

ENDURATHANE CS70D

A Low Viscosity, fast curing, hard setting, castable polyurethane resin

DESCRIPTION:

Endurathane CS70D is a formulated polyurethane resin system that reacts at room temperature to produce a hard, rigid polyurethane plastic suitable for manufacturing moulded components, models and prototypes. The extremely low mixed viscosity aids flow and wet out in the mould.

Fast cure and fast demould times are a feature which enable high productivity and good mould turnaround. Endurathane CS70D also possess excellent machineability.

RECOMMENDED USES:

The extremely low viscosity of the mixed system ensure good flow for wetting out picking up all mould detail and aides air release.

SPECIFICATION:

Polyol Component

Appearance: cream liquid
Viscosity at 25°C: 300-400 cPs
Specific Gravity: 1.05 – 1.07

Isocyanate Component

Appearance: brown liquid
Viscosity at 25°C: 80 - 150 cPs
Specific Gravity: 1.22 – 1.24

Mixing ratio by weight

60A : 100B parts by weight
50A : 100B parts by volume

PROPERTIES:

Properties	Result
Gel Time	2-3 minutes @ 20°C
Demould Time	6-15 minutes
Full Cure	18-24 hours @ 20°C
Shore Hardness	70-75°D

PROCESSING:

Quantities are be mixed by hand or drill and mixer, followed by vacuum de-gassing if a completely air free casting is required.

The optimum processing temperature for both components is in the range 20-25°C, lower component temperatures will result in a longer gel time and vice-versa.

The system will reach full cure within approximately 24 hours at normal ambient temperatures.

PACKAGING



16Kg kit comprising:
Part A 6Kgs;
Part B 10Kgs.



Bulk:
Part A: Nett 240 kg per 200L drum.
Part B: Nett 215 kg per 200L drum..



STORAGE AND HANDLING PRECAUTIONS

ALL CHEMICALS MUST BE USED BY TRAINED PERSONNEL. Mix up chemicals in a well-ventilated work space.

Component A (Isocyanate) must be stored in tightly closed containers and kept protected from moisture and foreign materials. Storage should be maintained at room temperature. The handling of PGL supplied isocyanates is safe, provided the standard safety precautions for handling hazardous chemicals are established and followed. Refer to the material safety data sheet prior to use.

Component B (resin) is hygroscopic and containers must be kept closed to prevent

absorption of moisture. Avoid eye and skin contact.

Shelf Life: Minimum 6 months.

Clean up:

Owing to the chemical resistance of polyurethane products it is important to clean up any waste as quickly as possible. Methyl Proxitol is suitable for general cleaning. Cured polyurethane may be softened and removed by soaking the part in NMP cleaner.

Wear suitable protective clothing, goggles and gloves at all times when cleaning.

Storage:

Store at temperatures between 15°C and 26°C in tightly closed containers to prevent moisture and other contamination. If exposed to moisture Component A will crystallise.



HEALTH AND SAFETY ADVICE

Refer to Polymer Group Material Safety Data Sheets for individual products. Also refer to the *Approved Code of Practice for the Safe Use of Isocyanates*.

Component A (Isocyanate) contains methylene bisphenyl diisocyanate (MDI). It is an irritant and allergic sensitiser. It is moderately toxic. Avoid contact with skin or eyes, avoid breathing any vapour (resulting from heating material or during heat of reaction/cure) and use with adequate ventilation.

Component B (Polyol) is an irritant, is moderately toxic and is classified as hazardous to the environment.

This kit is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and is regulated as a class 9 dangerous good.

ISOCYANATE COMPONENT:

HSNO Classification: 6.1D, 6.3A, 6.4A, 6.5A (respiratory), 6.5B (skin), 6.7B, 6.9A (lungs) & 6.9B (respiratory tract).

HSNO Approval Number: HSR002646

Hazard and Precautionary Statements:

Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer if inhaled.
Causes damage to organs if inhaled. (lungs)
May cause damage to organs if inhaled. (respiratory tract)



Prevention:

Read Safety Data Sheet before use.
Wear eye/face protection.
Wear protective gloves.
Wash hands thoroughly after handling.
Avoid breathing any dust, fume, vapours. Use with adequate ventilation.
Contaminated work clothing must be laundered before re-use.
Avoid release to the environment.

POLYOL COMPONENT:

HSNO Classification: 3.1D, 6.1E, 6.3B, 6.4A, 6.7B, 6.8B, 6.9B, 9.1B

HSNO Approval Number: HSR002644

Hazard and Precautionary Statements:

Harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May be harmful if inhaled.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life.
Harmful to terrestrial vertebrates.



Prevention:

Read safety data sheet before use
Avoid breathing any dust, fume, vapours. Use with adequate ventilation.
Contaminated work clothing must be laundered before re-use.
Wear protective gloves.
Wash hands thoroughly after handling.
Avoid release to the environment.