

# Desmotherm<sup>®</sup> 2170

## Characterization

Desmotherm 2170 is an aromatic, self-crosslinking, stoving urethane resin, as a binder for one-component stoving polyurethane systems.

## Form supplied

Form supplied is approximately 70% in n-butyl acetate / solvent naptha<sup>®</sup> 100 / isobutanol (13 : 12 : 5).

## Characteristic data

Property	Value	Unit of measurement	Method
Non-volatile content (4.0g / 60 min / 100°C)	67 - 71	%	
Viscosity (23°C)	800 - 3,200	mPa•s	
Iodine color value	≤ 7		

## Other data\*

Property	Value	Unit of measurement	Method
Flash point	approx. 25	°C	
Density at 20°C	approx. 1.10	g/ml	

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

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## Solubility / thinnability

Desmotherm 2170 can be thinned with esters, ketones and aromatic hydrocarbons such as ethyl acetate, butyl acetate, methoxypropylacetate, acetone, methyl ethyl ketone, methyl isobutyl ketone, cyclohexanone, toluene, xylene, solvent naphtha<sup>®</sup> 100 and mixtures thereof. Generally speaking, it has good compatibility with the solvents listed.

However, the solutions formed must be tested for their storage stability. Only PU grade solvents should be used (max. 0.05 % water, absence of reactive groups such as hydroxyl or amino groups). The product has only limited thinnability with aliphatic hydrocarbons.

Desmotherm 2170 should not be thinned to below a solids content of 40%. Prolonged storage of a solution with a lower binder content may result in turbidity and sedimentation.

## Compatibility

Generally speaking, Desmotherm 2170 is compatible with various polyesters from the Desmophen<sup>®</sup> and Alkynol<sup>®</sup> ranges, amino resins and flexibilizers. However, the compatibility of the combinations used should always be tested.

## Properties / Applications

Desmotherm 2170 is used primarily as the binder in one-component stoving polyurethane systems for highly flexible primers, intermediate coats, primer surfacers and thin coil-coating primers. Being a self-crosslinking stoving urethane resin, the product contains the amount of polyol required for crosslinking as well as the hardener. The film properties can be modified by combining with various polyesters from the Desmophen<sup>®</sup> and Alkynol<sup>®</sup> ranges, amino resins and flexibilizers.

The main field of application for systems based on Desmotherm 2170 is as primer surfacers in automotive OEM finishing. When formulating coatings with Desmotherm 2170, the temperature should not exceed 60°C otherwise the crosslinking reaction will begin. The properties of films based on Desmotherm 2170 are largely independent of the stoving conditions. The following stoving cycles are a guide:

100°C 50 min

140°C 15 min

160°C 7 min

200°C 4 min

Optimum film properties are obtained after approximately 30 minutes at 130°C. Overbaking at around 180°C is possible without any significant deterioration in the film quality. As with any product, use of Desmotherm 2170 in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.



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## Storage

Desmotherm 2170 should be stored in tightly sealed original containers and protected from moisture, heat, and foreign materials. Storage at higher temperatures will result in increase of color and the viscosity may increase above the specified maximum level. A slight increase in viscosity is also possible at lower temperatures. Recommended storage temperature is 0°-23°C.

## Storage time

Desmotherm 2170 has a shelf life of six months from date of receipt at customer, provided the material is stored in sealed original containers at the recommended storage temperature.

## Health and Safety Information

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling this product. Before working with this product, you must read and become familiar with the available information on its risks, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., safety data sheets and product labels. For further information contact your Covestro LLC representative or the Product Safety and Regulatory Affairs Department in Pittsburgh, PA.

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 and information 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 us. 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.

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