

VESTAMIN® A 139

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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

Appearance	clear liquid	-	-
Colour (APHA)	≤ 150	-	DIN/ISO 6271
Density at 25 °C	0.86	g/cm ³	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.

Evonik Resource Efficiency GmbH	Evonik Corporation	Evonik Speciality Chemicals Co., Ltd.
Paul-Baumann-Str. 1	Reource Efficiency	55, Chundong Road
45764 Marl	299 Jefferson Road	Xinzhuang Industry Park
Germany	Parsippany, NJ 07054-0677, USA	Shanghai, 201108, PR China
PHONE +49 2365 49-02	PHONE +1 973 929-8000	PHONE +86 21 6119-1000
FAX +49 2365 49-5030	FAX +1 973 929-8460	FAX +86 21 6119-1168
www.evonik.com/crosslinkers	www.evonik.com/crosslinkers	www.evonik.cn/crosslinkers
www.evonik.com/coatings	www.evonik.com/coatings	www.evonik.com/coatings
E-MAIL vesta@evonik.com	E-MAIL vesta@evonik.com	E-MAIL vesta@evonik.com

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