

Xthane TC-70S

Modified Toluene Diisocyanate (TDI) Terminated Polyester Prepolymer

Typical Properties of TC-70S Prepolymer			
NCO, %	2.2 – 2.5	Viscosity @ 176°F (80°C)	2100
Specific Gravity @ 25°C	1.16	Viscosity @ 212°F (100°C)	1400
Appearance @ 25°C	Solid	Residual TDI %	< 1.0
		Flash Point	480°F (249°C)

Product Description:

Xthane TC-70S is a TDI terminated polyester prepolymer for use in high property elastomers, elastomeric coatings and adhesives applications. As with all polyurethane products, application and field testing are necessary to determine suitability of the selected product or product combination for each specific application.

Storage and Handling:

Containers should be kept tightly closed to prevent moisture contamination. TDI will react with water to liberate CO² gas potentially causing containers to expand and rupture. Do not reseal if contamination is suspected. Use of a dry nitrogen blanket for partial drums is recommended. Storage for Xthane TC-70S should be maintained in a cool, dry place at ambient temperatures. Exposure to temperatures over 350°F (177°C) can create excessive pressure potentially causing containers to rupture.

Do not breathe aerosol or vapors and avoid contact with skin and eyes. Use protective equipment including respirator when handling heated TDI as exposure to vapors of heated TDI can be dangerous. To heat product properly, use well ventilated convection ovens. Avoid using drum heaters.

Typical Physical Properties TC-70S		Using MOCA	Using E300
Hardness	Shore A	70	68
Resilience	% Rebound	32	41
Split Tear Strength	PLI	320	153
Die C Tear Strength	PLI	550	291
Tensile Strength	PSI	5500	5000
Ultimate Elongation	%	760	>800
100% Modulus	PSI	380	370
200% Modulus	PSI	520	500
300% Modulus	PSI	710	640
Compression Set	%	33	30
Compression Deflection	10%	95	90
Tabor Abrasion	Mg loss	29	25

Processing Characteristics TC-70S		Using MOCA	Using E300
NCO Range	%	2.2 – 2.5	2.2 – 2.5
Curative Ratio	pph	7.08	5.7
Curative Level	Stoichiometry	95 %	95 %
Prepolymer Temperature	Centigrade	100°	80°
Extender Temperature	Centigrade	110°	30°
Mold Temperature	Centigrade	115°	100°
Pot Life	Minutes	6 - 8	5
Demold Time	Minutes	60	35
Recommended Cure Time	@ 212°F	16 hours	16 hours

Health and Safety Information:

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling any of the products listed above. Before working with these products, it is your responsibility to read and become familiar with the available information on its hazards, proper use and handling. This is extremely important and cannot be overemphasized. Information is available in several forms, e.g. material safety data sheets and product labels. To obtain this information, contact your ITWC, Inc. representative.

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