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TECHNICAL DATA

Ethacure 300

POLYURETHANE CURATIVE

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

Chemical Name	3,5-dimethylthio-2, 4-toluenediamine; 3,5-dimethylthio-2, 6-toluenediamine
Equivalent Weight	107
Molecular Weight	214.4
Appearance	Clear amber, low viscosity liquid
Boiling Point (°C)	353
Moisture Content (%)	<0.08
Specific Gravity @ 20°C	1.208
Viscosity @ 25°C (cps)	420

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.

This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.



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MIX RATIO

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

$$\% \text{NCO} \times 2.55 \times \% \text{Theory} = \text{Ethacure 300 pph}$$

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

MOULD TEMPERATURE AND POST CURE

Mould temperature is generally higher than mix temperature. Moulds should be preheated between 80 - 100°C and maintained at that temperature during cure. Demould time will vary with prepolymer and part size. Small parts (2 kg) can usually be demoulded after 20 minutes, while larger parts will require more time.

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, HANDLING AND SAFETY

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.

Personnel handling this product should use safety goggles when there is a possibility of eye contact. In case of eye contact, immediately flush with water for 15 minutes and get medical attention. In case of skin contact, wash the exposed area with soap and water. If ingested, give two glasses of water.

Ethacure 300 is expected **not** to exhibit a mutagenic or carcinogenic risk. Toxicological testing demonstrated that Ethacure 300 is only slightly toxic orally to rats (LD₅₀ = 1515 mg/kg) and practically non-toxic dermally to rabbits (LD₅₀ > 2000 mg/kg). Eye irritation, but not skin irritation has been observed with rabbits.

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