

VESTANAT® B 1358/100

43.13.075e / 05.03

General description

VESTANAT B 1358/100 is a solvent-free, blocked polyisocyanate, based on isophorone diisocyanate (VESTANAT IPDI). It is supplied in flakes.

Specification

Property	Value	Unit	Test method
Free NCO content	< 0.5	% wt	ISO 11 909 ASTM D 2572
Total NCO content	12.3– 12.9	% wt	ISO 11 909 (modified)

Typical data

Solids content	100	% by wt.	-
Splitting temperature	approx. 130	°C	-
Melting range	115 – 130	°C	DIN 53 181
Bulk density	580 – 600	kg/m ³	DIN 53 466
Ignition temperature	350	°C	DIN 51 794

Properties and Applications

VESTANAT B 1358/100 is a blocked cycloaliphatic polyisocyanate for crosslinking of suitable hydroxylated resins, like polyester, acrylic and alkyd resins.

The solvent-free form of delivery offers a great choice of possible solvents to be used and therefore the optimizing of many paint formulations.

Solutions in water-soluble solvents simplify the formulations of water-based 1K PUR stoving systems.

Dissolved in plasticizers, VESTANAT B 1358/100 can also be used for modifying of PVC or other thermoplastic materials.

In principle it is possible to formulate PUR stoving paints which cure at temperatures ≥ 130 °C.

The properties of the cured coatings are decisively determined by the polyols employed. Due to the fact that VESTANAT B 1358/100 imparts hard segments into a coating, it might be necessary to use additionally flexibilizing polyols. Recommendations are available on request.

VESTANAT B 1358 is also available as a 63 pbw. solution in aromatics 100 (VESTANAT B 1358 A, Product Information no. 43.13.017e).

Solubility

VESTANAT B 1358/100 is soluble in most types of common solvents, such as ketones, esters, aromatics, alcohols, glycolethers, glycol ether esters, etc. The compatibility with white spirit is limited.

The dissolving of VESTANAT B 1358/100 in an alcohol containing solvent should be performed at a maximum temperature of 80 °C, in OH-free solvents at a maximum of 100 °C.

We suggest the following procedure for dissolving: Approx. 30 % of the VESTANAT B 1358/100 should be added to the preheated solvent (80–100 °C) under vigorous stirring. Within 30 – 60 min the remainder of VESTANAT B 1358/100 is added by stirring continuously. The time for complete dissolution depends on the type of solvent and the equipment. The dissolving time can be shortened by prepulverizing the VESTANAT B 1358/100.

Filtration through a 10 µm filter is recommended.

Curing/catalysis

In conventional solvent-based formulations the use of tin catalysts, like DBTDL, is recommended in concentrations of 0.2 – 0.5 % by wt. calculated on resins. The resulting curing conditions are – depending on the reactivity of the polyol – 30 min to 60 min at 130 °C (see also Product Information VESTANAT B 1358 A, no. 43.13.017e).

Tin catalysts are not very effective when used in waterborne systems. A minimum curing cycle of 30 min 140 – 150 °C is expected.

Storage and Packaging

VESTANAT B 1358/100 can be stored in unopened containers for at least one year without loss of quality in accordance with the above specification.

VESTANAT B 1358/100 is supplied in non returnable drums holding 70 kg (120 l).

Safety and Handling

Please refer to our Material Safety Data Sheet.

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