SHK

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Pipes & Fittings

CHEMICAL RESISTANT CHART

Polypropylene is one of the most chemically resistant polymers.

Below you will see the chemical resistance of PP-R products according to DIN 53756; the chemical resistance related with composition, quality condition, concentration, time of affection and temperature of material. In this table the chemicals and the resistance in different temperature is shown.

Materials are classified in 3 categories:

1) A - Excellent
2) B - Good
3) C - Fair (Limited Life)

Shreeharikrishna Group

SHREE HARIKRISHNA GROUP OF COMPANIES

Plot No: - 139/1, Phase-II, GIDC Vatva,

Opp. Patel Alloy Steel Ltd. Ahmedabad 382445, Guj, INDIA

Ph.No. : 079-25831110, 41, 42, 25835359

Mobile : 9825064012, 9725821110, 9724323587

Email : info@shreeharikrishna.net

marketing@shreeharikrishna.net

website : www.shreeharikrishna.net

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SHK POLYMERS INDUSTRIES

Shreeharikrishna Group

CHEMICAL	CONS	TEMP			CHEMICAL	CONS	TEMP		
		20-40	60-80	100			20-40	60-80	100
Acetaldehyde	pure	A	B		Benzine	pure	A	C	
Acetaldehyde	40	A	A		Benzoic acid	pure	A	A	
Acetic acid	10	A	A	A	Benzoyl chloride		A		
Acetic acid	20	A	B		Benzyl alcohol	pure	A	B	
Acetone	pure	A			Benzyl chloride	pure	A		
Acetyl brominde		-	-	-	Borax	sata	A	A	
Acetylene		A	B		Boric acid	sata	A	A	
Acrylonitrile		B			Boron trichloride		A	A	
Adepic acid	sata	A	B		Butane gas		A	A	
Actyl alcohol		A	B		Butyl alcohol	pure	A	A	
Alum (potassium)	sata	A	A		Butyn diol		A		
Alum acetste	sata	A			Butyl phenol		A		
Allu . Ammo . Salphate	sata	A	A	A	Butyl phthalate		A	A	
Allu . Bromide	sata	A	A		Butyric acid	pure	A	C	
Allu . Chloride	sata	A	A		Calcium bisulfite		A	A	
Allu . Fluoride	sata	A	A		Calcium bromide		A		
Allu.hydroride	sata	A	A		Calcium carbonate	sata	A	A	
Allu. Nitrate	sata	A	A		Calcium chlorate	sata	A	A	
Allu . Salfate	sata	A	A		Calcium chloride	sata	A	A	
Amber acid	sata	A	B		Calcium hydroxide	sata	A	A	B
Ammonia gas	100	A	B		Calcium hypochloride	sata	A	C	
Ammonia solution	10	A	B		Calcium nitrate		A	A	
Ammo . Acetate	sata	A	B		Calcium sulfate	sata	A	A	
Ammo . Biacorbonate		A	A		Calcium sulfide	sata	A	A	
Ammo. Chloride	sata	A	B		Carbon dioxide gas wet		A	A	
Ammo . Fluoride	20	A	B		Carbon monoxide	gas	A	A	
Ammo. Hydro fluoride	sata	A	A		Carbonic acid	sata	A	B	
Ammo . Hydroxide	40	A	B		Castor oil	pure	A	A	
Ammo. Metaphosphate		A	A		Chlorine dioxide	8gm	C		
Ammo. Nitrate		A	A		Chlorine gas	wet			
Ammo . Phosphyte	10	A	A		Chlorinated water	400pbm	C		
Ammo.salfate	sata	A	A		Chlorinated water	3000pbm			
Ammo.salfide	sata	A	A		Chloro benzene	pure	B		
Ammo.salfite		A			Chlorofoam	pure	C		
Amyl . Alcohol	pure	A	B		Chromic potassium alum	sata	A	A	
Aniline	pure	B	C		Citric acid	10	A	A	
Animal oil		A	A		Coconut oil		A	A	
Antimony trichloride	sata	A	B		Copper borofluoride		A		
Arcenic acid	sata	A	B	C	Copper chloride	sata	A	B	
Asphalt		A			Copper cyanide	sata	A	A	
Bariam carbonate	sata	A	A		Copper nitrate		A	B	
Bariam chloride	sata	A	A		Copper sulfate	sata	A	A	
Bariam nitrate	sata	A	A		Corn oil	A			
Bariam salfate	sata	A	A		Cotton seed oil		A	B	
Beer		A	A		Cupric fluoride	sata	A	B	
Beet sugar		A	A		Cyclohexanol	pure	A	C	
Benzene	pure	B	C		Cyclohexanone	pure	B		

