -  | -  | 2  | -  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Gasoline (hydrocarbon aliphatic) |              | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 3  | 3  | 3   | 1   | 2  | -   | 3  | 3  | 3  | 2   | 3  | -  | 1    | 1  | 3    | 3  | 1   | 2  | 2    | -  |
| Gelatin                          |              | 1   | 1  | -  | 1    | 1  | 1   | 1  | 1  | 1  | 1  | 1  | 1   | 1   | 1  | 1   | 1  | 1  | 1  | 1   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Glucose                          | 20%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Glycerol                         |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Glycine                          | 10%          | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | 1  | 1   | -  | 2    | 2  |
| Glycolic acid                    | 30%          | -   | -  | -  | 3    | 3  | 3   | 1  | -  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Glycolic acid                    | 70%          | -   | -  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | -  |



## CHEMICAL RESISTANCE

| Chemicals              | °C        | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|------------------------|-----------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                        | Conc %    | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Heptane                | 100%      | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 1  | 3  | -   | 1   | 1  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | 1  |
| Hexamethylenetetramine |           | 3   | 3  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | 1  | 1  | -  | -   | -  | -  | 1    | -  | 1    | -  | 1   | -  | 2    | -  |
| Hexane                 |           | -   | -  | -  | 1    | -  | -   | 2  | 2  | -  | 1  | 2  | -   | 1   | 1  | -   | 3  | 3  | -  | 2   | 3  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | 1  |
| Hexene                 | 100%      | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 2  | -   | 1   | -  | -   | 2  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Hydrazine              | 10%       | -   | -  | -  | 3    | 3  | 3   | 1  | -  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 2   | 3  | 3    | 3  |
| Hydrobromic, acid      | 50%       | 1   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 2  | 3   | 3   | 3  | -   | 3  | 3  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 1   | -  | 3    | 3  |
| Hydrofluoric acid      | 4%        | 1   | 2  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | 1  | 2  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 1   | 2  | 2    | -  |
| Hydrofluoric acid      | 50%       | 1   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | 3  | 3  | -  | 2   | 2  | -  | 1    | 1  | 2    | 3  | 1   | 2  | 2    | 3  |
| Hydrofluoric acid      | 70%       | 3   | 3  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | -   | 3   | 3  | -   | 3  | 3  | -  | 2   | 3  | -  | 1    | 1  | 2    | 3  | 2   | -  | 3    | 3  |
| Hydrogen               | 100%      | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | -   | -  | -   | 1  | -  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Hydrogen chloride      | 2% - 7%   | 1   | 1  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | 1   | 3   | 3  | 3   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 3  |
| Hydrogen chloride      | 10% - 20% | 1   | 2  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | 3   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Hydrogen chloride      | 35%       | 1   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 2  | 2   | 3   | 3  | 3   | 2  | 2  | -  | 2   | 2  | -  | 1    | 1  | 2    | -  | 1   | 2  | 3    | 3  |
| Hydrogen peroxide      | 3%        | 1   | 3  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | 2  | 1    | 1  | 1    | -  | 1   | -  | 2    | 3  |
| Hydrogen peroxide      | 30%       | 2   | 3  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | -  | -   | 3   | 3  | -   | 1  | 2  | -  | 1   | 2  | 2  | 1    | 1  | 2    | -  | 1   | 1  | 3    | 3  |
| Hydrogen peroxide      | 100%      | -   | -  | -  | 3    | 3  | -   | 1  | 3  | -  | 3  | 3  | -   | 3   | 3  | -   | 3  | 3  | -  | 2   | 2  | -  | 1    | -  | 2    | -  | 1   | -  | 3    | 3  |
| Hydrogen sulfide       | 100%      | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 2  | -  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 2   | -  | 3    | 3  |
| Hydroquinone           | Saturated | -   | -  | -  | 3    | 3  | 3   | 1  | 2  | -  | 1  | -  | -   | 2   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Iodine, tincture of    |           | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 1  | -   | 1   | 1  | -   | 2  | 2  | -  | 3   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Isoamyl alcohol        |           | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 2  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | 3  | 2    | 2  |
| isobutanol             |           | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | -  | 1    | -  | 1   | -  | 2    | 3  |
| Isobutyl acetate       |           | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 1    | -  | 3   | 3  | 3    | 3  |
| Isopropyl acetate      |           | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Isopropyl alcohol      | 100%      | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | 1  | 1  | -  | 2   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Kerosene               |           | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 2  | 2  | -   | 1   | 1  | -   | 3  | 3  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Lactic acid            | ≤90%      | 1   | 1  | -  | 2    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | 3  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 2    | 3  | 1   | 1  | 1    | 3  |
| Lactose                |           | -   | -  | -  | 1    | 1  | 1   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Lanolin                |           | -   | -  | -  | 1    | -  | -   | 2  | 2  | -  | 2  | 2  | -   | 1   | -  | -   | 1  | 1  | -  | 2   | 2  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | 1  |
| Lauryl alcohol         |           | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 2    | 2  |
| Lead acetate           |           | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Lead nitrate           |           | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Lead sulfate           |           | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | -  |
| Lithium bromide        |           | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Magnesium bromide      |           | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | 1  | 1   | -  | 1    | -  |
| Magnesium carbonate    | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Magnesium chloride     | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | -  |
| Magnesium hidroxide    | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Magnesium nitrate      | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | 1  | 1   | -  | 1    | -  |
| Magnesium sulfat       | Saturated | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | -  |
| Maleic acid            | Saturated | 1   | 1  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Maleic acid            | Aqueous   | 1   | 1  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | 1  |
| Menthol                |           | -   | -  | -  | 2    | -  | -   | 2  | 3  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 2    | 2  |



