Xthane TD-90S

Modified Toluene Diisocyanate (TDI) Terminated Polyester Prepolymer

Typical Properties of TD-90S Prepolymer			
NCO, %	4.0 – 4.4	Viscosity @ 212°F (100°C)	1000
Specific Gravity @ 25°C	1.10		
Appearance @ 25°C	Colorless to light yellow liquid	Flash Point	480°F (249°C)

Product Description:

Xthane TD-90S 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.

Typical Physical Properties using MOCA			TD-90S
Hardness	Shore A		90
Resilience	% Rebound		35
Split Tear Strength	PLI		125
Die C Tear Strength	PLI		635
Tensile Strength	PSI		7300
Ultimate Elongation	%		
100% Modulus	PSI		880
200% Modulus	PSI		
300% Modulus	PSI		1750
Compression Set	%		25
Compression Deflection	15%		
Taber Abrasion	Mg Loss		-

Storage and Handling:

Containers should be kept tightly closed to prevent moisture contamination. TDI will react with water to liberate CO^2 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 TD-90S 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.

Processing Characteristics using MOCA			TD-90S
NCO Range			4.0 – 4.4%
Curative: MOCA	pph		11.0
Curative Level	Stoichiometry		90 %
Prepolymer Temperature			212°F
MOCA Temperature			240°F
Pot Life	Minutes		8 - 10
Demold Time	Minutes		
Recommended Cure Time	@ 212°F		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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