

Ulfcar® Polem A 40 RF

Type

Branched, castor oil-based bio polyol.

Form supplied

Solvent-free, liquid.

Uses

In the formulation of Rigid PUR/PIR block foam foamed with CO₂

Solubility / thinnability

Polem A 40RF is a modified polyol, and must be used as is.

Compatibility

Polem A 40RF is compatible with different MDI isocyanates. Given the many different products on the market, compatibility testing is always advisable.

Properties / Applications

In combination with MDI, Polem A 40 RF is suitable for use in the formulation of rigid PUR/PIR foam for isolation panel production etc. Polem A 40RF is a formulated product, and does not require any additional blow agent or additives.

For calculation of the necessary amount of polyisocyanate at equivalent chemical reaction use following formula:

$$\frac{42 \times 100 \times \text{OH}\%}{17 \times \text{NCO}\%} = \text{polyisocyanate (supply form)}$$

(solid resin) (supply form)

42 = molecular weight of NCO group
17 = molecular weight of OH group

Storage

When stored in originally sealed containers the product will remain stable for at least 6 months.

Labeling and REACH applications

This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet.

Important Note

Ulfcar®'s products are guaranteed against defective materials and manufacture and are sold subject to our standard terms and conditions of sale, copies of which may be obtained on request.

Further Information

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements. Ulfcar® has technical and practical experiences build over many years. You are welcome to call us for advice and technical assistance.

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to the technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out by only qualified experts in the sole responsibility of a customer. Please contact ULFCAR for the latest version. All our documents, offers, ect. are in association with our general sales, delivery and application conditions.

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Ulfcar® Polem A 40 RF

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Liquid

Viscosity at 23°C	1000 mPa·s DIN EN ISO 3219/A.3
OH value	367
Equivalent weight	153

Typical curing properties (MDI 200; NCO 31,5; Index 160)

Mixing time	15 sec.
Pot life:	23 sec.
Risetime	90 sec.
Stringtime	110 sec.

Typical data for final product

Density	40 g/l ISO 844
Compression, strenght	Parallel to flow direction 330 kPa ISO 845 Perpendicular to flow direction, 1: 150 kPa ISO 845 Perpendicular to flow direction, 2: 175 kPa ISO 845
Compression, module	Parallel to flow direction, 8,8 MPa ISO 845 Perpendicular to flow direction, 1: 2,8 MPa ISO 845 Perpendicular to flow direction, 2: 3,7 MPa ISO 845
Shear, strenght module	100 kPa ISO 1922 2,0 kPa ISO 1922
Tensile, strenght module	240 kPa ISO 1926 6,0 kPa ISO 1926
Dimension stability	48 (h) at -30°C: -0,2 Vol. % ISO 2796 48 (h) at +100°C: +3,0 Vol. % ISO 2796
Insulation property Lambda-value at 10°C	0,0023 W/m·K ISO 8301/ASTM C518 (foamed in block)
Closed cell	Min. 90% ISO 4590
Reaction to fire	Class D-s2d2 ISO 11925-2 & ISO 13501-1 Class B2 DIN 4102-1
Global Warming Potential (GWP)	0
Ozone Depletion Potential (ODP)	0

Please note

The above technical data is a guidance reference only. Different values can be achieved depending on the choice and ratio of the MDI. Careful testing should be conducted to verify final system.

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