## CHEMICAL RESISTANCE

| Chemicals               | °C         | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|-------------------------|------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                         | Conc %     | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Mercuric nitrate        | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Mercuric chloride       | Aqueous    | 1   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | 2  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Mercuric cyanide        | Saturated  | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Mercury                 | 100%       | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Methyl acetate          | 100%       | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Methyl acrylate         |            | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Methyl alcohol          |            | 3   | 3  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 2  | 3  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 2   | 3  | 2    | 2  |
| Methyl amine            | 32%        | -   | -  | -  | 3    | 3  | -   | 1  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | 2   | 3  | -  | 1    | -  | 1    | -  | 3   | 3  | 3    | 3  |
| Methyl benzene          |            | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 2  | 3  | -   | 1   | 2  | -   | 3  | 3  | 3  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | 2  | 3    | 3  |
| Methyl bromide          | 100%       | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Methyl butyl ketone     |            | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 1    | -  | 3   | 3  | 3    | 3  |
| Methyl chloride         | 100%       | 3   | 3  | -  | 3    | 3  | -   | 2  | -  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Methyl dichloroacetate  |            | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Methyl ethyl ether      | 100%       | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Methyl ethyl ketone     | 100%       | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 1  | 2  | -   | 1   | 1  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Methyl isobutyl ketone  |            | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Methyl isopropyl ketone |            | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Methyl methacrylate     | 100%       | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Methyl propyl ketone    |            | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Methyl sulfuric acid    | 50%        | -   | -  | -  | 3    | 3  | -   | -  | -  | -  | 1  | 3  | -   | 3   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Methylchloroacetate     | Techn.pure | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | 1  | -   | 2   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Methylcyclohexane       |            | -   | -  | -  | 1    | -  | -   | 2  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Methylcyclopentane      |            | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Methylene chloride      |            | -   | -  | -  | 2    | 3  | -   | 3  | 3  | 3  | 2  | 3  | -   | 2   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 2   | 2  | 3    | 3  |
| Milk                    |            | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 2    | -  | 1   | -  | 1    | -  |
| Mineral oil             |            | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | 1  |
| Monochloroethane        |            | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 2  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Morpholine              | Techn.pure | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | 2  | 3    | 3  |
| Motor oil               |            | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 2  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 1    | -  |
| Naphtha                 |            | 1   | 3  | -  | 1    | -  | -   | 2  | 3  | -  | 1  | 3  | 3   | 1   | -  | -   | 2  | -  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Naphthalene             | 100%       | 3   | 3  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | 1  | -   | 2  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Nickel acetate          |            | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | -  |
| Nickel dichloride       | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Nickel sulfate          | Saturated  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Nickelous nitrate       | Saturated  | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Nitric acid             | 1%-10%     | 3   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 2  | 3   | 3   | 3  | -   | 1  | 3  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Nitric acid             | 50%        | 3   | 3  | -  | 3    | 3  | 3   | 2  | 3  | -  | 2  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 2   | 2  | -  | 1    | 1  | 3    | 3  | 1   | -  | 3    | 3  |
| Nitric acid             | 100%       | 3   | 3  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | 3   | 3   | 3  | -   | -  | -  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Nitro benzoic acid      |            | -   | -  | -  | 2    | -  | -   | 1  | -  | -  | 1  | -  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 2   | -  | 1    | -  |
| Nitrobenzene            | 100%       | -   | -  | -  | 3    | 3  | 3   | 3  | 3  | -  | 1  | 3  | 3   | 2   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Nitroethane             |            | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | -  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Nitropropane            |            | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | -  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Nitrotoluene            |            | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | -   | 2   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Nonyl alcohol           |            | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 1   | -  | 2    | 2  |