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CHEMICAL	CONS	TEMP			CHEMICAL	CONS	TEMP		
		20-40	60-80	100			20-40	60-80	100
Dextrine	sata	A	A		Hypochlorous acid	10	B		
Dextrose (glucose)		A	A		Iodine		A		
Diacetone alcohol	pure	A			Isobutyl alcohol	pure	A		
Diehloro acetic acid		B			Ispropyl alcohol	pure	A		
Diethylamine	pure	A			Kerosene		C		
Diglycolic acid	sata	A			Lactic acid	25	A	A	
Dimethyl formamide	pure	A	B		Lard(animal oil)		B		
Ethyl acetate	pure	A	C		Lauric acid		A		
Ethyl alcohol	pure	A	B		Lead acetate	sata	A	A	
Ethyl monochloro acetate	pure	A			Lead chloride		A	A	
Ethylene chloride		B			Lead nitrate	sata	A	A	
Ethylene glycol	pure	A	A		Lead sulfate		A	A	
Fatty acid		A	B		Linseed oil		A	B	
Ferrous chloride	sata	A	A		Lithium bromide	60	A	A	
Ferric hydroxide	sata	A	A		Lithium chloride	sata	A	A	
Ferric nitrate	sata	A	A		Lithium hydroxide		A	A	
Ferric sulphate		A	A		Liquor (Gin, Wishky)		A		
Ferric sulfide		A	B		Magnesium chloride	sata	A	B	
					Magnesium citrate		A	B	
Ferric chloride	sata	A	A		Magnesium fluoride	sata	A	A	
Ferrous hydroxide	sata	A	A		Magnesium hydroxide	sata	A	A	
Ferrous nitrate	sata	A	A		Magnesium nitrate		A	A	
Ferrous sulphate		A	A		Magnesium sulfate		A	A	
Ferrous hydroxide	sata	A	A		Manganese chloride		A	B	
Ferrous nitrate	sata	A	A		Manganese sulfate		A	B	
Ferrous sulphate		A	A		Mercuric chloride		A	A	
Fluoboric acid	pure	A	B		Mercuric cyanide		A	A	
Fluorosilicic acid	50	A	B		Mercuric nitrate		A		
Formaldehyde	35	A	B		Mercuric sulfate	sata	A	A	
Formaldehyde	50	A	B		Mercury		A	A	
Formic acid	90	B			Methane		A	B	
Fruit juice	pure	A	A		Methyl alcohol	pure	A	A	
Gelatine & glue		A	A		Methyl amine		B		
Glycerol(glycerine)	pure	A	A		Methyl ethyl ketone		B	C	
Glycolic acid	sata	A			Mehtyl isobytul		A		
Heptane		B			Methyl monochloro acetate	pure	A		
Hexane		B			Methyl salicylate		B		
Hexyl alcohol	purre	C			Monochloro acetic acid	50	B		
Hydrobromic acid	47	A	A		Monochloro benzene		B		
Hydrochloric acid	35	A	B		Morpholine	pure	A		
Hydrocyanic acid		A			Naptha		A	B	
Hydrofinoric acid	55	A	B		Napthalene		C		
Hydrogen		A	A		Nickle acetate	sata	A	A	
Hydrogen fluoride		C			Nickle dichloride	sata	A	A	
Hydrogen peroxide	20	A	A	B	Nickle sulfate	sata	A	B	
Hydrogen sulfide (Gas)	dry	A	B		Nicotine		A		

