

VESTAMIN® A 139**GENERAL DESCRIPTION**

VESTAMIN® A 139 is a liquid, blocked crosslinker for polyisocyanate resins based on a cycloaliphatic diamine. As supplied the product exhibits a very low reactivity towards isocyanate groups. The crosslinking with polyisocyanate resins occurs under the influence of moisture by releasing the original diamine, which is spontaneously reacting with the isocyanate groups under formation of urea structures.

SPECIFICATION

| Property | Value | Unit | Test method |
|--------------|----------|----------|--------------|
| Amine number | 400 ± 10 | mg KOH/g | DIN ISO 3771 |
| Purity | > 96 | % by wt. | G.C. |

TYPICAL DATA

| Property | Value | Unit | Test method |
|--------------------------|--------------|-------------------|--------------------------|
| Appearance | clear liquid | - | - |
| Colour (APHA) | ≤ 150 | g/cm ³ | DIN/ISO 6271 |
| Density at 25 °C | 0.86 | °C | DIN 51 757 / ASTM D 1481 |
| Viscosity at 23 °C | 20 – 30 | mPa·s | DIN EN ISO 3219 |
| Amine equivalent weight | approx. 140 | g/val | - |
| Flash point (open cup) | 130 | °C | DIN 51 584 |
| Flash point (closed cup) | 77 | °C | DIN 51 758 |
| Ignition temperature | 240 | °C | DIN 51 794 |

PROPERTIES AND APPLICATIONS

In moisture curing isocyanate prepolymers VESTAMIN® A 139 has a pronounced accelerating effect. Wherever possible, the blocked diamine VESTAMIN® A 139 should be added to a moisture-curing paint immediately before application (see also indications on storage stability below). The amount to be added depends on the type of resin.

For systems based on VESTANAT® IPDI it is recommended to use an amount of VESTAMIN® A 139 equivalent to 50 – 60 % conversion with isocyanate groups. As a general rule, approximately 1.5 g VESTAMIN® A 139 should be used for every 1 g of NCO in the formulated paint.

Normally one-component, moisture-curing paints are catalyzed with a combination of Sn salts and tertiary amines. The replacement of the tertiary amines by VESTAMIN® A 139 reduces the curing time at both ambient and higher temperatures by about 50 %.

However, this accelerator substantially reduces the storage stability of the paints. Following the addition of VESTAMIN® A 139, the storage stability is generally limited to a few days up to a maximum of a few weeks.

STORAGE AND PACKAGING

VESTAMIN® A 139 can be stored in unopened containers for at least one year without loss of quality in accordance with the above specification.

VESTAMIN® A 139 is supplied in non returnable 25 kg net cans and in non returnable 180 kg net drums.

SAFETY AND HANDLING

VESTAMIN® A 139 is not classified as pyrophoric or as self heating, it is not explosive and also not classified as oxidizing or as an organic peroxide. In contact with moisture from air and in finely distribution on a large surface, e.g. with cotton waste or similar combustible materials autoignition may occur. The reason is that there will be small amounts of isobutyraldehyde in the gas phase above the surface of the product. A fire can occur with VESTAMIN® A 139 and dry cotton.

We recommend - if any material will leak from the container - please use a high amount of water (or sand) to remove it. The combination of high amount of water and wet cotton should be OK.

Please refer to our Material Safety Data Sheet.

Marl, June 10, 2018; This data sheet replaces all former issues.

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