## CHEMICAL RESISTANCE

| Chemicals               | °C           | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|-------------------------|--------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                         | Conc %       | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Octane                  |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 3  | 3  | -  | 2   | 3  | -  | 1    | -  | 3    | 3  | 1   | -  | 2    | 2  |
| Oils and fats vegetable |              | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 2  | -  | -  | 2   | 2  | -  | 1    | 1  | 2    | 2  | 1   | 1  | 2    | -  |
| Oils essential          |              | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 2  | 3  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | 2  | 2    | -  |
| Oleic acid              | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 1  | 2  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 2    | -  |
| Oleum                   |              | -   | -  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | 3   | 3   | 3  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Olive oil               |              | 1   | 1  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | 1  |
| Oxalic, acid            | Saturated    | 1   | 3  | -  | 2    | 3  | 3   | 1  | 1  | 1  | 1  | 2  | -   | 3   | 3  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Oxygen                  | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | 2  |
| Ozone                   |              | 3   | 3  | -  | 3    | 3  | -   | 2  | 3  | -  | 2  | 3  | -   | 3   | 3  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | -  | 1    | -  | 1   | -  | 3    | 3  |
| Palm oil                |              | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | 1  |
| Palmitic acid           | Techn.pure   | -   | -  | -  | 1    | 1  | -   | 2  | 2  | -  | 2  | 3  | -   | 1   | -  | -   | 1  | 1  | -  | 2   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 2    | 2  |
| Paraffins               | 100%         | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | -  | -  | 1   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | 2  |
| Paraformaldehyde        |              | -   | -  | -  | -    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 1   | -  | 2    | 2  |
| Peanut oil              |              | 1   | 1  | -  | -    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Pectin                  |              | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Pentanol,1              |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 2  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 1   | 3  | 2    | -  |
| Pentanone,3             |              | -   | -  | -  | 2    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 2   | -  | 3    | -  |
| Perchloric acid         | 20%          | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | -   | 3   | 3  | 3   | -  | -  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Perchloric acid         | 70%          | -   | -  | -  | 3    | 3  | -   | 2  | 3  | -  | 3  | 3  | -   | 3   | 3  | -   | 1  | 2  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 1   | 1  | 3    | 3  |
| Perchlorobutadiene      |              | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Petroleum               |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 2    | 2  |
| Petroleum ether         |              | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 2  | 2  | -   | 1   | 1  | -   | 3  | 3  | -  | 1   | 1  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | 2  |
| Phenol                  | 10%          | -   | -  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | 3   | 3  | 3  | 3  | 2   | 2  | -  | 1    | 1  | 3    | 3  | 1   | 2  | 3    | 3  |
| Phenol                  | 90%          | 3   | 3  | -  | 3    | 3  | 3   | 2  | 3  | -  | 1  | 1  | -   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 2   | -  | 3    | 3  |
| Phenylhydrazine         | Techn.pure   | -   | -  | -  | 2    | -  | -   | 2  | -  | -  | 2  | 3  | -   | 1   | -  | -   | -  | -  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 1   | 2  | 3    | 3  |
| Phosgene                | Liquid       | -   | -  | -  | 1    | -  | -   | -  | -  | -  | -  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 2    | -  |
| Phosgene                | Gas          | -   | -  | -  | 1    | -  | -   | 2  | -  | -  | 2  | 3  | -   | 1   | -  | -   | -  | -  | -  | 3   | 3  | -  | 1    | 1  | 2    | -  | 2   | -  | 2    | -  |
| Phosphine               | Concentrated | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 1   | -  | 3    | 3  |
| Phosphoric acid         | 20%          | -   | -  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 1  | 1   | 3   | 3  | 3   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Phosphoric acid         | 85%          | 1   | 3  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 1  | 1   | 3   | 3  | 3   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 2    | -  | 1   | 1  | 3    | 3  |
| Phosphorus oxychloride  | 100%         | -   | -  | -  | 3    | 3  | 3   | -  | -  | -  | 1  | 2  | -   | 3   | 3  | 3   | -  | -  | -  | 3   | 3  | 3  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Phthalic acid           | Saturated    | -   | -  | -  | 2    | 2  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | 1   | 3  | -  | 1    | 1  | 1    | -  | 1   | 2  | 3    | 3  |
| Picric acid             | Saturated    | -   | -  | -  | 2    | -  | -   | 1  | -  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | 3   | 3  | -  | 1    | -  | 2    | -  | 1   | -  | 3    | 3  |
| Piperidine              |              | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Potassium borate        | 10%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Potassium acetate       |              | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | -  | -  | 1    | -  | 1    | 1  | 2   | -  | 2    | 2  |
| Potassium bisulfate     |              | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Potassium bitartrate    | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Potassium bromate       | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Potassium bromide       | Saturated    | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Potassium carbonate     | Saturated    | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Potassium chlorate      | Saturated    | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Potassium chloride      | Aqueous      | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Potassium chromate      | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | 2  |
| Potassium cyanide       | Aqueous      | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | 2   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |



