

**PROPERTIES OF PLASTIC MATERIALS**  
**Resistance to chemical agents at ambient temperature (23°C)**  
**TECNOPOLYMERS AND RUBBERS**



Technical data

CHEMICAL AGENTS AND SOLVENTS	Polyamide (PA)			Transparent polyamide (PA-T)			Alcohol-Resistant transparent polyamide (PA-T AR)			Polypropylene (PP)			Acetal resin (POM)		Soft-Touch thermoplastic elastomer (TPE)		Rubber NBR			Flourated Rubber FKM			
	notes	conc.%	23°C	notes	conc.%	23°C	notes	conc.%	23°C	notes	conc.%	23°C	notes	conc.%	23°C	notes	23°C	notes	conc.%	23°C	notes	conc.%	23°C
Acetic acid	Sol.	10	●	Sol.	10	●	Sol.	10	□		40	●	Sol.	20	▲		●			▲			▲
Acetone		100	●			□			●			●			●					▲			▲
Acrylonitrile		100	●			▲			▲								□			▲			▲
Alimentary oils			●			●			●			●			●	Up to 60°C	●			●			●
Aluminium chloride	Sol.	10	●			●			●			●					●	Sol.		●	Sol.		●
Aluminium sulphate	Sol.	10	●	Sol.	10	●	Sol.	10	●			●					●	Sol.		●	Sol.		●
Ammonia	Sol.	10	●	Sol.	10	●	Sol.	10	●	Conc.		●					□	Sol.		□	Sol.		▲
Ammonia - gaseous			□			●			●			●					□			●			▲
Ammonium chloride	Sol.	10	●	Sol.	10	●	Sol.	10	●			●	Sol.	10	●		●			●	Sol.		●
Amyl alcohol		100	●			▲			●			●			●		●			●			●
Aniline		100	□			▲			▲			●			●		▲			▲			●
Beer			●			●			●			●			●		●			●			●
Benzoic acid	Sol.	Sat.	□	Sol.	10	▲	Sol.	10	□		Sat.	●				Up to 60°C	●	Sol.		□	Sol.		●
Benzol/benzene		100				●			●			▲			●		▲			▲			●
Boiling water	Swell.		□	Swell.		□	Swell.		□			●				□			□			□	
Boric acid	Sol.	10	●			□			□		Sat.	●					●	Sol.		●			●
Butter			●			●			●			●			●		●			●	Sol.		●
Butyl acetate		100	●		100	●			100	●		●					□						●
Butyl alcohol		100	●			▲			●			●			●		●			●			●
Calcium chloride	Sol.	10	●			●			●	Sol.	50	●			●		●	Sol.		●	Sol.		●
Carbon disulphide		100	●									●					▲			▲			●
Carbon tetrachloride			●			□			●			▲			●		▲			▲			●
Caustic soda 10%	Sol.	5,10	●	Sol.	5,10	●	Sol.	5,10	●	Sol.	5,10	●	Sol.	10	●		●	Sol.	5,10	□	Sol.	5,10	▲
Caustic soda 50%	Sol.	50	□	Sol.	50	●	Sol.	50	●	Sol.	50	●					●	Sol.	50	▲	Sol.	50	▲
Citric acid	Sol.	10	□	Sol.	10	□	Sol.	10	□		10	●			●	Up to 60°C	●	Sol.		●	Sol.		●
Chloroform		100	●			▲			▲			▲					▲			▲			●
Copper sulphate	Sol.	10	●									●			●		●	Sol.		●	Sol.		●
Dichloropropan												□					▲						
Distilled water			●			●			●			●			●		●			●			●
Edible fat			●			●			●			●			●		●			●			●
Ethyl acetate		100	●		100	●			100	●		●			●		□			▲			●
Ethyl alcohol		96	●			▲			●		96	●			●		●			□			□
Ethyl chloride		100	●			▲			▲			▲								●			●
Ethyl ether		100	●			●			●			●					▲			□			▲
Ethylene glycol			●			▲			□			●					□			●			●
Ferric chloride	Sol.	10	●			●			●			●			●		●	Sol.		●	Sol.		●
Formaldehyde (formalin)	Sol.	30	●	Sol.	40	□	Sol.	40	●	Sol.	40	●					▲	Sol.	40	●	Sol.	40	●
Formic acid	Sol.	10	●	Sol.		▲	Sol.		▲	Sol.	10	●			100	▲	Up to 60°C	●	Sat.		●	Sat,	▲
Freon 11												□			●					●	Sol.		□
Freon 12	Liq.		●			●			●			□			●					●			□
Freon 13												□			●					●			●
Gas oil			●			●			●			●			●		▲			●			●
Glycerine			●			●			●			●					▲			●			●
Glycol butylene		100	●			▲			□								□			●			●
Hydrochloric acid	Sol.	10	▲	Sol.	10	□	Sol.	10	□	Sol.	30	●	Sol.	10	▲	Up to 60°C	●		10	□		10	●
Hydrofluoric acid	Sol.	40	▲	Sol.	10	▲	Sol.	10	▲	Sol.	40	●			▲		□		50	▲	Sol.	50	●
Hydrogen peroxide	Sol.	3	▲	Sol.	3	▲	Sol.	3	▲		30	●	Sol.	90	▲		□	Sol.	80	▲	Sol.	80	□
Iodine tincture-alcoholic			▲			▲			▲			●					●						●
Isopropyl alcohol			●			▲			●			●			●		●			□			●

The characteristics described should be treated as guidelines only. No guarantee is made.  
The user is responsible for checking the exact operating conditions.

