



Desmodur[®] Z 4470 BA

Type	Aliphatic polyisocyanate (IPDI trimer)
Form supplied	approx. 70 % in n-butyl acetate
Uses	As the hardener component for lightfast polyurethane coating systems and as an additive resin for alkyd spray coatings.

Specification Property	Value	Unit of measurement	Method
NCO content	11.9 ± 0.4	%	DIN EN ISO 11 909
Non-volatile content (0.2 g/1 h/120 °C)	70 ± 2	%	DIN EN ISO 3251
Viscosity at 23 °C	600 ± 200	mPa·s	DIN EN ISO 3219/A.3
Color value (Hazen)	≤ 60		DIN EN 1557
Monomeric IPDI	< 0.5	%	DIN EN ISO 10 283

Other data* Property	Value	Unit of measurement	Method
Viscosity at 25 °C	approx. 550	mPa·s	DIN EN ISO 3219/A.3
Equivalent weight	approx. 360		
Flash point	approx. 34	°C	DIN 53 213/1
Density at 20 °C	approx. 1.06	g/ml	DIN EN ISO 2811

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

Desmodur[®] Z 4470 BA

Solubility / thinnability

Desmodur[®] Z 4470 BA is soluble or thinnable in polar solvents such as esters, ketones and ether esters, e.g. butyl acetate, methyl ethyl ketone and methoxypropylacetate, as well as in aromatics. 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).

Stable solutions with a minimum solids content of 20 % can be produced by thinning the supply form with, e.g. xylene, toluene or higher boiling aromatics such as solvent naphtha 100 or mixtures of aromatics. If prolonged storage stability of the thinned solutions is required, aliphatics should not be added. However, Desmodur[®] Z 4470 BA has the necessary compatibility with aliphatics to allow its addition to coatings formulated with aliphatic solvents.

Compatibility

Generally speaking, Desmodur[®] Z 4470 BA can be mixed with the following products: aliphatic polyisocyanates such as Desmodur[®] N 100, N 75, N 3200, N 3300, N 3400 and N 3600; aromatic polyisocyanates such as Desmodur[®] L, HL and IL; polyester polyols such as Desmophen[®] 670; polyacrylates such as the Desmophen A products; alkyd resins such as Alkydal[®] F 48.

However, the compatibility of the combinations used should always be tested.

Properties / Applications

Desmodur[®] Z 4470 BA is used primarily as the hardener component for lightfast two-component polyurethane coatings with high resistance to chemicals and weathering, very good gloss retention and outstanding mechanical properties. On account of its high hardness, Desmodur[®] Z 4470 BA is normally mixed with Desmodur[®] N products. Preferred co-reactants are flexibilised polyacrylate polyols such as Desmophen[®] A 565 and A 575 and polyester polyols such as Desmophen[®] 670.

The main applications for two-component coatings based on Desmodur[®] Z 4470 BA are in automotive OEM and automotive refinishing.

As Desmodur[®] Z 4470 BA has very good physical drying properties, it is also used as an additive resin in alkyd spray coatings to accelerate drying. The main applications of such coatings are in automotive refinishing and industrial finishing.

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Storage

- Storage in original sealed Bayer MaterialScience container.
- Recommended storage temperature: 0 - 30 °C.
- Protect from moisture, heat and foreign material.

General information: The product is sensitive to moisture. Storage at higher temperatures will result in increase of color and viscosity. Storage at significant lower temperatures will result in solidification. This solidification is reversible by briefly heating the product without adversely affecting the quality of the product.

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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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**.

Further information

The product is used mainly as a hardener in coating materials or adhesives. The handling of coating materials or adhesives containing reactive polyisocyanates and residual **monomeric IPDI** requires appropriate protective measures referred to in the safety data sheet. These products may therefore be used only in industrial or trade applications. **They are not suitable for use in homemaker (DIY) applications.**

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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