## CHEMICAL RESISTANCE

| Chemicals                 | °C           | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|---------------------------|--------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                           | Conc %       | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Potassium dichromate      | Saturated    | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | 2  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | 2  |
| Potassium fluoride        | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Potassium hydroxide       | 10%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 3   | 3  | 2    | 2  |
| Potassium hydroxide       | 30%          | -   | -  | -  | 1    | 2  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -1 | -   | 1  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 3   | 3  | 2    | 2  |
| Potassium hydroxide       | Concentrated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 2  | 2  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 3   | 3  | 2    | 2  |
| Potassium hypochlorite    |              | -   | -  | -  | 2    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 3   | 3  | -   | 2  | -  | -  | 1   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 2    | 2  |
| Potassium iodide          | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Potassium nitrate         | 50%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Potassium perchlorate     | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Potassium permanganate    |              | -   | -  | -  | 3    | 3  | 3   | 1  | 2  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 2  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Potassium persulfate      | Saturated    | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Potassium sulfate         | Saturated    | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Potassium sulfide         |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Potassium sulfite         | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Propane gaseous           |              | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 2  | 3  | -   | 1   | 1  | -   | 3  | 3  | -  | 1   | 2  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Propane liquid            | 100%         | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | -  | -   | 1   | 1  | -   | -  | -  | -  | 2   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Propionic acid            | 50%          | -   | -  | -  | 2    | 2  | -   | 1  | 2  | -  | 1  | 1  | -   | 3   | 3  | -   | 3  | 3  | -  | 2   | 2  | -  | 1    | 1  | 2    | -  | 1   | 1  | 3    | 3  |
| Propyl acetate            |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Propyl alcohol            |              | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 2  | -  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Propyl nitrate            |              | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | -  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Propylene                 |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 1   | -  | 3    | 3  |
| Propylene glycol          |              | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 2   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Propylene oxid            |              | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 3  | 3  | 3  | 2   | 3  | -  | 1    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Pyridine                  | 100%         | 3   | 3  | -  | 1    | -  | -   | 1  | 2  | -  | 2  | 2  | -   | 1   | 1  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | 1  | 3    | 3  | 3   | 3  | 3    | 3  |
| Pyrrole                   |              |     |    |    | 2    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
|                           |              |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Refrigerant:              |              |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Difluoromonochloromethane |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 1    | -  | 3   | 3  | 3    | 3  |
| Difluoroethane            |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 3   | 3  | 1    | -  |
| Difluoromethane           |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 3   | 3  | 1    | -  |
| Tetrafluoromethane        |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 2   | -  | 1    | -  |
| Resorcinol                | Saturated    | -   | -  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | 2  | -  | 2   | 3  | -  | 1    | -  | 3    | -  | 3   | -  | 3    | -  |
|                           |              |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Salicylaldehyde           |              | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 3  | 3  | 3  | 2   | 3  | -  | 1    | -  | 2    | -  | 2   | -  | 3    | 3  |
| Sea water                 |              | 1   | 1  | 1  | 1    | -  | -   | 1  | 1  | 1  | 1  | 1  | 1   | 1   | 1  | 1   | 1  | 1  | 1  | 1   | 1  | 2  |      |    |      |    |     |    |      |    |
| Silicone oil              |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 2  | 2  | -  | 1   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Silver acetate            |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | -  | 1    | -  | 1   | -  | 2    | -  |
| Silver nitrate            | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 2   | 1   | -  | -   | 1  | 2  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Sodium acetate            | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 2   | 2  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | 2  |
| Sodium benzoate           | 35%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Sodium bicarbonate        | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Sodium bisulfate          | 10%          | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 2  |
| Sodium bisulfide          | Acqueous     | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Sodium borate             | Saturated    | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | -  | 2    | 2  |
| Sodium borate             | Aqueous      | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | 1  | 1   | -  | 1    | -  |
| Sodium bromate            |              | -   | -  | -  | 2    | -  | -   | 1  | 2  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 2  |





