Version 1
October 2018

Isobloc C11

NONYL PHENOL FREE BLOCKED PREPOLYMER

PRODUCT DESCRIPTION

Isobloc C11 (formerly BP42-241) is a low viscosity blocked TDI prepolymer for use as an epoxy flexibiliser. This product does not contain nonyl phenol and is solvent free.

USES

Isobloc C11 can be used to increase the flexibility of 2K epoxy systems. It is best cured at ambient temperature with aliphatic or cycloaliphatic amines.

STORAGE, HANDLING AND PERSONAL PROTECTION

The recommendations in our Safety Data Sheet for this product must be followed at all times. More general information is included in our publication "A Guide to the Safe Handling of Polyurethane Chemicals"

The product shelf life is 6 months when stored at 25°C. Prolonged storage at elevated temperatures will result in decreased shelf life.
Isobloc C11 does not contain monomeric isocyanates when stored at ambient temperatures.

TYPICAL PROPERTIES

As supplied the product has the following typical characteristics:

Viscosity @ 25°C, cPs	15,000 – 55,000
Appearance	Clear viscous liquid
Calculated NCO content, %	2.1 – 2.4
Calculated NCO Equivalent Weight	1750 - 2000
Calculated Epoxy Equivalent Weight	875 - 1000
Solids content, %	>99.5
Specific Gravity, g/cm3	1.03

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Solubility

Isobloc C11 has good compatibility with acetates, ketones, esters and aromatics. Only PU grade solvents (<0.05% water) should be used. Viscosity can also be reduced by the addition of plasticisers such as phthalates and adipates.

Curing agents

The final properties are dependent on the choice of curing agent. For ambient cure, the best results are achieved with aliphatic or cycloaliphatic amines.

The following data was obtained by curing Isobloc C11 with Aradur 40 (cycloaliphatic amine) and Araldite GY250 (epoxy resin).

Isobloc C11 (pbw)	Epoxy resin (pbw)	Amine (pbw)	Tensile strength (MPa)	Elongation (%)	Hardness (°A)	Hardness (°D)
100	0	6.8	1.9	560	53	13
80	20	11.8	4.9	180	88	34
60	40	16.9	13.0	160	-	58
40	60	21.9	24.7	140	-	71

The results above are typical values and do not constitute a specification.

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