

Prototype Formulation for Polymer Sealant

Auto Care Formulation Information

Polymer Sealant Liquid

Formulation reference: PW-360



AV09029

Description

This polymer sealant liquid polish features an amino-functional silicone that gives long-lasting protection with good color and gloss. Full protection is developed 24 hours after application of the polish.

Ingredient	Weight %	Trade Name/Supplier
Phase A		
1. Low aromatic solvent 160/190°C	10.0	Exxon Chemicals Ltd. Shell Chemicals Ltd.
2. Low aromatic solvent 200/250°C	12.0	Exxon Chemicals Ltd. Shell Chemicals Ltd.
3. Oleic acid	1.4	
4. Dimethylamino ethanol	1.3	
Phase B		
5. XIAMETER® OFX-0536 Fluid	2.0	Dow Corning Corp.
6. <i>Dow Corning</i> ® 531 Fluid	3.0	Dow Corning Corp.
Phase C		
7. Water	55.1	
8. Cellulose thickener	0.8	Hercules Ltd.
9. <i>Kaopolite</i> ® SF	10.0	Kaopolite, Inc.
10. Dimethylamino ethanol	0.1	
Phase D		
11. Wax emulsion	4.3	

Procedure

- 1) Mix phase A ingredients until uniform using low shear in an auxiliary vessel.
- 2) Add phase B ingredients to phase A with low shear.
- 3) Add phase C ingredients to the main vessel with low-speed stirring until fully dispersed.
- 4) Add the contents of the auxiliary vessel to the main vessel under high shear.
- 5) Add phase D ingredient to the main vessel with low-speed stirring.

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Typical Properties/Additional Information

A method used to improve the corrosion resistance of a polish is to react XIAMETER® OFX-0536 Fluid with lauric acid. In the example above, the XIAMETER® OFX-0536 Fluid and lauric acid only would be added to the solvents (ratio 0.3 acid to 1.0 XIAMETER® OFX-0536 Fluid) and this heated to 45°C for 5 minutes. Components 3 and 4 would then be added and the polish completed as before.

Suggestions for adjusting the formulation:

- To improve gloss: Incorporate 0.5–1.0% XIAMETER® PMX-200 Silicone Fluid, 1,000 cSt
- To improve ease of use/leveling: Incorporate 0.5–1.0% XIAMETER® PMX-200 Silicone Fluid, 350 cSt, or *Dow Corning*® 593 Fluid
- To improve color intensity: Incorporate 0.2–0.5% XIAMETER® PMX-200 Silicone Fluid, 12,500 cSt
- To improve gloss, ease of use and color: Incorporate XIAMETER PMX-200 Silicone Fluid, 350 cSt; XIAMETER PMX-200 Silicone Fluid, 1,000 cSt; XIAMETER PMX-200 Silicone Fluid, 12,500 cSt in a ratio of 3:1:1 at 1% total level

See Auto Care Raw Material Supplier Reference Sheet (Form No. 26-1064-01) for the role of the raw material and supplier information.

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Contact Information

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Printed in USA

AGP10042

Form No. 26-1605A-01

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