Por-A-Thane A1081

(formerly A81T)

Preliminary Data

Por-A-Thane A1081 is a TDI-terminated polyester prepolymer that produces high performance elastomers designed for the roll industry. Triol curatives such as Curathane E92 or TMP/TIPA blends produce durometers in the 52 - 55 Shore A range when mixed with this high performance prepolymer.

CHARACTERISTICS

Appearance at RT	Solid
NCO Content, %	3.17 – 3.43
Brookfield Viscosity	
@ 212° F (100°C) cps	1200
Odor	Slight Isocyanate
Storage Stability	Excellent in the absence of moisture

Hygiene

Por-A-Thane A1081 in its liquid form contains a small quantity of free toluene diisocyanate (TDI), which is known to cause severe irritation to the eyes, skin and mucous membranes. Avoid contact with eyes, skin and clothing, and wash thoroughly after handling. Avoid breathing vapor. Use only with adequate ventilation.

Additives that nay be used with Por-A-Thane A1081 to produce finished goods may present hazards in handling and use. Always consult and follow label directions and handling precautions before with the manufacturing process.

Meltdown Procedure

Por-A-Thane A1081 can be melted using such devices as melt down ovens, thermostatically controlled drum heaters or warming blankets. Recommended temperature is 158°F (70°C). Recommended times as this temperature are:

5 gallon pail	16 - 24 hours
55 gallon drum	36- 48 hours

Materials that are exposed to lowered temperatures may require longer times. To ensure homogeneity of the materials, containers should be rolled prior to use.

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PROCESSING

Curative	Curathane XP E 92 (triol)
Stoichiometry, %	95
Resin Temperature, °F	212
Curative Temperature, °F	75
Mold Temperature, °F	250
Pot Life, minutes	60
Cure Cycle, hrs@250°F	16

TYPICAL PROPERTIES OF CURED ELASTOMER

Hardness, Shore A	52-55
Ultimate Tensile, PSI	1500 +/- 300
Elongation, %	400
Tear, Die C, pli	170 +/- 5
Split Tear (ASTM D470), pli	17 +/- 2
Resilience, Bashore, %	31

Lower durometers and other characteristics of the final elastomer can be modified by use of a variety of materials that do not react chemically with any other component of the recipe. These non-reactive materials include plasticizers, fillers, pigments, and hydrolytic stabilizers. PUMA POLYMERS Technical staff is available to help with developing your desired result.

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