## CHEMICAL RESISTANCE

| Chemicals           | °C        | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|---------------------|-----------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                     | Conc %    | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Sodium bromide      |           | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 2  |
| Sodium carbonate    | Saturated | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 2   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Sodium chlorite     | Diluted   | -   | -  | -  | 1    | 3  | -   | 1  | 2  | -  | 1  | 2  | 3   | 1   | -  | -   | -  | -  | -  | 3   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Sodium chlorite     | Acqueous  | -   | -  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Sodium chlorite     |           | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Sodium Chromate     | Diluted   | -   | -  | -  | 1    | 1  | -   | 1  | -  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 2  |
| Sodium clorate      |           | 1   | 1  | -  | 1    | -  | -   | 1  | -  | -  | 1  | -  | -   | 1   | -  | -   | 1  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium clorate      | Acqueous  | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Sodium cyanide      | Acqueous  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Sodium cyanide      | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | 2  |
| Sodium dichromate   | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 2   | -  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | 2  |
| Sodium fluoride     | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Sodium hydroxide    | 1%        | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium hydroxide    | 30%       | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 2  | -   | 1  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 2   | -  | 1    | 2  |
| Sodium hydroxide    | 45%       | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 2  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 2   | 3  | 1    | 2  |
| Sodium hydroxide    | 60%       | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | 3  | 1    | 2  |
| Sodium hydroxide    | Conc.     | -   | -  | -  | 1    | 2  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 3   | 3  | 2    | 3  |
| Sodium hydroxide    | 1%        | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium Hydrosulfite | 10%       | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | 2  |
| Sodium hypochlorite | Diluted   | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | -   | 3   | 3  | -   | 1  | 2  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 1   | 2  | 3    | 3  |
| Sodium hypochlorite | 15%       | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | -   | 3   | 3  | -   | 1  | 2  | -  | 1   | -  | -  | 1    | 1  | 2    | -  | 1   | 2  | 3    | 3  |
| Sodium hypochlorite | Saturated | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | -   | 3   | 3  | -   | 1  | 2  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 1   | 2  | 3    | 3  |
| Sodium iodine       |           | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| Sodium nitrate      | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium nitrite      | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium oxalate      | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Sodium perborate    | Saturated | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 2   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | -  |
| Sodium perchlorate  | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Sodium peroxide     | 10%       | -   | -  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 1  | -   | 3   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | -  |
| Sodium peroxide     | Saturated | -   | -  | -  | 3    | 3  | -   | 2  | 2  | -  | 1  | 1  | -   | 3   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 3    | -  |
| Sodium persulfate   | Saturated | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 2    | -  |
| Sodium phosphate    | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Sodium silicate     | Saturated | 1   | 3  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | -   | -  | -   | 1  | 1  | -  | 1   | 3  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Sodium stearate     | Acqueous  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Sodium sulfate      | Saturated | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 2  |
| Sodium sulfate      | Acqueous  | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | 1   | 2  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Sodium sulfide      | Saturated | 1   | 3  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium sulfide      | Acqueous  | 1   | 3  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Sodium sulfite      | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium thiosulfate  | Saturated | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 2  |
| Sodium thiosulfate  | Acqueous  | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Soya oil            |           | 1   | 1  | -  | 1    | -  | -   | -  | -  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 1    | -  |
| Stannic chloride    | Saturated | 3   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Stannous chloride   | Acqueous  | -   | -  | -  | 3    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Stannous chloride   | Saturated | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Steam               |           | -   | -  | -  | 3    | 3  | -   | 3  | -  | -  | 2  | -  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 1    | -  | 2   | -  | 3    | 3  |



