



DESMODUR RN

Polyisocyanate Crosslinking Agent

Product Code XR036281

Effective Date: 7/01/02

Description

Desmodur RN polyisocyanate is a solution of polyisocyanurate with aliphatic and aromatic NCO groups in ethyl acetate.

Application

Desmodur RN polyisocyanate is a suitable crosslinker for adhesives based on Desmocoll polyurethane, natural rubber or synthetic rubber. Desmodur RN polyisocyanate is especially useful for crosslinking pale-colored adhesives used to bond rubber-based materials. The use of Desmodur RN polyisocyanate with suitable adhesives yields bonds, which undergo minimal discoloration on exposure to light.

After adding Desmodur RN polyisocyanate to a polyurethane or rubber-based adhesive, the ready-to-use two-component mixture must be used within its pot life. Pot life is not only governed by the polymer content of the adhesive but also by its other components (resins, antioxidants, plasticizers, solvents, etc.). At the end of the pot life, which can vary from several hours to one working day, the adhesive becomes increasingly difficult to process and its viscosity increases rapidly. Finally, irreversible gelling occurs. The following guide values are suggested for determining the amount of crosslinker to be used. Amounts given are parts by weight (pbw).

To crosslink 100 pbw adhesive: Desmocoll® (hydroxyl polyurethane) based adhesives (containing 20% polyurethane) should be crosslinked with 4 - 7 pbw Desmodur RN polyisocyanate. Baypren® (polychloroprene rubber) based adhesives (containing approximately 20% rubber content) should be crosslinked with 4 - 7 pbw Desmodur RN polyisocyanate.

Product Specifications

Property	Value
NCO content of solution (DIN EN ISO 11 909, Annex A)(%)	7.2 ± 0.3

Typical Properties*

Property	Value
Form supplied	approx. 40% in ethyl acetate
Non-volatile content (DIN EN ISO 3251)	approx. 40%
Density at 20°C (DIN 53 217/5)	approx. 1.04 g/cm ³
Viscosity at 20°C (DIN 53 015)	approx. 11 mPa•s
Solvent	ethyl acetate
Flash Point (DIN 51 755)	-5°C
Appearance	virtually colorless to slightly yellowish liquid

The color does not influence the quality of the bonds.

Storage

When stored in its sealed original containers at temperatures of 10 - 25°C, Desmodur RN polyisocyanate will remain stable for six months.

All Desmodur grades are highly sensitive to moisture and react with water to form carbon dioxide and insoluble ureas. The containers must therefore be kept tightly sealed. Exposure to water in any form (e.g. from damp containers or solvents or moist air) must be avoided in order to prevent the formation of carbon dioxide, which may cause a dangerous increase in pressure in the containers. Exposure to air and/or light accelerates yellowing but this has, in general, no effect on the processing properties of the adhesive.

* These items are provided as general information only. They are approximate values and are not part of the product specifications.

Packaging

Desmodur RN polyisocyanate is supplied in one-liter metal bottles containing 0.75 kg.

Health and Safety Information

Appropriate literature has been assembled which provides information pertaining to the health and safety concerns that must be observed when handling Desmodur RN polyisocyanate. For materials mentioned that are not Bayer products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer should be followed. Before working with any product mentioned in this publication, you must read and become familiar with available information concerning its hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms such as material safety data sheets and product labels. For further information contact your Bayer MaterialScience representative or the Product and Regulatory Affairs Department in Pittsburgh, Pa.

Note: The information contained in this bulletin is current as of July 2002. Please contact Bayer MaterialScience to determine whether this publication has been revised.

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