Technical Information

Catalyst 500 series

Catalyst for addition-crosslinking silicone polymers

The products of the Catalyst 500 series are diluted solutions of a highly reactive platinum complex in different media. Evonik Nutrition & Care GmbH offers two different complexes: the divinyl tetramethyl disiloxane-platinum(0)-complex and the methyl vinyl cyclosiloxane-platinum(0)-complex. The media offered include Polymer VS, divinyl tetramethyl disiloxane (DVS) and methyl vinyl cyclosiloxane (MVC).

Technical data (no specification)

Product name	Complex	Medium	Platinum content [ppm]	Platinum content [wt.%]	Viscosity at 25 °C [mPas]	Vinyl content [mmol/g]
Catalyst 510	DVS	Polymer VS	5 000	0.5	500	0.35
Catalyst 511	DVS	Polymer VS	10 000	1.0	500	0.55
Catalyst 512	DVS	Polymer VS	20 000	2.0	500	1.0
Catalyst 517	DVS	DVS	20 000	2.0	5	10.8
Catalyst 540	MVC	MVC	20 000	2.0	5	11.5

Technical data (no specification)

Property	Unit	
Appearance		Yellowish liquid

Application

The platinum complexes are highly efficient even in very small quantities so that typically, only 10 to 20 ppm of platinum are used in formulations. Increasing the concentration leads to higher crosslinking rates and thus to shorter pot lives.

It should be observed that the complexes react sensitively to a number of substances (e. g. sulphur, heavy metal and amino compounds, some PU and PVC types). Contact with such substances shall be avoided both while producing the formulation and while the product cures.

If the application imperatively requires for such a contact (e. g. curing in a PU mold), the catalyst loss can be compensated by an increased feedstock concentration of up to approx. 100 ppm. Especially the products Catalyst 517 and 540 are suited for this purpose because they prevent uncontrolled increase of the crosslinking rate due to the inhibiting media DVS and MVC.

Registration status

The ingredients of all above mentioned Catalysts are listed in the following chemical inventories:

EINECS/ELINCS, TSCA, DSL, AICS, ENCS, TCCL, PICCS, IECSC, New Zealand, TCSI

Further information is available on request.

Packaging and Storage

Packaging	5 kg or 25 kg PE container
Shelf life	12 months in originally sealed containers
Storage	Dry, up to 30 °C (86 °F) in sealed containers, do not permanently expose to intensive sunlight

When storing the higher-concentration catalysts, precipitates may occur, but this has no effect on the catalyst activity.

Safety and Handling

The rules and regulations for the handling and use of chemicals have to be observed. Please refer to the Material Safety Data Sheet for further details.

07/2018

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