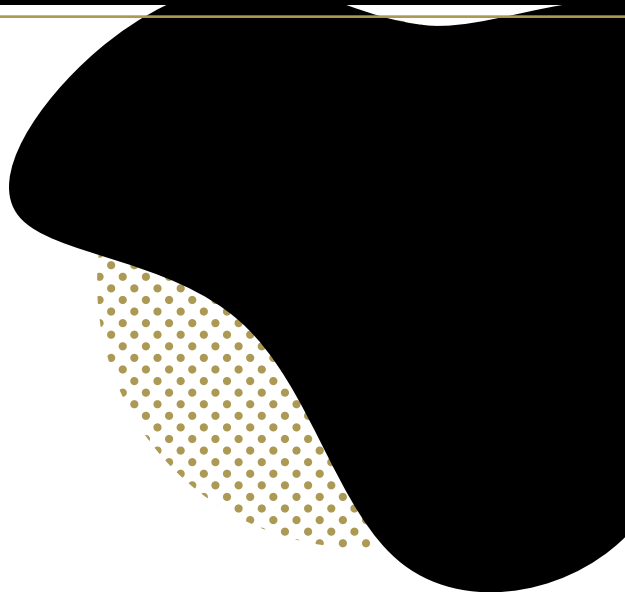


The background of the entire page is a photograph of a nylon manufacturing process. It shows multiple strands of white nylon being spun from spindles in a factory setting. In the foreground, a large, green, ribbed metal spool is visible. The background is slightly blurred, showing industrial equipment and factory lighting. There are decorative gold-colored grid patterns in the upper left and a pattern of white plus signs on a dark background in the lower right, partially overlapping the title area.

Nylon Chemical Resistance Guide

9/14/2023 The information presented in this document was assembled from literature of the resin product producer(s). The information is believed to be accurate however Entec Polymers ("Entec") makes no representations as to its accuracy and assumes no obligation or liability for the information, including without limitation its content, any advice given, or the results obtained. ENTec DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING FITNESS FOR A PARTICULAR PURPOSE. The customer shall use its own independent skill and expertise in the evaluation of the resin, product to determine suitability for a particular application and accepts the results at its sole risk.

Nylon 6 and Nylon 66 resins have outstanding resistance to a wide range of chemicals, especially aliphatic and aromatic hydrocarbons, alkalis, greases, fuels, lubricants, and ketones. This guide is intended to provide some general information on how Nylon resins perform in contact with common chemicals. Testing of molded parts under actual conditions of use is strongly recommended as stresses found in molded parts may negatively influence chemical resistance test results.



Aqueous Solutions of Hydrogen Peroxide and Inorganic Salts at 23°C

Solution	Visual Change	Ratings
Hydrogen Peroxide		
0.5% Hydrogen Peroxide	Unchanged	Good
1% Hydrogen Peroxide	Degrades	Poor
3% Hydrogen Peroxide	Degrades	Poor
10% Hydrogen Peroxide	Degrades	Not Recommended
30% Hydrogen Peroxide	Degrades	Not Recommended
Inorganic Salts		
10% Aluminum Chloride	Unchanged	Fair
10% Calcium Chloride	Unchanged	Fair
10% Chrome Alum	Unchanged	Good
10% Copper Sulfate	Unchanged	Good
10% Ferric Chloride	Yellowing	Poor
10% Magnesium Chloride	Unchanged	Good
10% Magnesium Sulfate	Unchanged	Good
5% Mercuric Chloride	Swelled	Poor
5% Potassium Dichromate	Yellowing	Poor
10% Potassium Nitrate	Unchanged	Good
1% Potassium Permanganate	Degrades	Not Recommended
10% Sodium Bisulfite	Unchanged	Good
10% Sodium Hypochlorite	Chalking	Good
10% Sodium Sulfate	Unchanged	Good
10% Zinc Chloride	Unchanged	Fair

