

Silicone additive for Leather, Ink, and Paint Self-emulsifying silicone gum

Y-MEISTER™ Series Y-MEISTER86

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Y-MEISTER86 is a self-emulsifying silicone gum that can provide slipperiness, abrasion resistance and leveling properties to leather, ink, paints, etc.

1 Features

- 1) By adding a small amount to water-based or solvent-based synthetic resin paints and coating the surface of a substrate, it is possible to impart slipperiness, abrasion resistance and leveling properties.
- 2) It can be stably dispersed in water, non-polar solvents and polar solvents (Better for water-based formulations).
- 3) Since it is nonionic, it can be used for every type of ionic materials.
- 4) It has good long-term storage stability.*
- 5) Environmentally friendly silicone product that is VOC-free and heavy metal-free.

* For storage conditions, please also refer to [8] Handling precautions.

2 General properties

Parameter	Grade	Y-MEISTER86
Appearance (color)		White
Appearance (properties)		Paste
Non-volatile content (105°C × 3 h) %		96 - 98
Ionic		Nonionic

(Not specified values)



White Paste

3 Applications

Use	Recommended formulation and effects
Leather surface treatment agent	By adding 0.1 to 0.5% to synthetic leather resin surface treatment agent made of urethane resin, acrylic resin, etc., it is possible to impart slipperiness, abrasion resistance, and leveling properties to the coating surface.
Ink	By adding 0.05 to 1.0% to water-based and solvent-based ink, slip properties can be imparted when extracting the ink.
Various one-component paints	Since it does not contain any cross-linking components, it does not inhibit the cross-linking reaction within the paint, and by adding about 0.2 to 3.0% to various paints, it can impart slipperiness, abrasion resistance, and leveling properties to the coated surface after hardening.

4 How to use

Example: 0.5% solution of Y-MEISTER86

- 1) Mix the solvent (dispersion medium) and Y-MEISTER86 in 1/1 ratio.
- 2) Gradually add the solvent (dispersion medium) to the stirred mixture of 1) and continue stirring.
- 3) Repeat step 2) until you have a 0.5% solution.

- We recommend adding 0.1 to 10% Y-MEISTER86 to various paints.
- Please adjust and test the amount of additive within the recommended range.
- If a large amount of solvent (dispersion medium) is added at once, it will be difficult to disperse, so add it gradually while mixing and adjust to the desired concentration.

5 Dispersibility in various solvents (0.5% solution of Y-MEISTER86)

It dissolves completely in the solvents toluene and MEK (methyl ethyl ketone), and disperses in the dispersion media DMF (dimethylformamide), acetone, and water.



6 Evaluation of appearance and touch of coating surface

It also improves the coating properties of Water-based acrylic resin paints, which tend to cause cissing.

Surface Treatment	None	Water-based acrylic resin paint	Add 2% Y-MEISTER86 to water-based acrylic resin paint
Exterior			
Touch Feeling	Non-slip	Non-slip	Smooth

Evaluation criteria

Base material: PU resin (uneven surface)

Paint: Water-based acrylic resin

Coating conditions: 20 μm, drying 100°C x 2 minutes (for water drying)

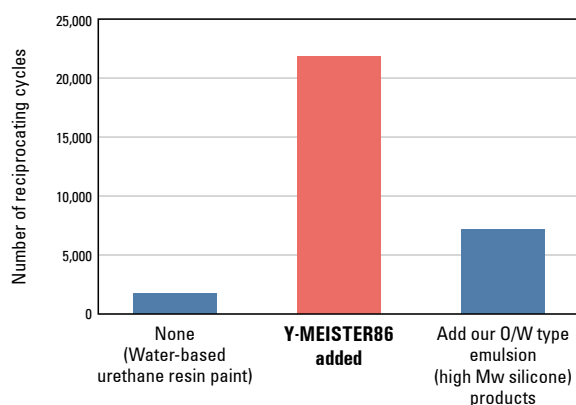
Preparation method: Water-based acrylic resin paint/Y-MEISTER86 = 98/2 wt% parts, stir for 1 hour with a stirrer

* Shaking and mixing for 6 hours or more, also OK.

7 Abrasion resistance

It also improves the abrasion resistance of urethane resin, which is soft and tends to have poor abrasion resistance.

■ Abrasion resistance of Y-MEISTER86



Evaluation criteria

Base material: Polyurethane resin (uneven surface)

Paint: Water-based urethane resin

Coating conditions: 20 μm, drying 100°C x 2 minutes (for water drying)

Preparation method: Mix water-based urethane resin paint/Y-MEISTER86, stir for 1 hour with a stirrer

Test conditions: 1.3 kg load, brass button, back and forth rubbing, number of times until coating breaks

■ Effective ingredient ratio and durability of evaluated paint

Silicone additive	None	Y-MEISTER86 added	Add our O/W type emulsion (high Mw silicone) products
Water-based urethane resin paint	100%	88%	88%
Y-MEISTER86	—	12%	—
Our O/W type emulsion (high Mw silicone) products	—	—	12%
Durability of repeated strokes	Less than 1,500	22,000 strokes	7,000 strokes

(Reference value)

8 Handling precautions

- 1) Seal container tightly and store in a cool, dark place (25°C or below, out of direct sunlight). Moreover, avoid some contaminations (acids, bases and certain organo-metallic compounds) to prevent polymerization and gelation.
- 2) In case of dissolving in organic solvent, when painting, coating, curing or drying, be sure to keep the product away from heat and flame, and provide adequate ventilation.

9 Safety and hygiene

- 1) When handling the products, take care to avoid contact with the skin and mucous membranes by wearing protective glasses and protective gloves. In case of skin contact, immediately wipe off with dry cloth and then flush thoroughly with running water. In case of accidental eye contact, flush immediately with plenty of clean water for at least 15 minutes and then seek medical attention. Contact lens wearers must take special care. If the products get into the eye, the contact lens may become stuck to the eye.
- 2) In case of dissolving in organic solvent, wear a protective mask in a small place with poor ventilation. And it is recommended to install a local exhaust ventilation system. If you become uncomfortable by inhaling the vapors, move to an area with fresh air immediately.
- 3) Keep out of reach of children.
- 4) Be sure to read the Safety Data Sheets (SDS) for these products before use. SDS are available from the Shin-Etsu Silicone website. If the SDS is not listed on the website, please contact the sales department.
SDS download URL :
<https://www.shinetsusilicone-global.com/support/sdstds/>



10 Packaging

15 kg (can), 180 kg (drum)

To request a sample, please contact us via our web form or our local sales office nearby.

<https://www.shinetsusilicone-global.com/contact/>

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