

Dow Corning[®] 11-100 Additive

FEATURES & BENEFITS

- Increase LOI value
- Improve inorganic filler de-agglomeration
- Impart hydrophobicity to inorganic filler surface
- Longer shelf life
- High quality consistency
- Low viscosity
- Meet higher customer LOI specific requirement
- Improve process stability and productivity of compounding
- Longer inventory window

COMPOSITION

- Alkoxy siloxane

A functional siloxane for low smoke halogen free wire & cable material LOI improvement and inorganic filler surface treatment

APPLICATIONS

- Low smoke halogen free wire & cable material
 - Improve LOI (Limiting Oxygen Index) value
 - Improve filler dispersion in polymer matrix
- Inorganic fillers surface treatment
 - Improve de-agglomeration
 - Impart hydrophobicity

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value
Appearance		Clear liquid, no gel
Specific Gravity		0.97
Viscosity (@ 25 °C)	cSt	5.5
Freeze Point	°C	< -16
Actives Content	wt%	>90
Flash Point	°C	16

Materials were tested according to Dow Corning Corporate Test Methods (CTM). Copies of CTMs are available on request.

DESCRIPTION

Dow Corning[®] 11-100 Additive contains alkoxy and alkyl functional groups on siloxane to improve LOI value for low smoke halogen free wire & cable material and improve dispersion of inorganic fillers, such as ATH/MDH etc into organic polymers such as resin, plastic, and rubber. It also will transform hydrophilic inorganic powders, fillers, or substrates to that of hydrophobic. The alkoxy groups react similarly to that of silane coupling agents, forming a stable bond with the mineral filler or surface. The alkyl functionality acts as both compatilizer with organic polymer matrices, as well

as hydrophobe to reduce water absorption. This material is also low viscosity and can be applied easily.

HOW TO USE

Dow Corning 11-100 Additive can be applied to mineral fillers and inorganic surfaces by pre-treatment or in-situ mixing, i.e. during compounding with a polymer resin or rubber (Such as EVA, PP, PE, PU).

In-Situ Application

This additive could be added to the extruder or mixer directly at a level of approximately 1% (for 1-10 micron size particles) based on the weight of the mineral filler. In some cases, it may

be upwards of 2-3%. For each specific application, the optimum loading should be determined by testing several loadings. Because this product contains methanol and will generate methanol during the mixing process at elevated temperature, a vent should be provided and safe handling of this vent stream should be considered.

Pre-Treatment

This product can be applied directly to a mineral filler by atomizing onto a well mixed (preferably in a fluidized state for best mixing) powder. Or it can be applied by dipping, brushing, or spraying onto a surface. The additive can be applied neat or in a dilute solution of aliphatic hydrocarbon solvent, aromatic hydrocarbon, or anhydrous alcohol, generally at a level of 1% (for 1-10 micron size particles) by weight of mineral filler powders. Higher surface area substrates would require a higher percentage of *Dow Corning* 11-100 Additives by weight, generally 2-3%. After application, the inorganic powder/substrate should then be air dried at ambient conditions or dried briefly at 105 °C to 120 °C (221-248 °F) to complete condensation of silanol groups at the surface and to remove methanol and water. Optimum treatment level, application, and drying conditions, such as time and temperature, should be determined for each application prior to use in a commercial process. This product contains residual methanol and will also generate methanol upon reaction, so appropriate handling should be considered.

HANDLING PRECAUTIONS

This product contains residual methanol and is flammable. Also when exposed to moisture, *Dow Corning* 11-100 Additive hydrolyses, generating methanol. Appropriate measures should be taken to prevent the accumulation of hazardous concentrations of methanol fumes in the working environment.

**PRODUCT SAFETY
INFORMATION REQUIRED FOR
SAFE USE IS NOT INCLUDED IN
THIS DOCUMENT. BEFORE
HANDLING, READ PRODUCT
AND MATERIAL SAFETY DATA
SHEETS AND CONTAINER
LABELS FOR SAFE USE,
PHYSICAL AND HEALTH
HAZARD INFORMATION. THE
MATERIAL SAFETY DATA
SHEET IS AVAILABLE ON THE
DOW CORNING WEBSITE AT
DOW CORNING.COM, OR FROM
YOUR DOW CORNING SALES
APPLICATION ENGINEER, OR
DISTRIBUTOR, OR BY CALLING
DOW CORNING CUSTOMER
SERVICE.**

USABLE LIFE AND STORAGE

After opening a container of *Dow Corning* 11-100 Additive, a partially filled container should be protected from atmospheric moisture to prevent gelation by purging the container with dry nitrogen or other dry, inert gas. When stored at or below 25 °C (77 °F) in the original unopened containers, this product has a usable life of at least 18 months from the date of production.

PACKAGING INFORMATION

This product is available in 18 kg pails and 195 kg drums. Samples are available in 500 ml bottles.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance

(PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customers' tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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