Technical Data Sheet

XIAMETER™ MEM-0036 Emulsion

Aqueous emulsion of polydimethylsiloxane

Features & Benefits

- Ready to use non-ionic emulsion
- Provides gloss and water repellency
- Good wetting and slip characteristics
- General purpose release agent
- Does not contain alkylphenol-ethoxylates (APEO)
- Complies with Detergent Regulation (EC) No. 648/2004
- Good emulsion stability. Dilutions up to 130 parts water to 1 part emulsion are possible so that optimum concentration of silicone may be used with no excess waste
- Good freeze-thaw stability (5 cycles)

Applications

XIAMETER™ MEM-0036 Emulsion has been specially formulated for use as polish ingredient and release agent/lubricant either “as received” or “pre-diluted” with water. Its formulation, stability and efficiency can lead to a variety of applications. These include:

- As ingredient in polishes, XIAMETER™ MEM-0036 Emulsion is used to provide good gloss with minimum smear in both car and furniture polish formulations
- Mold release of:
    - Rubber or plastic parts (stoppers, screw tops, bungs, etc.)
- Lubrication of:
    - Extruded rubber parts; conveyor belts
- Textile lubricant:
    - Yarn manufacture
    - Sewing thread lubrication
    - Hosiery manufacture
    - Sewing needle lubrication
    - Glass fabric exhaust filters

Typical Properties

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

CTM[1]	Property	Unit	Result
0176	Appearance		White liquid
0862	Non-volatile content	%w/w	35.50–38.0
0001	Specific gravity @ 77°F (25°C)		1.0

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

Typical Properties (Cont.)

CTM	Property	Unit	Result
0007	pH		6–8
	Emulsifier type		Non-ionic
	Diluent		Water

Description

XIAMETER™ MEM-0036 Emulsion is a 35% actives non-ionic emulsion formulated with a polydimethyl-siloxane. Because its nonionic nature, it can be used in a variety of systems, such as nonionic, anionic, cationic surfactant or polymer systems without forming a complex. Extensive testing has shown that XIAMETER™ MEM-0036 Emulsion performs comparably to its predecessor.

How to Use

XIAMETER™ MEM-0036 Emulsion can be used as received or in a diluted form.

For use as a release/lubricant XIAMETER™ MEM-0036 Emulsion may be applied at received in a diluted form by the conventional methods of spraying, dipping, wiping or brushing. Low hardness water should be used for dilution. A typical dilution is XIAMETER™ MEM-0036 Emulsion (1 part w/w) to water (20 parts w/w) but the user should determine the best concentration and application method on a small scale before production.

For use as fabric finish agent XIAMETER™ MEM-0036 Emulsion can be applied to fabric by padding. The amount of emulsion required will depend on the fabric constructions and type of fabric used (natural, synthetic). Generally, between 10 g/1 and 40 g/1 bath concentration is recommended.

Procedure for Padding

1. Scour goods in a non-ionic detergent and rinse thoroughly. Follow with an acid rinse using 2 g1 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 the mixing tank in accordance with the manufacturers' instructions. If hot, cool to below 30°C before adding the silicone emulsion.
3. Pre-dilute the required amount of XIAMETER™ MEM-0036 Emulsion with an 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.

Precautions During Use

- Start with clean mixing tank, delivery lines, pad box and rolls.
- Dilute the emulsion with cold water only.
- Do not use a high shear stirrer when making finishing liquor.

How to Use (Cont.)

ATTENTION: Sample formulations are provided for illustrative purposes only. Dow does not warrant their merchantability, fitness for use, performance, efficacy, safety or freedom from patent infringement.

They are not commercial formulations and have not been subjected to extensive testing. It is your responsibility to thoroughly test any formulation before use.

Mix Before Use

During storage, some product stratification may be observed; therefore, it is recommended that XIAMETER™ MEM-0036 Emulsion be mixed prior to use or down-packaging to ensure homogeneity. Small bottles can be hand mixed or mixed on a mixing wheel. Larger packaging, such as pails or drums, can be rolled. Tote packages can be mixed with the use of a tote mixer. To reduce the risk of microbial and physical contamination, minimize the duration that containers are open, and use only clean and sanitized equipment and tools. Further, to avoid the risk of over-shearing during tote mixing, pitched blades are recommended rather than cowles-style or other higher shear blades. Variable speed mixers are recommended, as speed may need to be adjusted to ensure mixing efficiency depending on product viscosity. Finally, a multiple blade assembly be necessary to avoid stagnant zones and ensure appropriate mixing occurs throughout the tote.

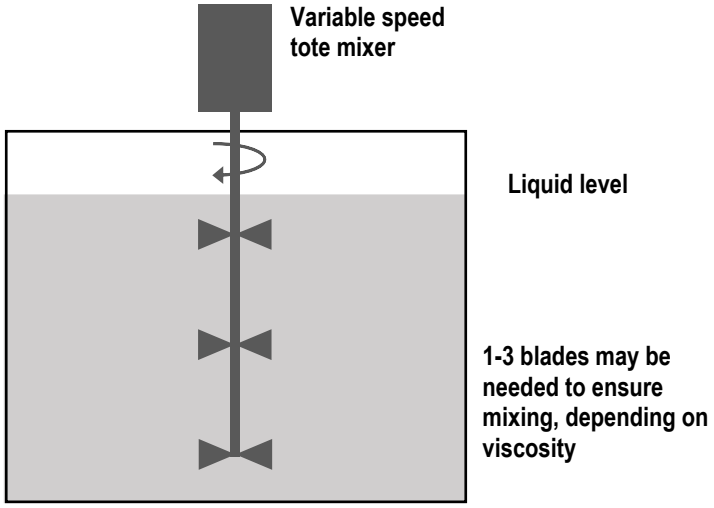

Figure 1. Example tote mixing configuration

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

XIAMETER™ MEM-0036 Emulsion will freeze so adequate precautions should be taken. In case of freezing, thaw at room temperature before use to reconstitute. To prevent freezing, store above 5°C.

When stored at or below 35°C in the original unopened containers, this product has a usable life of 15 months from the date of production.

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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Form No. 95-403-01-0124 S2D