Organic Solvents at 23°C

Reagent	Visual Change	Ratings
Alcohols		
Benzyl Alcohol	Coarse Surface after 2 days	Not Recommended
Butyl Alcohol	Temporary loss of stiffness	Good
Ethyl Alcohol	Temporary loss of stiffness	Good
Ethylene Glycol	Temporary loss of stiffness	Good
Isopropyl Alcohol	Temporary loss of stiffness	Good
Methyl Alcohol	Temporary loss of stiffness	Good
Aldehyde		
Benzaldehyde	Unchanged	Excellent
Aromatic Hydrocarbons		
Benzene	Unchanged	Excellent
Toluene	Unchanged	Excellent
Xylene	Unchanged	Excellent
Chlorinated Hydrocarbons		
Carbon Tetrachloride	Unchanged	Excellent
Chloroform	Temporary loss of stiffness	Good
Dichloroethylene	Temporary loss of stiffness	Good
Dichloromethane	Temporary loss of stiffness	Good
Monochlorobenzene	Unchanged	Excellent
Perchloroethylene	Unchanged	Excellent
Cyclic Amine		
Pyridine	Unchanged	Excellent
Ester		
Amyl Acetate	Unchanged	Excellent
Butyl Acetate	Unchanged	Excellent
Ethyl Acetate	Unchanged	Excellent
Methyl Acetate	Unchanged	Excellent
Ethers		
Ether (Diethyl)	Unchanged	Excellent
Tetrahydrofuran	Unchanged	Excellent
Ketone		
Acetone	Unchanged	Excellent
Cyclohexanone	Unchanged	Excellent
Mixture of Hydrocarbons		
Decalin	Unchanged	Excellent
Gasoline	Unchanged	Excellent
Kerosene	Unchanged	Excellent
Mineral Oil	Unchanged	Excellent
Petroleum	Unchanged	Excellent
Resorcinol	Dissolves	Not Recommended
Tetralin	Unchanged	Excellent
Turpentine	Unchanged	Excellent
Sulfur Compounds		
Carbon Disulfide	Unchanged	Excellent

Acids, Bases, Halogen, etc.

Reagent	Temp (°C)	Visual Change	Ratings
Amide			
Dimethylformamide	23	Strong Attack	Not Recommended
Bases			
Potassium Hydroxide (5%)	23	Minimal Effect	Good
Potassium Hydroxide (5%)	70	Minimal Effect	Good
Potassium Hydroxide (10%)	23	Minimal Effect	Good
Potassium Hydroxide (10%)	70	Crazing	Poor
Sodium Hydroxide (1%)	23	Unchanged	Excellent
Sodium Hydroxide (5%)	23	Minimal Effect	Good
Sodium Hydroxide (5%)	70	Minimal Effect	Good
Sodium Hydroxide (10%)	23	Minimal Effect	Good
Sodium Hydroxide (10%)	70	Crazing	Poor
Halogens			
Bromine	23	Strong Attack	Not Recommended
Chlorine	23	Strong Attack	Not Recommended
Inorganic Acids			
Hydrochloric Acid (Conc)	23	Dissolves	Not Recommended
Hydrochloric Acid (Dilute)	23	Partially Dissolves	Not Recommended
Nitric Acid (Conc)	23	Dissolves	Not Recommended
Phosphoric Acid (Conc)	23	Dissolves	Not Recommended
Sulfuric Acid (Conc)	23	Dissolves	Not Recommended
Sulfuric Acid (Dilute)	23	Partially Dissolves	Not Recommended
Ketone			
Gamma-Butyrolactone	23	Strong Attack	Not Recommended
Organic Acids			
Acetic Acid (Conc)	23	Partially Dissolves	Not Recommended
Acetic Acid (Conc)	93	Dissolves	Not Recommended
Acetic Acid (Dilute)	23	Etched	Not Recommended
Formic Acid (Conc)	23	Dissolves	Not Recommended
Formic Acid (Dilute)	23	Partially Dissolves	Not Recommended
Phenol Compounds			
O-Chlorophenol	23	Dissolves	Not Recommended
m-Chlorophenol	23	Dissolves	Not Recommended
p-Chlorophenol	23	Dissolves	Not Recommended
Cresol	23	Dissolves	Not Recommended
Phenol	23	Dissolves	Not Recommended
Xylenols	23	Dissolves	Not Recommended