ProSil OFX-0531 Fluid

Amino methoxy-functional polydimethylsiloxane

FEATURES

- Excellent detergent resistance
- Durable protection
- Good gloss
- Easy rub out
- Color enhancement
- Premium softener for leather treatments
- Improves abrasion resistance
- Improves water repellency
- Improves surface properties

COMPOSITION

- Solvent solution of an amino-functional siloxane

APPLICATIONS

- As an ingredient in detergent-resistant auto polishes and cleaners.
- Imparting durable silicone characteristics into various top coat formulations.
- Minimizing or eliminating problems of silicone transfer or oiling typical of additions of low molecular weight silicones.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local XIAMETER sales representative prior to writing specifications on this product.

CTM*	Test	Unit	Value
0176	Appearance		Clear, colorless, slightly hazy liquid
0208	Active ingredient	% w/w	50
	Solvents		Aliphatic petroleum distillates and isopropyl alcohol
0004	Viscosity at 25°C	cSt	100-200
0002	Refractive index		1.410
0001	Specific gravity at 25°C		0.865
0021A	Flash point, closed cup	°C	13

* CTM: Corporate Test Method; copies of CTMs are available on request.

DESCRIPTION – AUTO/HOME CARE

Some formulations benefit from the use of XIAMETER® OFX-0531 Fluid and XIAMETER® OFX-0536 Fluid, while others make use of XIAMETER OFX-0531 Fluid with XIAMETER® PMX-200 Silicone Fluid. Chemically, XIAMETER OFX-0531 Fluid is a double functional polydimethylsiloxane. The highly polar nature of the amino-functional groups and the ability of the silicon-functional methoxy groups to cure cause the polish film to deposit and adhere strongly to automobile finishes, chrome and aluminum surfaces.

Solubility

XIAMETER OFX-0531 Fluid is soluble in many common organic solvents including aliphatic and aromatic hydrocarbon solvents, isobutane and lower alcohols (absolute). The fluid is not soluble in water and hydrolyses in the presence of water. Properly formulated polish emulsions, however, are very stable and do not lose performance benefits upon ageing. The fluid may also be made more water accepting with acetic acid or other organic acids.

Detergent resistance
XIAMETER OFX-0531 Fluid resists removal by common car wash detergents. Solvent systems were evaluated in side by side panel tests. Polish was applied, rubbed out and dried overnight. An area of panel was then scrubbed for 30 seconds with a concentrated liquid detergent and washed and unwashed sections were evaluated for gloss. Blends of the fluids gave intermediate detergent resistance (Table 1). The best formulations from this first test were then further evaluated on automobiles which were given a thorough commercial wash each week. Results of this test are given in Table 2. The best formulation, six parts XIAMETER OFX-0531 Fluid and one part XIAMETER OFX-0536 Fluid, had detergent resistance equal to XIAMETER OFX-0536 Fluid alone.

Polishing properties
Polish formulas were evaluated on laboratory panels and on automobiles for ease, depth of gloss and detergent resistance. A blend of six parts XIAMETER OFX-0531 Fluid and one part XIAMETER OFX-0536 Fluid was excellent in every case, except for a slight compromise in detergent resistance. Other results are given in Table 3.

Typical formulation
XIAMETER OFX-0531 Fluid can be used, depending on desired performance properties, or can be blended to optimize certain properties. It is excellent for formulating liquid, rinse or paste polishes. Polishes formulated with these fluids develop water repellency almost immediately after application, and good detergent resistance develops about three to four hours after application. Optimum detergent resistance develops after about 24 hours.

DESCRIPTION – TEXTILES

XIAMETER OFX-0531 Fluid is a solution of amino-functional siloxane in solvent with a combination of alkoxy reactivity and organo-functional amine groups, that adds a new dimension to the properties and possible uses of silicone polymers.

Amine-functional groups facilitate co-reactions with many types of plastics such as polyester, urethanes, acrylics and carboxylic acids, imparting durable silicone characteristics into various top coat formulations.

Since the silicone can be chemically reacted into these various polymer systems the problem of silicone transfer or oiling typical of the additions of low molecular weight silicones can be minimized or eliminated.

HOW TO USE – TEXTILES

XIAMETER OFX-0531 Fluid is suitable for application by padding, curtain coating or mixing (in closed equipment).

The concentration of silicone required to give the desired properties will depend on the fabric or leather construction and the kind of polymer system to be mixed with. Typical doses are between 10 g/1 and 40 g/1 of product for padding and curtain coating application. The dose for mixing with polymer systems, such as urethanes and acrylics, will depend on the degree of finish required. Normally between 0.5 and 1.5% of silicone solids on the dried weight of leather is recommended.

Padding/curtain coating application
1. Pre-dilute the required amount of fluid with an approximately equal weight of solvent (MIBK, aliphatic or aromatic solvents), and add to the mixing tank. Ensure that mixing tank is cold.

2. Top up to final volume with the solvent used to pre-dilute the fluid.

Precautions
- Start with clean mixing tank, delivery lines, pad box and rollers.
- Always use cold solvent and use in closed equipment.

PRODUCT SAFETY INFORMATION

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, ENVIRONMENTAL, AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE XIAMETER WEB SITE AT WWW.XIAMETER.COM.

STORAGE

Product should be stored between 0 and 25°C (32 and 77°F) in original, unopened containers. The most up-to-date shelf life information can be found on the XIAMETER Web site in the Product Detail page under Sales Specification.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses. Not intended for human injection. Not intended for food use.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

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