- = good resistance
- = fair resistance (limited use according to working conditions)
- ▲ = poor resistance (should not be used)

Blanks stand for data not available

- Conc. = concentration
- Sol. = solution
- Liq. = liquid
- Sat. = saturated
- Swell. = swelling

CHEMICAL AGENTS AND SOLVENTS	Polyamide (PA)			Transparent polyamide (PA-T)			Alcohol-Resistant transparent polyamide (PA-T AR)			Polypropylene (PP)			Acetal resin (POM)			Soft-Touch thermoplastic elastomer (TPE)		Rubber NBR			Flourated Rubber FKM			
	notes	conc.%	23°C	notes	conc.%	23°C	notes	conc.%	23°C	notes	conc.%	23°C	notes	conc.%	23°C	notes	23°C	notes	conc.%	23°C	notes	conc.%	23°C	
Kerosene			●			●			●			□			●			▲			●			●
Lactic acid	Sol.	10	●	Sol.	10	□	Sol.	10	□	Sol.	20	●			●	Up to 60°C	●	Sol.		●	Sol.		●	
Linseed oil			●			●			●			●			●	Up to 60°C	●			●			●	
Magnesium chloride	Sol.	10	●			●			●	Sol.	Sat.	●			●			Sol.		●	Sol.		●	
Mercuric chloride	Sol.	6	●									●												
Mercury			●			●			●			●											●	
Methyl acetate		100	●		100	●		100	●								□						●	
Methyl alcohol		100	●			▲			●		100	●			●					□			▲	
Methyl ethyl ketone			●			▲			●			□			▲					▲			▲	
Methylene chloride		100	●			▲			▲			□								▲			●	
Milk			●			●			●			●			●					●			●	
Mineral oil			●			●			●			●			●	Up to 60°C	●			●			●	
Nitric acid		10	▲	Sol.	2	□	Sol.	2	□	Sol.	10	●	Sol.	10	▲		□	Sol.	10	□	Sol.	10	□	
Oil			●			●			●			□			●					●			●	
Oil ether			●			●			▲			●			●					▲				
Oils for transformers			●			●			●			□			●	Up to 60°C	□			●			●	
Oleic acid		100	●			●			●	Sol.		●			●	Up to 60°C	●			□				
Paraffin oil			●			●			●			●				Up to 60°C	●			●			●	
Petrol			●			●			●			□			●					▲	Swell.	□	●	
Petrol vapor			●			●			●	Swell.		□			●					▲		□	●	
Phenol	Sol.		▲			▲			▲			●			▲					▲			●	
Phosphoric acid	Sol.	10	▲			▲			▲	Sol.	85	●	Sol.	10	▲	Up to 60°C	●	Sol.	20	□	Sol.	20	●	
(Caustic Potash) Potassium hydroxide 50%	Sol.	50	●	Sol.	50	●	Sol.	50	●	Sol.	50	●						Sol.	50	●	Sol.	50	▲	
(Caustic Potash) Potassium hydroxide 10%	Sol.	5,10	●	Sol.	5,10	●	Sol.	5,10	●	Sol.	5,10	●	Sol.	10	□			Sol.	5,10	□	Sol.	5,10	▲	
Potassium nitrate	Sol.	10	●	Sol.	10	●	Sol.	10	●	Sat.		●								●			●	
Sea, river and drinkable water			●			●			●			●			●					●			●	
Silicone oil			●			●			●			●								●			●	
Silver nitrate			●	Sol.	10	●	Sol.	10	●	Sol.	20	●						Sol.		□				
Soap solution	Sol.		●	Sol.		●	Sol.		●	Sol.		●			●			Sol.		●	Sol.		●	
Sodium carbonate	Sol.	10	●			●			●	Sol.	Sat.	●			●			Sol.		●	Sol.		●	
Sodium chloride	Sol.	10	●	Sol.	25	●	Sol.	25	●	Sol.	Sat.	●			●			Sol.		●	Sol.		●	
Sodium hypochlorite	Sol.		●			▲			▲	Sol.	20	●	Sol.	5	▲			Sol.	10	▲	Sol.	10	●	
Sodium nitrate	Sol.	10	●	Sol.	10	●	Sol.	10	●	Sat.		●								●			●	
Sodium silicate			●						●			●						Sol.		●	Sol.		●	
Sodium sulphate	Sol.	10	●	Sol.	10	●	Sol.	10	●			●			●			Sol.		●	Sol.		●	
Steam			●			●			●			●								□			●	
Sulphuric acid	Sol.	10	▲	Sol.	2	●	Sol.	2	●		98	●	Sol.	10	▲	Up to 60°C	●	Sol.	20	□	Sol.	20	●	
Tartaric acid			●	Sol.		□	Sol.		□	Sol.	10	●			●	Up to 60°C	●	Sol.		●	Sol.		●	
Tetralin			●			●			●			▲								▲			●	
Toluol/toluene			●			●			●			□			●					▲			□	
Trichloroethylene			□			●			●			▲								▲			□	
Unleaded petrol			●			●			●	Swell.		□			●					▲	Swell.	□	●	
Vaseline			●			●			●			●								□			●	
Vinegar												●								□			□	
Whisky			●			□			●			●			●					●			●	
Wine			●			●			●			●			●					●			●	
Xiyol			●			●			●			▲			●					▲			●	
Zinc chloride		10	□	Sol.	50	●	Sol.	50	●	Sol.	20	●			●			Sol.		●	Sol.		●	

The characteristics described should be treated as guidelines only. No guarantee is made.  
The user is responsible for checking the exact operating conditions.