## CHEMICAL RESISTANCE

| Chemicals                | °C<br>Conc % | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|--------------------------|--------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
|                          |              | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Stearic acid             |              | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 2    | -  | 1   | 1  | 2    | 2  |
| Strontium bromide        |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Strychnine               |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | -  | -   | 1  | 1  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Styrene                  | 100%         | -   | -  | -  | 1    | 1  | -   | 3  | 3  | -  | 2  | 3  | -   | 1   | 1  | -   | -  | -  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 2   | -  | 3    | 3  |
| Succinic acid            | 50%          | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |
| Succinic acid            | Saturated    | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | 1  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Sugar syrup              |              | 1   | 1  | -  | 1    | 1  | -   | 1  | 1  | -  | 1  | 1  | 1   | 1   | 1  | 1   | 1  | 1  | 1  | 1   | -  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Sulfur                   | Techn. pure  | 1   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 2   | 3  | -  | 1    | 1  | 2    | -  | 1   | 1  | 3    | 3  |
| Sulfur chloride          |              | -   | -  | -  | 3    | 3  | -   | -  | -  | -  | 3  | 3  | 3   | 3   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 3    | 3  |
| Sulfur dioxide, dump     |              | -   | -  | -  | 3    | -  | -   | 1  | 1  | -  | 1  | 3  | -   | 3   | 3  | -   | 3  | 3  | -  | 1   | 2  | -  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Sulfur dioxide, liquid   |              | -   | -  | -  | 3    | -  | -   | 3  | 3  | -  | 3  | 3  | -   | 3   | 3  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | 1  | 1    | -  | 3   | 3  | 3    | 3  |
| Sulfuric acid            | 1%-6%        | 3   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | 1   | 3   | 3  | -   | 1  | 2  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 2    | -  |
| Sulfuric acid            | 20%          | 3   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | 1  | 2  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 3    | 3  |
| Sulfuric acid            | 40%          | 3   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | 2   | 3   | 3  | -   | 1  | -  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 1   | 1  | 3    | 3  |
| Sulfuric acid            | 60%          | 3   | 3  | -  | 3    | 3  | -   | 1  | 2  | -  | 1  | 2  | 3   | 3   | 3  | 3   | 1  | 3  | 3  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Sulfuric acid            | 80%          | 3   | 3  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 2  | -   | 3   | 3  | 3   | 2  | 3  | 3  | 1   | -  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Sulfuric acid            | 95%          | 3   | 3  | -  | 3    | 3  | -   | 2  | 3  | -  | 2  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 2   | 3  | -  | 1    | 1  | 3    | 3  | 1   | 1  | 3    | 3  |
| Sulfuric acid            | Fuming       | 3   | 3  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | -   | 3   | 3  | -   | 3  | 3  | -  | 3   | 3  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Sulfurous acid           | Saturated    | -   | -  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 2   | -  | 2    | 3  |
| Sulfuryl chloride        | Techn.pure   | -   | -  | -  | 3    | 3  | -   | 3  | 3  | -  | 3  | 3  | -   | 3   | 3  | -   | -  | -  | -  | 3   | 3  | -  | 1    | -  | 2    | -  | 1   | -  | 2    | 3  |
| Tannic acid              | 10%          | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 3   | 3  | -   | 2  | 2  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | 1  | 2    | 2  |
