



TECHNICAL DATA SHEET

TSE 40D Cast Elastomer

High Impact Elastomer

Product Description

TSE 40D Cast Elastomer is a two component urethane elastomer with a Shore D hardness of 40. The system has some very unique properties. The system has a high degree of flexibility combining both high impact resistance and resistance to abrasion. It also has good hydrolysis resistance and will retain its properties upon weathering.

TSE 40D has excellent wet out of fiberglass.

Typical Liquid Properties (75°F)

TSE 40D Cast Elastomer (Part A) Isocyanate

Viscosity, cps	300
Density, lbs/gal	8.92
Color	Clear
Shelf Life	6 months

TSE-40D Cast Elastomer (Part B) Polyol

Viscosity, cps	1,300
Density, lbs/gal	8.57
Color	Clear
Shelf Life	6 months

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Typical Mechanical Properties

<u>Property</u>	<u>ASTM</u>	<u>Unit</u>	<u>0%</u>	<u>50% glass</u>
Density	D 792	sp-gr	1.056	1.48
Hardness	D 2240	Shore D	44.8	56.8
Tensile Strength	D 638	psi	1,003	27,685
Elongation	D 638	%	71.3	1.7
Flexural Strength	D 790			
77°F		psi	523	7,965
150°F		psi	101	5,527
Flexural Modulus	D 790			
77°F		ksi	10.83	682.59
150°F		ksi	682.59	424.57
Notched Izod Impact	D 256	ft-lb/in	3.16	22.79
Instrumented Impact	D 3763			
Load at Peak		lb	667.5	1,592.6
Total Energy		ft*lb	23.5	18.7
Failure mode			Penetrated	Rebound
Tg (°C)			74.63	82.18

Processing and Application

TSE 40D Cast Elastomer can be processed using both high and low pressure equipment and 2 component cartridge guns. It is essential to have equipment that consistently delivers accurate amounts of both components to the mixer to obtain a high quality elastomer.

The product can be cast to almost any thickness.

Surfaces should be clean and free of contaminates.

Processing Temperature*

Mix Ratio, by Weight

Gel Time **

Polyol/ Isocyanate

50°F – 140°F

100grams/52grams

55 – 65 minutes

*Depends on equipment used.

** Can be varied upon request

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Storage and Handling Part (A)

TSE 40D Cast Elastomer should be stored tightly closed containers and protected from contamination with moisture and other foreign substances, which can adversely affect processing. It will react slowly with water to form CO₂ gas, which may cause sealed containers to rupture. Partially filled containers should be blanketed with dry nitrogen.

Storage temperature should be maintained between 77° and 122°F. Under these conditions the shelf life for unopened containers should be 6 months.

If TSE 40D Cast Elastomer (Part A) is stored for long periods of time below 77°F crystallization and settling may occur. If crystals do form, they can be melted with moderate, indirect heat (104°F – 122°F) in a well-ventilated oven for the minimum time needed to render the product clear.. When the crystals are melted the product should be mixed by rolling the container or stirring until homogeneous.

Since the heated TSE 40D Part A will generate vapors more rapidly than at 77°F be sure to follow the precautions listed on the MSDS in the “Personal Protection” section when opening a heated container of TSE 40D (Part A).

Storage and Handling Part (B)

TSE 40D Cast Elastomer Part(B) is slightly hygroscopic and may absorb water. Containers should be kept tightly closed and protected from contamination with moisture and foreign materials, which can adversely affect processing.

This Polyol can become viscous at low temperatures. For ease of handling, storage temperatures between 75° and 120° are recommended.

Standard Package

Components are supplied in 5-gallon pails (40 Lbs. net) and 55-gallon drums (450-500 Lbs. net)

Safety and Handling

Refer to the Safety Data Sheet (SDS) before handling either TSE EcoSPRAY® 40D (Part A) or TSE EcoSPRAY® 40D (Part B). It is the responsibility of the operator to completely read and understand the SDS for each component before handling them.

If for any reason you are not clear on the proper safety and handling procedures please contact your supervisor or a TSE representative for additional information.

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