

® HANSA SFA 3 – Series of OMe Siloxanes

Character	OMe Siloxanes
Chemical Structure	End and side functional methoxy polysiloxanes
Appearance	Clear oil
Solid content [%]	Approx. 100
Viscosity [mPas / 20°C]	100-50.000
Ionic character	Nonpolar
Storage life	In closed containers at room temperature (approx. 20° C) for at least 12 months. The product is not sensitive to frost.

The above given values are technical data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

Properties

The reactive Si-O-Me bond, in Hansa SFA 3 series of products, undergoes a variety of reactions namely hydrolysis and condensation. The important aspect of its reactivity is associated with the production of silicone intermediates and with cross-linking reactions for room temperature vulcanising materials (RTVs). The reactivity of the group is in a way analogous to the Si-Cl bond, except that the reactions are somewhat slower.

The reactive alkoxy groups are located at the ends of PDMS chain with exception of Hansa SFA 33050, 33500 33100 and 33502 all of which contains also side alkoxy groups. This increases speed of cross-linking as well as internal cross-linking density.

Application

The SFA 3 series products are ready to use raw materials in neutral condensation curing silicon adhesives, sealants and speciality coatings.

Can be used on corrosion sensitive materials such as marble or oxidation susceptible metals.

Protection from moisture is important as these polymers will hydrolyze in presence of water. Nitrogene purging or blanketing is suggested when handling SFA 3 products.

Standard Ti based catalysts as well as conventional organo tin catalysts can be used to cure Hansa SFA 3 products.

The products of Hansa SFA 3 series can be used as main polymers or in formulations together with conventional SMP or STP polymers based on PES, PU or others. Due to their silicone backbone the products of Hansa SFA 3 series are far superior in terms of UV/light fastness, weathering and water resistance. Also thermal resistance of alkoxy modified polymers from Hansa SFA 3 series is far superior to its carbon based counterparts.

Incorporation of Hansa SFA 3 series polymers in SMP or STP based formulations will improve hydrophobicity, adhesion to hydrophobic surfaces as well as light fastness.

Unlike conventional carbon back bone based SMP's, STP's or other hybrids there is no need of using HALS stabilisers making the formulation more environmentally friendly.

XP 35230 is an hybrid hydride/ trimethoxy siloxane, its dual reactivity allows it to react in both addition as well as condensation systems and thus improve adhesion of LSR or RTV to one another. Typical dosing levels are 3-5 %, hydride content is 1500 ppm of H.

SFA 35100 and SFA 35101 are statistical end modified short siloxane which serves as a reactive surface modifiers design to reduce the viscosity of highly filled addition cured formulations.

HANSA	Modification	Viscosity [mPas]	Molecular weight	Specific gravity [g/cm³]
SFA 32502	end trimethoxy	5000	51000	0,973
SFA 32203	end trimethoxy	13000	68000	0,975
SFA 32503	end trimethoxy	50000	105000	0,976
SFA 32001	vinyl trimethoxy silan	1-2	148	0,97
SFA 33050	end & side trimethoxy	50	2450	0,98
SFA 35100	Statistical end trimethoxy	50	6000	0,98
SFA 32500	end trimethoxy	500	11500	0,98
SFA 33500	end & side trimethoxy	500	11500	0,98
SFA 33100	end & side trimethoxy	100	4600	0,98
SFA 35101	35100 with add on	50	6000	0,97

Different molecular weights/viscosities and alkoxy content with end or side or both modifications are possible on customer's request.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

CHT Germany GmbH, Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Germany
Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com