| Tartaric acid            |              | 1   | 1  | -  | 3    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | 1  | 1  | -  | 1   | 2  | -  | 1    | 1  | 2    | -  | 1   | 1  | 1    | 1  |
| tethahydrofuran          | 100%         | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 2  | 3  | 3   | 1   | 2  | -   | 3  | 3  | 3  | 3   | 3  | -  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Tetralin                 | Techn.pure   | -   | -  | -  | 1    | -  | -   | 3  | 3  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Thiophene                | 100%         | -   | -  | -  | 1    | -  | -   | 2  | 2  | -  | 2  | 3  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 3   | 3  | 2    | -  |
| Thymol                   |              | -   | -  | -  | 2    | -  | -   | -  | -  | -  | 2  | -  | -   | 2   | -  | -   | 2  | 3  | -  | -   | -  | -  | 1    | -  | 3    | -  | 1   | -  | 3    | 3  |
| Toluene                  | 100%         | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 2  | 3  | 3   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 2   | -  | 3    | 3  |
| Tributyl citrate         |              | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | 2   | 3  | -  | 1    | -  | 2    | -  | 2   | -  | 2    | -  |
| Tributyl phosphate       | Techn.pure   | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | 3   | 3  | 3  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Trichloroacetaldehyde    | 100%         | -   | -  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 1  | -   | 2   | -  | -   | -  | -  | -  | 3   | 3  | -  | -    | -  | 2    | -  | 3   | 3  | 3    | 3  |
| Trichloroacetic acid     |              | -   | -  | -  | 3    | 3  | 3   | 2  | 3  | -  | 1  | 1  | -   | 3   | 3  | -   | 3  | 3  | -  | 3   | 3  | 3  | 1    | 1  | 2    | -  | 3   | 3  | 3    | 3  |
| Trichlorobenzene         | 100%         | -   | -  | -  | 2    | -  | -   | 3  | 3  | -  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 3   | 3  | 3    | 3  |
| Trichloroethane          |              | -   | -  | -  | 2    | -  | -   | 3  | 3  | -  | 3  | 3  | -   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Trichloroethylene        | 100%         | 3   | 3  | -  | 2    | -  | -   | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 1   | 2  | 3    | 3  |
| Trichlorotrifluoroethane | 100%         | -   | -  | -  | 1    | -  | -   | 3  | 3  | 3  | 3  | 3  | 3   | 1   | -  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 2   | -  | 1    | -  |
| Triethylamine            | Techn.pure   | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 3  | 3  | 3   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 2   | -  | 2    | 3  |
| Triethanolamine          | Techn.pure   | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 2   | 3  | 3  | 1    | -  | 1    | -  | 3   | 3  | 3    | 3  |
| Triethylene glycol       |              | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 2   | 2  | -  | 1    | -  | 1    | -  | 1   | -  | 2    | -  |
| Triisopropylbenzene      |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | -  | -   | 1   | -  | -   | 3  | 3  | 3  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 1    | -  |
| Trimethylbenzene         |              | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 2  | 2  | -   | 1   | -  | -   | 3  | 3  | -  | -   | -  | -  | 1    | -  | 3    | 3  | 1   | -  | 3    | 3  |
| Trimethylpentane         | 10%          | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | 1   | -  | -   | 2  | 3  | -  | 3   | 3  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Urea                     | Saturated    | 1   | 1  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Uric acid                |              | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | -  | -   | 1   | -  | -   | -  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |

