

## Suitability of Various Plastic Materials of Construction for Handling Sodium Hypochlorite (Bleach) Service

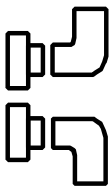
Plastics	Suitability
Thermoset Vinyl Ester	AB to 18% to 180° F, glass or graphite reinforced
Thermoset Epoxy	A to 100% to 70° F, best grades A to 20% to 140° F, best grades Fail in 60 days, 70° F 5% concentration, standard grades
Polyethylene Ultra High Molecular Weight U.H.M.W. PE	A to 100% to 170° F +0.04% wt, 30 days, 70° F +0.21% wt, 10 days, 140° F, no change appearance
Polypropylene PP	A to 100% to 70° F AB 100% at 70-120° F BC 100% at 125° F B/NR 100% at 140-225° F, no stress NR 100% >225° F A 30% to 100° F A 20% to 140° F AB 15% at 122° F B 15% at 150° F C 12-13% >70° F NR 12-13% at 104° F A to 5% to 120° F NR 5% at 212° F
Polyvinyl-Chloride, PVC Normal Impact, PVC High Impact	A to 100% to 150° F, normal & high impact Some effect at 140° F
Chlorinated Polyvinyl Chloride CPVC	A to 100% to 190° F AB to 100% to 212° F

A <10% swelling, <15% loss of tensile strength, little or no chemical attack

B <15% swelling, <30% loss of tensile strength, minor chemical attack

C <20% swelling, <50% loss of tensile strength, moderate chemical attack

R >20% swelling, >50% loss of tensile strength, chemical attacked or dissolved



## **Suitability of Various Plastic Materials of Construction for Handling Sodium Hypochlorite (Bleach) Service**

<b>Plastics</b>	<b>Suitability</b>
Poly-Vinylidene Fluoride PVDF Kynar®	AB to 100% to 275° F A to 17% to 280° F
Ethylene Chlorotrifluoro Ethylene ECTFE Halar®	A to 100% to 300° F No change 30 days, 200° F, solution
Polyetra-Fluoro-Ethylene PTFE Teflon®	A to 100% to 500° F

A <10% swelling, <15% loss of tensile strength, little or no chemical attack

B <15% swelling, <30% loss of tensile strength, minor chemical attack

C <20% swelling, <50% loss of tensile strength, moderate chemical attack

NR >20% swelling, >50% loss of tensile strength, chemical attacked or dissolved