TECHNICAL DATA SHEET

HANSA SFA 11340
Hydride modified siloxanes

Description

The crosslinkers of the HANSA SFA 11 series are polydimethylsiloxanes with Si-H groups on the chain, while the HANSA SFA 13 series additionally have terminal Si-H groups.

Both materials are typically used in platinum catalyzed crosslinking reactions with vinyl siloxanes in addition curing elastomers. They can also be used in the synthesis of organo-modified silicone products for a large group of applications.

Key Features

- Crosslinker
- side-modification
- Good UV stability
- No shrinkage during crosslinking

Key Applications

- Intermediate for addition curing formulations

Use and Cure Information

The preferred catalyst for the Hydrosilylation reaction is platinum catalyst from the ALPA-KAT series. It is advised to determine the ratio of hydride functional siloxane and the desired reaction component beforehand. Especially when using filled system, a hydride excess is needed.

Property	Test Method	Value
Product		
Color		**Transparent**
Hydride content %		**0.03 %**
Molecular weight g/mol		**24000 g/mol**
Non-Volatile Content (%)		**> 99**
Shelf Life		**12 mths**
Ultralow cyclic content		**Yes**
Viscosity	Brookfield	**2000 cP**
Uncured Product		
Cure Type		**Additon cure**
Cured Product		
Density	BS ISO 2781	**0.97 g/cm3**
Solubility		
Solubility - Water		**insoluble**

When handling Si-H containing materials make sure to use equipment with dedicated charging and vents systems to prevent contamination with other materials that promote side reactions and the generation of hydrogen gas. For more information see the MSDS.

Reactions of Si-H materials are usually exothermic and depending on the concentration of the Si-H material in the system. When producing organo-modified silicone products it is important to monitor the temperature early in the reaction step to avoid a potentially dangerous situation.

When formulating addition curing elastomers make sure that the platinum catalyst is not in the same component as the Si-H fluid.

All materials of the HANSA SFA 1 series are stable at ambient temperature under the exclusion of water.

Health & Safety

Si-H modified silicone compounds are reactive under certain conditions and care is required when handling these materials. They may evolve hydrogen on contact or when mixed with strong acids or bases; amines; primary or secondary alcohols and water in the presence of acids, bases, or catalytic metals; some catalytic and reactive metals; or metal salt forming compounds. When contacting these materials, Si-H compounds can rapidly evolve hydrogen gas and form flammable and explosive mixtures in air. Si-H products used in platinum-catalyzed addition-curing systems, such as Si-H elastomers, can also release flammable and explosive hydrogen gas if these products are combined with each other or with incompatible materials.

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