|  | CHEMICAL RESISTANCE |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
|----------------------------------------------------------------------------------|---------------------|-----|----|----|------|----|-----|----|----|----|----|----|-----|-----|----|-----|----|----|----|-----|----|----|------|----|------|----|-----|----|------|----|
| Chemicals                                                                        | °C<br>Conc %        | ABS |    |    | PA66 |    |     | PE |    |    | PP |    |     | POM |    |     | PS |    |    | PVC |    |    | PTFE |    | EPDM |    | FPM |    | NBR* |    |
|                                                                                  |                     | 20  | 50 | 75 | 20   | 60 | 100 | 20 | 40 | 60 | 20 | 60 | 100 | 20  | 60 | 100 | 20 | 50 | 75 | 20  | 40 | 60 | 20   | 50 | 20   | 50 | 20  | 50 | 20   | 50 |
| Valnut oil                                                                       |                     | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 2  | -   | -   | -  | -   | 2  | 2  | -  | -   | -  | -  | 1    | 1  | 2    | -  | 1   | -  | 1    | -  |
| Vaseline                                                                         | Techn.pure          | -   | -  | -  | 1    | -  | -   | 2  | 3  | -  | 1  | 2  | -   | -   | -  | -   | 1  | 1  | -  | 2   | -  | -  | 1    | 1  | 2    | -  | 1   | 1  | 1    | 1  |
| Vaseline oil                                                                     | 100%                | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 2  | -   | -   | -  | -   | 1  | -  | -  | 2   | -  | -  | 1    | -  | 2    | -  | 1   | -  | 1    | -  |
| Vegetable oil                                                                    |                     | -   | -  | -  | -    | -  | -   | -  | -  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Vinegar                                                                          |                     | 1   | 1  | -  | 3    | 3  | -   | 1  | 1  | 1  | 1  | 1  | -   | 1   | 2  | -   | 1  | -  | -  | 1   | 2  | 2  | 1    | 1  | 1    | -  | 2   | 2  | 2    | 2  |
| Vinyl acetate                                                                    | Techn.pure          | -   | -  | -  | 1    | -  | -   | 1  | 2  | -  | 1  | 3  | 3   | -   | -  | -   | -  | -  | -  | 3   | 3  | 3  | 1    | -  | 1    | -  | 2   | -  | 2    | 2  |
|                                                                                  |                     |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Water                                                                            |                     | 1   | 1  | 1  | 1    | 1  | 1   | 1  | 1  | -  | 1  | -  | -   | 1   | 1  | -   | 1  | 1  | 1  | 1   | 1  | 1  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Water distilled                                                                  | 100%                | 1   | 1  | 1  | 1    | 1  | 1   | 1  | 1  | 1  | 1  | 1  | 1   | 1   | 1  | 1   | 1  | 1  | 1  | 1   | 1  | 1  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Water mineral                                                                    |                     | 1   | 1  | 1  | 1    | 1  | 1   | 1  | 1  | -  | 1  | -  | -   | 1   | 1  | -   | 1  | 1  | 1  | 1   | 1  | 1  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Whiskey                                                                          |                     | -   | -  | -  | 1    | -  | -   | -  | -  | -  | 1  | 1  | -   | 1   | 1  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | 1  |
| White spirit                                                                     |                     | -   | -  | -  | 1    | -  | -   | 1  | -  | -  | 1  | 2  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 3    | 3  | 1   | -  | 1    | -  |
| Wine                                                                             |                     | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
|                                                                                  |                     |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Xylene                                                                           | 100%                | -   | -  | -  | 1    | -  | -   | 2  | 3  | 3  | 3  | 3  | 3   | 1   | 2  | -   | 3  | 3  | 3  | 3   | 3  | 3  | 1    | -  | 3    | 3  | 1   | 2  | 3    | 3  |
|                                                                                  |                     |     |    |    |      |    |     |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |      |    |      |    |     |    |      |    |
| Zinc acetate                                                                     |                     | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 2   | -  | 2    | 2  |
| Zinc bromide                                                                     |                     | -   | -  | -  | 3    | 3  | 3   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Zinc carbonate                                                                   | Saturated           | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Zinc chloride                                                                    | Aqueous             | 3   | 3  | -  | 2    | 3  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | -  | -  | -  | -   | -  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | 1  |
| Zinc nitrate                                                                     |                     | -   | -  | -  | 1    | 3  | 3   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | -  | -  | 1   | -  | -  | 1    | 1  | 1    | -  | 1   | -  | 1    | -  |
| Zinc phosphate                                                                   | Saturated           | -   | -  | -  | 1    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | 1  | 1   | 1  | 1  | 1  | 1   | 1  | 1  | 1    | 1  | 1    | 1  | 1   | 1  | 1    | 1  |
| Zinc sulfate                                                                     | 10%                 | -   | -  | -  | 2    | -  | -   | 1  | 1  | -  | 1  | 1  | -   | 1   | -  | -   | 1  | 1  | -  | 1   | 1  | -  | 1    | 1  | 1    | -  | 1   | 1  | 1    | -  |

The resistance of materials to different chemicals is highly affected by concentration, contact time, presence of mechanical stress and environmental factors like temperature and humidity. The data reported in the chemical resistance chart correspond to the present state of our knowledge and they come from careful examination of available published information. However, this information should be considered as a general guide rather than an unqualified guarantee. There is no guarantee as to the binding of chemically inert materials. For this and other reasons it is recommended to always perform experimental tests to demonstrate the suitability of the material in specific applications.

#### Chemical resistance

- 1 Resistant
- 2 Partially resistant
- 3 Not resistant
- No data available

#### Description of the materials

**ABS** Acrylonitrile butadiene styrene  
**PE** Polyethylene  
**PA** Polyamide (Nylon)  
**POM** Polyoxymethylene, polyacetal  
**PP** Polypropylene  
**PS** Polystyrene

**PVC** Polyvinyl chloride  
**PTFE** Polytetrafluoroethylene, Teflon  
**EPDM** Ethylene-propylene-diene rubber  
**FPM** Fluorinated rubber, Viton  
**NBR\*** Acryl-nitrile-butadiene rubber (Food and No Food)