chanhvinh.com

Technical Data Sheet

DOWSIL™ HV 496 Emulsion

High molecular weight, silanol functional siloxane polymer emulsion, low cyclic siloxane content

Features & Benefits

Textiles

- Natural to slick handle
- Improved tear strength on woven fabric
- Improved crease resistance
- Improved abrasion resistance
- Improved stretch recovery of knitted garments
- Fabric whiteness retention

Leather

- Excellent thermal stability
- Easy application
- Good slip characteristics, imparts greasy hand feel to leather surface
- Good abrasion resistance
- Excellent dilution stability
- High gloss/color intensity
- Good surface wetting characteristics

Release

- Excellent thermal stability
- Easy application
- Excellent dilution stability
- Good surface wetting characteristics

Auto/Home Care

- Excellent emulsion stability
- Easy application
- Good slip characteristics
- Good detergent resistance
- Excellent dilution stability
- High gloss/color intensity
- Good surface wetting characteristics

Mineral Wool/Fiberglass Hydrophobing

- Good water repellency
- Good compatibility with phenolic resin binder solutions
- Excellent dilution stability

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

© 2017–2022 The Dow Chemical Company. All rights reserved.

chanhvinh.com

Applications

- Can be used to provide an elastomeric finish on fabrics
- Enhances the performance of traditional crease resist resin systems
- Hand modifier in water-based top finishing formulations for leather treatment; also provides abrasion resistance and gloss
- Industrial release
- In aerosol spray starch products as ironing aid
- In hard surface cleaners to protect substrates
- In shoe polishes
- Hydrophobing agent for mineral wool products

Typical Properties

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

Test[1]	Property	Unit	Result
CTM 0176B	Appearance		Milky white
CTM 0007A	pH		6.5–8.5
CTM 0862	Non-volatile content	% w/w	38–42
	Emulsion type		Slightly anionic

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

Description

DOWSIL™ HV 496 Emulsion contains a high molecular weight, reactive, polydimethylsiloxane polymer. The product is also low in cyclic siloxane content.

In textiles, DOWSIL™ HV 496 Emulsion can be used to enhance the performance of traditional crease resist resin systems. The slightly anionic character of the emulsion makes this material most suitable for application by padding. DOWSIL™ HV 496 Emulsion can be used in fabric finishing formulations with organic softeners or as the major component.

Formulations of DOWSIL™ HV 496 Emulsion are best applied on conventional padding equipment. Exhaustion is not possible due to the slightly anionic character of DOWSIL™ HV 496 Emulsion. The pad bath should be formulated to give a pick-up of 0.5 to 2.0% silicone based on the dried weight of the fabric. Adjusting the ratios of the specific components of the formulation will give a wide variety of handles and effects.

DOWSIL™ HV 496 Emulsion imparts good softness to treated fabrics, without causing any yellowing. The emulsion can be cross-linked to form an elastic finish, imparting stretch recovery to knitted goods.

DOWSIL™ HV 496 Emulsion can also be used as an ingredient in leather finishes to improve hand, abrasion resistance and gloss. Add 1% to 4% by weight of the DOWSIL™ HV 496 Emulsion to the aqueous phase of the desired mixture using low shear mixing.

DOWSIL™ HV 496 Emulsion is useful as mold release agent in the fabrication of rubber and plastic parts. Best performance is when used alone, in a diluted form to 1% to 5% by weight in water.

DOWSIL™ HV 496 Emulsion imparts effective hydrophobicity at low add-on levels on mineral wool or fiberglass.

®™Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow

© 2017–2022 The Dow Chemical Company. All rights reserved.

chanhvinh.com

Description (Cont.)

DOWSIL™ HV 496 Emulsion is useful in auto and home care polishes and as ironing aid in spray starch products. Incorporate at levels between 3.5% and 7.0% in the aqueous phase of any product with low shear mixing.

How to Use

Textiles

1. Scour goods in a non-ionic detergent and rinse thoroughly. Follow with an acid rinse using 2 g/1 of 80% acetic acid for 5 minutes. This will neutralize any alkali residues from previous processes that may cause pad bath instability and lead to oil spots on fabrics or gel on the rollers.
2. If crease resist resins or fillers are used, dilute in a separate tank in accordance with the manufacturer's instructions. If hot, cool to below 30°C (86°F). Add to the mixing tank.
3. Pre-dilute the required amount of DOWSIL™ HV 496 Emulsion with approximately equal weight of cold water and add to the mixing tank.
4. If crease resist resin catalyst is used, pre-dilute with an equal weight of water and add to the mixing tank.
5. Top-up to final volume with cold water and adjust to pH 4.5–5.5 with 80% acetic acid.

Liquor temperature	20–25°C (68–77°F)
Liquor pH	4.5–5.5
Drying	110–130°C (230–266°F)

Curing	
Stenter	30–70 seconds
Zone 1	110°C (30°F)
Zone 2	130°C (266°F)
Zone 3	150–190°C (302–374°F)
Other Zones	150–90°C (302–374°F)
Oven 4–5 Minutes	150°C (302°F)

Specific times and temperatures will vary with fabrics and finishes.

Hydrophobing Mineral Wool

If used in a resin system, DOWSIL™ HV 496 Emulsion can be added in a prediluted form in water. Although this emulsion has good compatibility with some phenolic resins it may be necessary to mix it with the resin immediately before coating the substrate.

As a starting addition rate, it is recommended that DOWSIL™ HV 496 Emulsion is added at 0.2% (by weight) of the untreated mineral wool or fiberglass substrate.

Other Applications

DOWSIL™ HV 496 Emulsion can be diluted to the desired actives content useful in the application by using water. Once diluted, the mixture should be used in a timely manner to minimize the potential for microbial contamination or stability issues to develop.

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

© 2017–2022 The Dow Chemical Company. All rights reserved.

chanhvinh.com

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.

Usable Life and Storage

When stored at or below 40°C (104°F) in the original unopened containers, this product has a usable life of 18 months from the date of production.

It is best practice to mix before use as emulsions may stratify upon aging.

Packaging Information

This product is available 20 kg pails, 200 kg drums and 1000 kg IBC.

Samples are available in 1 kg 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 has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

Compared to DOWSIL™ HV 495 Emulsion, DOWSIL™ HV 496 Emulsion has low cyclics content, and the biocide is not a skin-sensitizer.

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.

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow
DOWSIL™ HV 496 Emulsion
© 2017–2022 The Dow Chemical Company. All rights reserved.

chanhvinh.com

dow.com

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

®Trademark of The Dow Chemical Company