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CHEMICAL	CONS	TEMP			CHEMICAL	CONS	TEMP		
		20-40	60-80	100			20-40	60-80	100
Nitric acid	10	A	B		Potassium fluoride		A	A	
Nitric acid	50	B			Potassium hydroxide	25	A	A	
Nitrobenzene		B			Potasssium hypochlorite		A		
Nitrobenzene dioxide		C			Potassium nitrate		A	A	
Nitro toluene	pure	B			Potassium permaganate	25	A	B	
Nitrous oxide		A	A		Potassium phosphate		A	A	
Oil light		A			Potassium sulfate	pure	A	A	
Oil lubricant		C			Potassium sulfide		A	A	
Oil-machine, motor		B			Potassium sulfite		A	A	
Oil-crude oil		B			Potassium thiocynate		A		
Olive oil		A	A		Propionic acid	50	A		
Orgenic prosphorous		A	B		Propyl alcohol	pure	A	B	
Oxilic acid	20	A	A		Rhodium chloride		A		
Oxygen gas		B			Silicone oil		A	A	
Ozone solution	10rpm	B			Silver chloride		A	A	
Palmitic acid	pure	A	B		Silver nitrate		A	A	
Paraffin oil		A			Silver sulfate		A	A	
Peanut oil		A			Sodium acetate	sata	A	A	
Perchloro ethylene	pure	C			Sodium alum	sata	A	A	
Perchloric acid	10	A	B		Sodium benzonate		A	A	
Perchloric acid	30				Sodium bicarbonate		A	A	
Phenol	pure	A	A		Sodium bichromate	sata	A	B	
Phosphoric acid	10	A	A		Sodium bisulfite		A	B	
Phosphoric acid	85	A	B		Sodium bromide	sata	A	A	
Phosphorous pentoxide	pure	C			Sodium carbonate		A	A	
Photographic solution		A	A		Sodium chlorate	sata	A	A	
Phathalic acid		C			Sodium chloride (brine)		A	A	
Picric acid	10	A	A		Sodium cynide		A	B	
Plating solution (brass)		A	A		Sodium dithionite	10	A		
Plating solution(cromium)					Sodium ferricynide	sata	A	B	
Plating solution (crome)					Sodium fluoride		A	A	A
Plating solution (coper)		A	A		Sodium hydroxide (causticsoda)	30	A	A	
Plating solution (gold)					Sodium hypochlorite (Bleach)	13	C		
Polyethylene glycol		A	B		Sodium iodide		A		
Poly alum.chloride		A			Sodium nitrate	sata	A	A	
Polyoinyl alcohol		A	A		Sodium peroxide		A	A	
Potash(potassium carbonate)		A	A		Sodium phosphate		A	A	
Pottasium alum	sata	A	A		Sodium phosphate(neutral)		A	A	
Pottasium alu.silicate		A	A		Sodium sulfate	sata	A	A	
Potassium biacarbonate	sata	A	A		Sodium sulfite		A	A	
Potassium bisulfate		A	A		Sodium thiocynate		A		
Potasium borate		A	A		Soyabean oil		A	B	
Potassium bromide		A	A		Starryous chloride		A	B	
Potassium chlorate		A	A		Sugar liquors		A	A	
Potassium chloride		A	A		Sulfamic acid	20	A		
Potassium cyanide		A	B		Sulfur dichloride		C		
Potassium ferro cyanide		a	a		Sulfur dioxide (Dry Gas)		A	A	

CHEMICAL	CONS	TEMP			CHEMICAL	CONS	TEMP		
		20-40	60-80	100			20	60	100
Sulpher dioxide (wet gas)		A	B						
Sulfuric acid	20	A	A						
Sluform acid		A	A						
Tannic acid		A	A						
Tartaric acid		A	B						
Tertairy bytul alcohol		C							
Tetrachiloroethane	pure	C							
Tatinic sulfate		C							
Titanium dioxide		A	A						
Titanium tetra chloride		A							
Toulene		C							
Trichloro acetic acid		A							
Trimethyl propane		A	A						
Terpantine		C							
Urea	50	A	A						
Vaseline		A	B						
Vinegar		A	A						
Water		A	A	A					
Water-sea		A	A	A					
Wine		A	B						
Zinc bromide	sata	A	B						
Zinc chloride		C							
Zinc cynaide		A	A						
Zinc nitrate		A	A						
Zinc sulfate		A	A						

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