

Dynasylan® 6490, 6498 & 6598 –

Vinyl oligomers for use in plastic compounds and in adhesives & sealants



Dynasylan® 6490, 6498 & 6598 exhibit

- Excellent silane compatibilizer between inorganic fillers (e.g. kaolin, MDH, ATH) and organic polymers (EPDM, EVA, PE)
- High boiling and flash point give them outstanding advantages with regards to safety & handling during processing
- Reduced hydrolysis alcohol (VOC)

Dynasylan® 6490, 6498 & 6598 – At a Glance



USP for plastic compounds & filler treatment applications

- Compounds for flexible cables (e.g. rubber, silicone based), for radical crosslinked cables (peroxide or e-beam)
- Products can be used in insulating or sheath layers
- Suitable product can be chosen depending on customer needs
- Polyolefin based HFFR cable compounds (thermoplastic, peroxide or e-beam crosslinked)
- Typically not used for XL-PE cables crosslinked via Sioplas or Monosil process



USP for adhesives & sealants applications

- Dynasylan® 6490
 - Drying agent in moisture curable SMP adhesive and sealants as (partial) VTMO replacement
 - Co-adhesion promoter in RTV-2 Silicones
 - Note VTMO Replacement: Not 1:1 alternative in all target systems (drying kinetics, storage stability and rheological efficiency different)
- Dynasylan® 6498 and 6598 for peroxide curable acrylate adhesives (e.g. EV)

Better Performance, Safer Processes: The Vinyl Oligomer Advantage

Dynasylan® 6490, 6498 & 6598 – Make the different ...

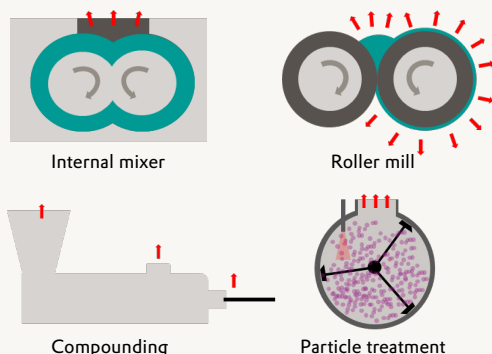
Dynasylan® Vinyloligomers

- Significantly reduced VOC emissions vs. monomeric silanes
- Higher boiling point vs. monomeric silanes
- Safer handling, transport and storage vs. monomeric silanes

Dynasylan®	VTMO	VTEO	VTMOEO	6490	6498	6598
Viscosity (20°C) (mPas)	ca. 1	ca. 1	ca. 3	2–4	3–7	3–7
Flash point (°C)	22	46	115	>60	>60	>60
Boiling point (°C)	123	161	285	ca. 220	ca. 240	255
Vinyl groups (%)	18	14	10	24	21	10
Calculated hydrolysis alcohol release (g/kg)	650 Methanol	730 Ethanol	820 2-Methoxy-Ethanol	400 Methanol	490 Ethanol	460 Ethanol

Improving ... with Dynasylan® 6490, 6498 & 6598

Technical challenges: Low boiling point of monomeric vinyl-silanes leads to problems during application:



Oligomerization of monomers (e.g. Dynasylan® 6490, 6498, 6598) solves various problems:

- Higher boiling point
- Higher flash point
- Higher concentration of vinyl-groups per kg
- Reduced hydrolysis alcohol
- Reduced dosage amount to achieve good results
- Hydrolysis alcohol is less critical (methanol or ethanol)

Special case
Dynasylan® 6498

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice. Dynasylan® is a registered trademark of Evonik Industries or its subsidiaries.

Evonik Operations GmbH
Smart Effects business line
Rodenbacher Chaussee 4
63457 Hanau
Germany

ask-se@evonik.com
www.evonik.com
www.evonik.com/smarteffects
evonik.click/smarteffects-industrial-applications

The Silica and Silanes experts at Evonik – From elements to excellence.

