# Chemical Resistance



## Codes

- (A) **Excellent** = Recommended
- (B) **Good** = Recommended
- (C) **Fair** (limited life)
- (X) **Not Recommended**

Corrosion resistance data given in this publication are based on laboratory tests conducted by the manufacturers of the materials covered and are indicative only of the conditions under which the tests were made. The information may be considered as a basis for recommendation but not as a guarantee. Materials should be tested in actual service to determine suitability for a particular purpose.

Consult Chemline for ratings on other materials not shown in this book such as **Hypalon** or **Neoprene** seals, or **Polyamide** or **Polysulfone** flow meter tubes.

| Chemical | Concentration (%) | Temp. °C | Temp. °F | PVC | CPVC | PP | PVDF | TEFLON | VITON | EPDM | NITRILE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Acetaldehyde** $CH_3CHO$ | Pure | 20 | 68 | X | X | A | X | A | C | A | X |
| | | 40 | 104 | | | A | | A | C | A | |
| | | 60 | 140 | | | B | | A | X | B | |
| | | 80 | 176 | | | | | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetaldehyde** (Aqueous) $CH_3CHO$ | 40 | 20 | 68 | X | X | A | X | A | B | A | X |
| | | 40 | 104 | | | A | | A | B | A | |
| | | 60 | 140 | | | A | | A | C | A | |
| | | 80 | 176 | | | B | | A | X | B | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetamide** $CH_3CONH_2$ | Satu | 20 | 68 | | | A | | A | A | A | A |
| | | 40 | 104 | | | | | A | A | A | A |
| | | 60 | 140 | | | | | A | | | |
| | | 80 | 176 | | | | | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | | | | |
| **Acetic Acid** $CH_3COOH$ | 10 | 20 | 68 | A | A | A | A | A | B | A | B |
| | | 40 | 104 | A | A | A | A | A | B | A | |
| | | 60 | 140 | A | A | A | A | A | C | B | |
| | | 80 | 176 | | A | A | A | A | X | | |
| | | 100 | 212 | | | | A | A | | | |
| | | 120 | 248 | | | | B | A | | | |
| **Acetic Acid** $CH_3COOH$ | 20 | 20 | 68 | A | A | A | A | A | B | A | X |
| | | 40 | 104 | A | A | A | A | A | C | A | |
| | | 60 | 140 | A | B | A | A | A | C | B | |
| | | 80 | 176 | | C | B | B | A | X | | |
| | | 100 | 212 | | | | B | A | | | |
| | | 120 | 248 | | | | B | A | | | |
| **Acetic Acid** $CH_3COOH$ | 50 | 20 | 68 | A | A | A | A | A | C | B | X |
| | | 40 | 104 | A | B | A | A | A | X | | |
| | | 60 | 140 | B | C | A | A | A | | | |
| | | 80 | 176 | | X | | B | A | | | |
| | | 100 | 212 | | | | B | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetic Acid** (Glacial) $CH_3COOH$ | 80 | 20 | 68 | A | B | A | A | A | X | C | X |
| | | 40 | 104 | B | C | A | A | A | | | |
| | | 60 | 140 | C | X | C | B | A | | | |
| | | 80 | 176 | | | | C | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetic Acid** (Glacial) $CH_3COOH$ | 99 | 20 | 68 | X | X | A | A | A | X | X | X |
| | | 40 | 104 | | | B | A | A | | | |
| | | 60 | 140 | | | C | B | A | | | |
| | | 80 | 176 | | | | | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetic Anhydride** $(CH_3CO)_2O$ | Pure | 20 | 68 | X | X | B | B | A | X | C | X |
| | | 40 | 104 | | | C | C | A | | X | |
| | | 60 | 140 | | | X | X | A | | | |
| | | 80 | 176 | | | | | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetone** $CH_3COCH_3$ | Pure | 20 | 68 | X | X | A | X | A | X | A | X |
| | | 40 | 104 | | | A | | A | | B | |
| | | 60 | 140 | | | C | | A | | | |
| | | 80 | 176 | | | | | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetone** (Aqueous) $CH_3COCH_3$ | 10 ppm | 20 | 68 | A | A | A | A | A | A | A | B |
| | | 40 | 104 | A | A | A | A | A | B | A | C |
| | | 60 | 140 | B | B | A | A | A | | A | |
| | | 80 | 176 | | | A | B | A | | B | |
| | | 100 | 212 | | | | B | A | | | |
| | | 120 | 248 | | | | B | A | | | |
| **Acetonitrile** $CH_3CN$ | | 20 | 68 | | | B | A | A | | A | C |
| | | 40 | 104 | | | | A | A | | | |
| | | 60 | 140 | | | | C | A | | | |
| | | 80 | 176 | | | | X | | | | |
| | | 100 | 212 | | | | | | | | |
| | | 120 | 248 | | | | | | | | |
| **Acetophenone** $C_6H_5COCH_3$ | | 20 | 68 | | | A | C | A | C | A | X |
| | | 40 | 104 | | | B | C | A | X | A | |
| | | 60 | 140 | | | C | X | A | | A | |
| | | 80 | 176 | | | X | | A | | B | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetyl Acetone** $CH_3COCH_2COCH_3$ | | 20 | 68 | X | X | | X | A | | | |
| | | 40 | 104 | | | | | A | | | |
| | | 60 | 140 | | | | | A | | | |
| | | 80 | 176 | | | | | | | | |
| | | 100 | 212 | | | | | | | | |
| | | 120 | 248 | | | | | | | | |
| **Acetyl Bromide** $CH_3COBr$ | | 20 | 68 | | | | A | A | | | |
| | | 40 | 104 | | | | A | A | | | |
| | | 60 | 140 | | | | A | A | | | |
| | | 80 | 176 | | | | B | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | A | | | |
| **Acetyl Chloride** $CH_3COCl$ | | 20 | 68 | | | A | A | A | X | X | X |
| | | 40 | 104 | | | A | B | A | | | |
| | | 60 | 140 | | | C | C | A | | | |
| | | 80 | 176 | | | X | X | A | | | |
| | | 100 | 212 | | | | | A | | | |
| | | 120 | 248 | | | | | | | | |
| **Acetylene** $C_2H_2$ | | 20 | 68 | A | X | A | A | A | A | C | A |
| | | 40 | 104 | | | A | A | A | A | C | A |
| | | 60 | 140 | | | A | A | A | A | X | B |
| | | 80 | 176 | | | B | A | A | A | | |
| | | 100 | 212 | | | | | A | B | | |
| | | 120 | 248 | | | | | B | | | |

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