

# Chemicals-proof of Tsurupica Material

Alcohol	Ethanol	
	Methanol	
	IPA (Isopropyl alcohol )	
Ketone	Acetone	
	MEK (Methylethylketone)	
	Cyclohexane	×
	MIBK (Methyl isobutyl ketone)	×
Ether	Ethyl ether	×
	THF (Tetrahydrofuran)	×
Aromatic	Xylene	×
Hydrocarbon	n-Pentane	×
	n-Hexanen	×
	n-Octane	×
Chloro	1,2-Dichloroethane	×
Acid	Hydrochloride	
	Sulphur dioxide (10%)	
	Sulphur dioxide (90%)	×
	Acetic acid (10%)	
	Formic acid (10%)	
	Nitric Acid	
	Phosphoric Acid	
Alkaline	Sodium Hydroxide (50%)	
	Ammonia Solution (10%)	
Others	Methyl Methacrylate	×
	DOP (Di-octyl phthalate)	×
	DMF (Dimethylformamide)	
	Methyl cellosolve	
	Limonene	×
	Formaldehyde (40%)	
	Hydrogen Peroxide (30%)	

## Q&A

Q) Is the material corrosive to selected gases and vapors?

A) If you could share the test result of this with us, we will offer the sample plates.

Q) if there was any experience with making a low-temperature vacuum this material with epoxy or indium or some other cryogenic-compatible sealing technology.

A) The key issue is the thickness of the material you are going to use. We have observed the crack occurred after long time for several years due to the difference of the pressure of inside and outside of the vacuum chamber.

We strongly recommend the thickness of more than 5 mm in case that you need the aperture of 40mm. For the sealing technology, we tested to use indium and O-ring, however the shrinking have to be considered when you use with lower temp.

Surface condition of Optical polish (Tsurupica-RR) and rough polish (Tsurupica-R)

### Optical polish

surface roughness (ave.) : <0.05um

### Rough polish

surface roughness (ave.) : <0.30um