



Technical Data Sheet

HydroxySHIELD™ Polymer

Amino functional siloxane polymer

INCI NAME: Bis-Diisopropanolamino-PG-Propyl Disiloxane/Bis-Vinyl Dimethicone Copolymer

Features & Benefits

- Exceptional conditioning
- Reduced dry friction
- Improved wet & dry combing
- Reduced breakage
- Long-lasting hydrophobicity
- Fast drying
- Ease of styling
- Improved alignment
- Color protection
- Heat protection
- Non-yellowing in formulation
- Solvent is readily biodegradable

Composition

- 90% active silicone in 10% Butyloctanol

Applications

- Rinse-off conditioners
- Leave-in conditioners
- Shampoos
- Sulfate-free shampoos
- Anhydrous serums
- Styling conditioners
- Clear anhydrous formulations possible

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test	Property	Unit	Result
	Appearance		Clear to slightly hazy fluid, light amber
CTM0004	Viscosity at 25°C (77°F)	cSt	4000–15000
CTM0001A	Specific gravity at 25°C (77°F)		0.95

1. CTM: Corporate Test Method, copies of CTMs are available on request.

Typical Properties (Cont.)

Test	Property	Unit	Result
	Flash point (Cleveland closed-cup)	°C	> 132
	Cyclotetrasiloxane (D4) content	Wt %	< 0.1
	Cyclopentasiloxane (D5) content	Wt %	< 0.1
	Cyclohexasiloxane (D6) content	Wt %	< 0.1
CTM0927	Amine neutral equivalent base, acidity/alkalinity butanol solvent, potentiometric		13000–15000
	Nitrogen	%	0.09–0.102

Description

HydroxySHIELD™ Polymer is an innovative hydroxyamino functionalized silicone that delivers exceptional conditioning of damaged hair surface, restoring hair's hydrophobic state, providing reduced breakage and ease of styling benefits.

How to Use

Conditioners can be prepared by including HydroxySHIELD™ Polymer in the oil phase of a conditioner or by mixing the fluid with a surfactant (i.e. cocamidopropyl betaine) in a shampoo.

HydroxySHIELD™ Polymer is compatible with a variety of typical hair care formulation ingredients, including quaternary ammonium salts, silicone fluids, isododecane, organic oils and emollients.

Handling Precautions

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

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 has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

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

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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