



TPU

Chemical Resistance

HUNTSMAN

IROGRAN[®] Resistance Properties

Medium	Temperatur Temperature °C	IROGRAN P-Series	IROGRAN E-Series	IROGRAN H-Series	max. Volume increase %
Acetone	RT	-	-	-	40
AL-chloride, aqueous, 5 %	RT	++	++	++	1
Ammonia, 10 %	RT	++	++	++	1
Aniline	RT	--	--	--	
ASTM Fuel A	RT	++	++	++	4
ASTM Fuel B	RT	++	++	++	10
ASTM Fuel C	20°C	+	+	+	18
ASTM oil 1	80°C	++	++	++	
ASTM oil 2	80°C	++	++	++	3
ASTM oil 3	80°C	++	+	+	6
Ethanol 96 %	RT	+	+	+	11
Petrol, standard grade	RT	++	++	++	10
Petrol, premium grade	RT	-	-	-	17
Benzene	RT	-	-	-	
Butanol	RT	-	-	-	
Butylacetate	RT	-	-	-	40
Cyclohexanol	RT	+	+	+	5
Dibutylphthalate	RT	+	+	+	40
Diesel oil	RT	++	++	++	5
Dimethylformamide	RT	o	o	o	
Acetic acid 3 n	RT	-	-	-	2
Acetic acid, 20 %	RT	+	+	+	
Ethylacetate	RT	-	-	-	40
Ethylether	RT	+	+	+	
Fe chloride, aqueous, 5 %	40°C	+	+	+	
Glycol	RT	++	++	++	2
Glystantin / water 1:1	20	+	+	+	
Glystantin / water 1:1	80°C	+	-	-	
Isopropanol	RT	+	+	+	12
Kerosine	RT	++	++	++	3
Sodium chloride solution, conc.	RT	++	++	++	
Methanol	RT	+	+	+	10
Methylen chloride	RT	--	--	--	
Methylethylketone	RT	-	-	-	45
Mineral oil	80°C	++	++	++	
Soda soap fat	RT	++	++	++	
Sodium hydroxide solution 1N	RT	+	+	+	
Nitric acid, 20 %	RT	--	--	--	
Hydrochloric acid, 20 %	RT	+	+	+	
Sulphuric acid, 20 %	RT	+	+	+	
Sea water	RT	++	+	+	
Carbon tetrachloride	RT	-	+	+	
Toluene	RT	-	-	-	35
Trichloro ethylene	RT	-	-	-	
Water	100°C	-	--	--	
Water	RT	++	++	++	1

What about the resistance to:

Chemicals?

The impact of chemicals on IROGRAN[®] grades results in different modification of the material's properties. As the resistance mainly depends on the concentration and the temperatures used the information contained in this booklet can only be general. Basic information can be found in the comparison table. If further detailed information is required please contact your technical service representatives. These tests can be carried out in our laboratory on request.

Oil and Grease?

IROGRAN[®] in general is well-resistant to oil and grease, but additives and contamination contained in the material can lead to irreversible damage when IROGRAN[®] is exposed to oil and grease.

IROGRAN[®] is resistant to ASTM testing oil, even at 100° C over period of several weeks.

Acids and alkaline solutions?

The resistance to acids and alkaline solutions of the IROGRAN grades described is limited. IROGRAN[®] is resistant to diluted acids and alkaline solutions at room temperature for a short time.

- ++ resistant over a prolonged period
- + conditionally resistant, after a certain time appreciable differences are possible
- not resistant, short-term contact possible under certain conditions
- not resistant, pronounced attack
- o soluble
- RT room temperature 23°





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