



# Perspex® Cast Chemical Resistance

## Technical Data Sheet

### Chemical Resistance Values

The table below shows the chemical resistance of Perspex® cast acrylic sheet to a variety of chemicals. Values quoted are the results of tests on representative samples and do not constitute a specification.

The following symbols have been used:

S = Satisfactory (no apparent effect apart from possible staining)

A = Some attack evident (swelling or slight crazing)

U = Unsatisfactory (the sample has dissolved, swollen, decomposed, etc.)

Chemical	Concentration	Resistance	Exposure Time	Notes
Acetic acid	10%	S	5 years	-
	100%	U	1 day	Badly swollen
	Glacial	U	3 days	Dissolved
Acetone	100%	U	1 day	Dissolved
Alcohol, n-butyl	-	U	1 year	Crazing and disintegration
Alcohol, ethyl	10%	A	1 year	Slight attack
	50%	A	1 year	Slight attack
	100%	U	1 year	Slight swelling and softening
Alcohol, isopropyl	10%	A	1 year	Crazing
	50%	A	1 year	Crazing
	100%	A	1 year	Attacked
Alcohol, methyl	10%	A	1 year	Slight attack
	50%	A	168 days	Swollen
	100%	U	168 days	Swollen: weight increase
Ammonia	0.880 sol.	S	1 year	-
Amyl acetate	-	U	28 days	Dissolved
Aniline	-	U	7 days	Dissolved
Aviation fuel	100-octane	A	168 days	Slight crazing
Benzaldehyde	-	U	7 days	Dissolved
Benzene	-	U	1 day	Dissolved
Butyl acetate	-	U	10 days	Dissolved
Calcium chloride	Saturated sol.	S	3 years	Slight attack
Carbon tetrachloride	-	U	84 days	Dissolving
Chloroform	-	U	1 day	Dissolved
Chlorine	2% in water	A	5 years	Surface crazing and attack
Chromic acid	10%	S	5 years	Stained
	Saturated sol.	U	1 year	Dissolving
Citric acid	Saturated sol.	S	5 years	-
Dibutyl phthalate	-	A	2 years	Surface crazed
Diocetyl phthalate	-	A	2 years	Slight attack
Dibutyl sebacate	-	A	2 years	Slight attack
Diethyl ether	-	U	168 days	Swollen & soft
Ethylene glycol	-	S	5 years	-
Ethylene dichloride	-	U	1 day	Dissolved
Ethyl acetate	-	U	3 days	Dissolved
Epichlorhydrin	-	U	1 day	Dissolved
Formaldehyde	40%	S	5 years	-
Formic acid	10%	S	5 years	-
	90%	U	7 days	-
Glycerol (glycerine)	-	S	5 years	-
Hexane	-	S	168 days	Slight crazing
Hydrochloric acid	10%	S	168 days	Slight crazing
	Concentrated	S	168 days	Slight crazing
Hydrocyanic acid	-	U	1 day	Dissolved
Hydrofluoric acid	Concentrated	U	1 day	Swollen & soft
Hydrogen peroxide	10 vol.	S	1 year	-
	90%	U	1 day	-
Mercury	-	S	2 years	-



Methylene chloride	-	U	1 day	Dissolved
Methyl salicylate	-	U	7 days	Dissolved
Nitric acid	10%	S	1 year	-
	Concentrated	U	1 day	Swollen
Oil, transformer	-	S	5 years	Staining
Oil, diesel	-	S	1 year	Hazing
Oil, olive	-	S	5 years	Slight crazing
Oil, paraffin (medicinal)	-	S	5 years	-
Oil, silicone	-	A	1 year	Swollen
Oxalic acid	Saturated sol.	S	5 years	-
Perchloroethylene	-	U	5 years	Severe crazing
Phenol	Saturated sol.	U	7 days	Dissolved
Phosphoric acid	10%	S	5 years	-
	Concentrated	U	7 days	Severe crazing
Potassium dichromate	10%	S	5 years	Slight staining
Potassium hydroxide	Saturated sol.	S	168 days	-
Potassium permanganate	N/10 sol.	S	5 years	Severe staining
Sodium carbonate	Saturated sol.	S	5 years	-
Sodium chlorate	Saturated sol.	S	5 years	-
Sodium chloride	Saturated sol.	S	5 years	-
Sodium hydroxide	Saturated sol.	S	5 years	-
Sodium hypochlorite	10% chlorine sol.	S	5 years	-
Sulphuric acid	10%	S	5 years	-
	30%	S	1 year	Slight edge attack
	Concentrated	U	1 day	Swollen
Tartaric acid	Saturated sol.	S	5 years	-
Toluene	-	U	7 days	Dissolved
Trichloroethane	-	U	1 day	Dissolved
Trichloroethylene	-	U	1 day	Dissolved
Tricresyl phosphate	-	U	2 years	Attacked / crazed
Water	-	S	5 years	-
White spirit	-	S	5 years	Slight crazing
Xylene	-	U	7 days	Dissolved

Perspex® is a registered trademark of the Lucite International UK Limited (registered in England No 3830161) group of Companies.

#### Perspex® Cast Acrylic Sheet

The information given in this report is confidential. Its reproduction in whole, in part or in summary form without our written consent in each instance is expressly forbidden. The information is given in good faith and is based on our general experience, but because of the many particular factors which are outside our knowledge and control that affect the use of products, no warranty is given or is to be implied. Freedom from patent rights must not be assumed.



#### Contact us

Tel. (02) 9417 6111 Fax. (02) 9417 6169

Web. [www.allplastics.com.au](http://www.allplastics.com.au)

Address. Unit 20/ 380 Eastern Valley Way, Chatswood, NSW 2067 AUSTRALIA.