

Desmotherm[®] 2170

Type	Aromatic, self-crosslinking, stoving urethane resin
Form supplied	approx. 70 % in n-butyl acetate / solvent naphtha [®] 100 / isobutanol (13 : 12 : 5)
Uses	As a binder for one-component stoving polyurethane systems

Specification Property	Value	Unit of measurement	Method
Non-volatile content (5.0 g/60 min/125 °C, convection oven)	69 ± 2	%	DIN EN ISO 3251
Viscosity at 23 °C	2000 ± 1200	mPa·s	DIN EN ISO 3219/A.3
Color value (Iod)	≤ 7		DIN EN 1557

Other data* Property	Value	Unit of measurement	Method
Flash point	approx. 25	°C	DIN 53 213/1
Density at 20 °C	approx. 1.10	g/ml	DIN EN ISO 2811

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



Desmotherm[®] 2170

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[®] 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[®] and Alkynol[®] ranges, amino resins and flexibilisers. 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 combination with various polyesters from the Desmophen[®] and Alkynol[®] ranges, amino resins and flexibilisers.

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 approx. 30 min at 130 °C. Overbaking at around 180 °C is possible without any significant deterioration in the film quality.

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Storage

- Storage in original sealed Bayer MaterialScience container.
- Recommended storage temperature: 0 - 23 °C.
- Protect from moisture, heat and foreign material.

General information: 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.

Storage time

Bayer MaterialScience represents that, for a period of six months following the day of shipment as stated in the respective transport documents, the product will meet the specifications or values set forth in section "specifications or characteristic data" above, what ever is applicable, provided that the product is stored in full compliance with the storage conditions set forth in and referenced under section "storage" above and is otherwise handled appropriately.

The lapse of the six months period does not necessarily mean that the product no longer meets specifications or the set values. However, prior to using said product, Bayer MaterialScience recommends to test such a product if it still meets the specifications or the set values. Bayer MaterialScience does not make any representation regarding the product after the lapse of the six months period and Bayer MaterialScience shall not be responsible or liable in any way for the product failing to meet specifications or the set values after the lapse of the six months period.



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Safety

Hazards identification

Flammable. Irritating to the eyes. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

The safety data sheet should be observed. This contains information on labeling, transport and storage as well as on handling, product safety and ecology.

This Information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided - especially that contained in our safety data and technical information sheets - and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery. This does not apply to Trial-Products.

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