

TEGOAMIN® SMP

TEGOAMIN® SMP belongs to the chemical compound class of the tertiary amines. It is used as a catalyst for the production of flexible polyurethane foams.

Physical properties

Appearance	clear, colorless to slightly yellow liquid of low viscosity
Solidification point	below -50 °C
Refractory index n_D^{20}	1.437 ± 0.001
Nitrogen content	7.35 ± 0.35 %
Solubility in water	unlimited

Performance

In the course of the foaming reaction TEGOAMIN® SMP shows a graduated efficiency. Creaming is delayed at the start, whereas the curing reaction is clearly strongly catalyzed. This performance profile leads to a faster and better curing of the skin which makes it easier to remove the paper and prevents any remaining stickiness of the foam at the saw.

The special ratio of the catalytic effect on the blowing reaction and the gelling reaction make TEGOAMIN® SMP a highly multi-purpose catalyst. It can be successfully applied in all formulations, whether they are blown exclusively with water or an additional physical blowing agent, like e. g. methylene chloride, is used.

Application of a further amine as a co-catalyst is not necessary as a rule, even in so-called critical formulations, like those for foams with higher densities or for soft grades processed with a comparatively small amount of water and an additional organic blowing agent.

As another very interesting effect TEGOAMIN® SMP increases the hardness of the resulting foam. When a common, normally applied amine in a formulation is replaced by TEGOAMIN® SMP, a 5 to 10 % increase of the hardness can be expected.

It must, however, be considered that this special effect depends on the content of water in the formulation. It is strong and quite distinctive. If the water content is high, the effect gradually diminishes with falling water content and it completely disappears when the amount of water is about 3.0 parts water or less.

Instructions for Use

Depending on the existing machinery the individual manufacturers prefer accelerated or retarded catalytic effects in the formulations.

General standard formulations are therefore of limited value. It has been found that 0.15 parts by weight TEGOAMIN® SMP per 100 parts by weight polyol are a suitable starting value for optimization work.

The special hardening effect of TEGOAMIN® SMP has already been pointed out above. If this effect is unwelcome, it can be neutralized by reducing the isocyanate index by 2 – 3 points. This will improve the economic efficiency of the formulation.

Instructions for storage

For TEGOAMIN® SMP we guarantee a shelf life of at least 12 months upon delivery under the condition that it is stored in factory-packed containers and protected against extreme weather conditions, particularly against extremely high temperatures.

The solidification point of TEGOAMIN® SMP is below -50 °C. Storage at low temperatures is therefore not a general problem.

Packaging

450 kg pallet (9 x 50 kg in steel drums)

For Information

- on classification and labelling in accordance with shipping instructions and the Toxic Substances Control Act
- on protective measures during storage and handling
- on measures in case of accidents and fire
- on toxicology and ecological toxicity

please refer to our safety data sheets.

Legal References

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