

DESMODUR[®] 44V20L

General Properties and Applications

Desmodur[®] 44V20L is a liquid, dark brown polymeric isocyanate based on diphenylmethane-4,4'-diisocyanate (MDI) with isomers and homologues of higher functionality. It is used in conjunction with polyols to produce polyurethane.

Sampling	Exposure to moisture must be prevented when taking product samples
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Specification Property	Value	Unit of measurement	Method
NCO content	30.5 - 32.5	% by wt.	MDI-01-01
Viscosity 25 °C*)	160 - 240	mPa·s	MDI-01-02
Acidity	max. 200	ppm HCl	MDI-01-03

*) Lengthy storage can lead to an increase in the viscosity of Desmodur[®] 44V20 L, although in our experience this has no adverse effect on the processing properties of the product.

Other Data* Property	Value	Unit of measurement	Method
Density 20 °C	approx. 1.23	g/cm ³	DIN 51757
Phenylisocyanate content	max. 50	ppm	MDI-01-09
Coefficient of thermal expansion	6.59 · 10 ⁻⁴	K ⁻¹	
Specific heat (cp)	approx. 1.51	kJ/kgK	

* These values provide general information and are not part of the product specification

Storage	Recommended storage temperature: + 10 to + 30 °C (in exceptional cases up to 50°C) Storage stability (ex works): 6 months if stored in moisture-tight drums
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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.
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Directions for Processing

Desmodur[®] 44V20 L may undergo partial crystallization at temperatures below 0 °C. The product can, however, be brought back into the liquid state by heating the entire contents of the drum for a short time to a maximum of 70 °C, although this may lead to an increase in the solids content.

Drums including empty ones should always be kept tightly sealed. The product should never be allowed to come into contact with water, which reacts with Desmodur[®] 44V20 L to form polyureas and carbon dioxide.

Contact with water in any form (damp drums, solvents containing water, moist air) must be prevented not only during storage, but also when removing material from drums and during processing.

Failure to do so may lead to a dangerous build up of pressure in tanks and drums due to the generation of carbon dioxide. In addition, polyureas forming in Desmodur[®] 44V20 L can cause solids to separate out, leading to blockages in the filters, pumps and pipelines of the processing equipment and resulting in production problems.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

This product is not designated as „Medical Grade“ (1) and therefore shall not be considered a candidate for the manufacture of a medical device or of intermediate products for medical devices, which are intended under normal use to be brought into direct contact with the patient's body (e.g., skin, body fluids or tissues, including indirect contact to blood)*. [This product is also not designated for Food Contact (2), including drinking water, or cosmetic applications. If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, for Food Contact products or cosmetic applications Covestro must be contacted in advance to provide its agreement to sell such product for such purpose.] Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for Food Contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro.

1) Please see the "Guidance on Use of Covestro Products in a Medical Application" document.

2) As defined in Commission Regulation (EU) 1935/2004.

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