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Ethacure 300

POLYURETHANE CURATIVE

TECHNICAL DATASHEET

Ethacure 300 is a liquid aromatic diamine polyurethane curative. Cast polyurethane stress/strain physical properties are excellent. At similar hardness, these properties compare favorably with other diamine curatives.

Ethacure 300 curative is convenient to use because it is a liquid at room temperature and is processed at room temperature.

Product Specification

	Ethacure 300
Chemical name	1,3 Benzenediamine, 4-methyl-2,6-bis (methylthio) 1,3 Benzenediamine, 2-methyl-4, 6-bis (methylthio)
Equivalent Weight	107
Appearance	Clear to light amber, low viscosity liquid
Moisture Content (%)	< 0.10
Specific Gravity at 68°F	1.21
Viscosity at 77°F (cps)	420
Boiling Point (°F)	667

Processing

Ethacure 300 is a low viscosity liquid that is ready for immediate use. Loading can be accomplished with simple hand pumps or gravity feed. Dry nitrogen should be used to blanket curative tanks.

% Theory

Selection of 95% theory is generally recommended. Lowering it to 85% theory will improve compression set and raise 300% modulus (tensile). Increasing to 105% theory will enhance tear strength and elongation.

Mix Ratio

The following equation calculates the amount of **Ethacure 300** required for 100 parts (by weight) of prepolymer.

%NCO × 2.55 × %Theory = Ethacure 300 pph

%Theory is expressed as a decimal, i.e. 95% theory is 0.95 for the calculation.

Mold temperature and Post Cure

Mold temperature is generally higher than mix temperature. Molds should be preheated between 176 – 212°F (80 - 100°C) and maintained at that temperature during cure. Demold time will vary with prepolymer and part size.

The recommended post cure conditions for TDI polyether and polyester prepolymers are 16 hours at 100°C. Prepolymers based on TDI/PTMEG (high performance ERAPOLS) may require shorter post cure periods.

Storage and Handling

Ethacure 300 is stored in sealed containers and protected from moisture and oxidation by dry nitrogen. Although the product is not particularly hygroscopic, containers should not be left open to the atmosphere. Chemical stability is excellent under normal conditions, but storage in areas of excess heat and/or high humidity should be avoided. Flush an opened container with dry nitrogen before resealing.

In the event of a spill, contain with dykes or absorbents to prevent entry into sewers or streams. Small spills can be taken up with dry chemical absorbent. Refer to MSD'S for further information.

Health and Safety

Use caution when handling **Ethacure 300** as with any aromatic diamine.
Always wear suitable gloves and glasses when handling. Use in a well-ventilated area.

Toxicological testing for **Ethacure 300** dermally to rabbits (LD50 > 2000 mg/kg).

Please consult the MSDS for further information.