RILSAN®
FINE POWDERS

Rilsan® PA11-based coating resistance as a function of temperature

Chemical Resistance

In general, Rilsan® Polyamide 11-based coatings have good resistance to inorganic salts, alkalis, most solvents, and organic acids. Greater caution must be observed in applications involving inorganic acids, phenols and certain chlorinated solvents. In such cases, please contact Arkema technical staff for assessment, specifying the practical problem involved: e.g nature of metal to be protected and the temperature and chemical composition of the liquid.

Resistance (°C)	20	40	60	90
Inorganic bases				
ammonium hydroxide (concentrated)	G	G	G	G
ammonia (liquid or gas)	G	G		
lime-wash	G	G	G	
potassium hydroxide (50%)	G	L	P	P
sodium hydroxide (5%)	G	G	L	
sodium hydroxide (10%)	G	L	L	
sodium hydroxide (50%)	G	L	P	P
Inorganic acids				
chromic acid (10%)	P	P	P	P
hydrochloric acid (1%)	G	L	P	P
hydrochloric acid (10%)	G	L	P	P
nitric acid (all concentrations)	P	P	P	P
phosphoric acid (50%)	G	L	P	P
sulphuric acid (1%)	G	L	L	P
sulphuric acid (10%)	G	L	P	P
sulphuric trioxide	L	P	P	P
Inorganic salts				
alum	G	G	G	
aluminium sulphate	G	G	G	G
ammonium nitrate	G	G	G	
ammonium sulphate	G	G	L	
chlorides (barium/ calcium /saturated sodium)	G	G	G	G
calcium arsenate	G	G	G	
calcium sulphate	G	G	L	
copper sulphate	G	G	G	G
diammonium phosphate	G	G	L	
magnesium chloride (50%)	G	G	G	G
potassium ferrocyanide	G	G	G	
potassium nitrate	G[1]	G[1]	P	P
potassium sulphate	G	G	G	G
sodium carbonate	G	G	L	P
sodium silicate	G	G	G	
sodium sulphide	G	L	L	
trisodium phosphate	G	G	G	G

Resistance (°C)	20	40	60	90
Other inorganic products				
agricultural sprays	G	G	P	P
bleach solution	L	P	P	P
bromine / chlorine / fluorine	P	P	G	G
hydrogen	G	G		
hydrogen peroxide (20 volumes)	G	L	G	G
mercury	G	G	L	P
oxygen	G	G	P	P
ozone	L	P		
potassium permanganate (5%)	P	P	G	
sea water	G	G	G	G
soda water	G	G		
sulphur	G	G		
Hydrocarbons				
acetylene	G	G	G	G
alcanes (methane, propane, butane, hexane)	G	G	G	
benzene	G	G[2]	L	
cyclohexane	G	G	L	
decalin	G	G	L	
HFA	G			
naphthalene	G	G	G	L
styrene / toluene / xylene	G	G[3]	L	L
Various products				
beer, cider, fruit juices, milk, mustard, vinegar, wine	G			
crude petroleum, high-octane petrol, kerosene (paraffin), normal petrol, solvent naphta, town gas	G	G	G[1]	
greases	G	G	G	G
oils	G	G	G	G
solutions or emulsions D.D.T. or lindane	G	G		
hydroxy-quionoline (agricultural sprays)	G			
soap solution	G			
stearin	G	G	G	
turpentine	G	G	G[1]	

Condition after 18 months contact:
G: Good - L: Limited - P: Poor
1: Slight yellowing - 2: Yellowing - 3: Swelling action

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Resistance (°C)	20	40	60	90
Organic acids and anhydrides				
acetic acid	L	P	P	P
acetic anhydride	L	P	P	P
citric acid	G	G	L	P
formic acid	P	P	P	P
lactic acid	G	G	G	L
oleic / stearic acid	G	G	G	L
oxalic acid	G	G	L	P
picric acid	L	P	P	P
tartaric acid (saturated solution)	G	G	G	L
uric acid	G	G	G	L
Various organic compounds				
anethole	G			
carbon disulphide	G[1]			
diacetone alcohol	G	G[3]	L	
dimethyl formamide	G	G	L	
ethylene chlorhydrin	P	P		
ethylene oxide	G	G	L	P
furfurol	G	G[3]	L	P
glucose	G	G	G	G
tetraethyl lead	G			
tetrahydrofurane	G	G	L	
phenols	P	P	P	P
Organic bases				
aniline (pure)	L	P	P	P
diethanolamine (20%)	G	G[3]	G[3]	L
pyridine (pure)	L	P	P	P
urea	G	G	L	L

Resistance (°C)	20	40	60	90
Salts, esters, ethers				
acetate esters (amyl, butyl, methyl)	G	G	G	L
phosphate esters (dioctyl, tributyl, tricesyl)	G	G	G	L
diethyl ether	G			
dioctylphtalate	G	G	G	L
fatty acid esters	G	G	G	G
methyl sulfate	G	L		
Alcohols				
benzyl alcohol	L	P	P	P
butanol	G[3]	L	P	P
ethanol (pure)	G[3]	G[3]	L	
glycerin (pure)	G	G	L	P
glycol	G	G	G	P
methanol (pure)	G[3]	L	P	
Chlorinated solvents				
carbon tetrachloride	P	P		
methyl bromide	G	P		
methyl chloride	G	P		
perchloroethylene	G	G	L	
trichloroethane	L	P		
trichloroethylene	G	L		
Adehydes and ketones				
aldehydes (acetaldehyde / benzaldehyde / formaldehyde)	G	L	P	
acetone (pure)	G	G	L	P
cyclohexanone	G	L	P	
methylethylketone (MEK) methylisobutylketone (MIBK)	G	G	L	P

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Arkema Headquarter
51 Espl. du Général de Gaulle Immeuble LIGHTWELL,
92800 Puteaux
France
T +33 (0)1 49 00 80 80

arkema.com