



Compound, Corrosion Preventive, Under Vehicle Water Based, Black

1 Scope

1.1 Material Description. This specification covers the requirements for a sprayable corrosion preventive compound for use on automotive chassis and sheet metal components. The compound is suitable for room temperature (22 °C) spray application over room temperature steel. It is capable of forming a firm adherent film over a variety of substrates at the specified thickness. The compound is an emulsion system that contains no hydrocarbon solvents, asphalt, or fibrous fillers such as asbestos. The product must be stored above freezing temperatures (0 °C). It shall be nontoxic and non-injurious to plant personnel.

1.2 Symbols. Not applicable.

1.3 Applicability. Typical applications are under vehicle metal housings and brackets.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ASTM D92	ASTM D865	ASTM D3792	ISO 1872
ASTM D380	ASTM D1475	ASTM D4017	SAE J400
ASTM D638	ASTM D2697	EPA 24	SAE J2527

2.2 GM Standards/Specifications.

9981062	GMW3286	GMW15024	GMW16501
9981872	GMW14124	GMW15282	GMW16709
GMW16	GMW14638	GMW15349	
GMW3059	GMW14729	GMW16171	

2.3 Additional References.

TMC003 Material Safety Data Sheet guidance documents (available at www.gmsupplypower.com).

3 Requirements

3.1 Physical Properties. See Table 1.

3.2 Performance Requirements. See Table 2. Test panels for all performance specification tests are 0.8 mm × 100 mm × 300 mm cold rolled steel or 2.0 mm × 75 mm × 300 mm hot rolled steel (unpolished) sprayed or flow coated at room temperature (22 °C) to a thickness of 100 µm to 150 µm. Coated test panels must be aged for 72 h at room temperature before testing. Corrosion resistance is also required over steel castings.

Table 1: Physical Properties

Properties	Values	Test Methods
Color	Black	
Flash Point	None	ASTM D92
Density at 25 °C	1.3 kg to 1.4 kg/L	ASTM D1475
Volume Solids	58% Minimum	ASTM D2697
Viscosity at 25 °C	8000 cps to 12 000 cps	Brookfield RV No. 5 Spindle, 20 rpm at 60 s
Volatile Organic Compound (VOC) Content	0.004 kg/L	ASTM D3792, ASTM D4017, EPA 24
Freeze Thaw Cycle ^{Note 1}	No detrimental effects after three (3) cycles	
Dry Time	20 minutes	Dry to Touch

Note 1: The Freeze-Thaw Cycle Test consists of the following: 4 h at -10 °C and 4 h at room temperature (22 °C)

Table 2: Performance Requirements ^{Note 1}

Properties	Requirements	Test Methods
Gravelometer at -20 °C	Chip rating of seven (7) or better	SAE J400
Salt Spray Resistance - Cold Rolled Steel - Hot Rolled Steel - Steel Castings Plant Parts	No more than 3.0 mm creepback	Scribed, 168 h per GMW3286, with blow off per GMW15282
Humidity	No detrimental effects	GMW14729, 96 h
Xenon ^{Note 2,}	No "mud cracking" or other surface failures after 100 kJ and 168 h salt spray exposure	SAE J2527, GMW3286
Poultice, Humidity, and Thermal Cycle ^{Note 3, Note 4}	No blistering, peeling, lifting, blooming, sagging, cracking or other surface defects	
High Temperature	No sag or flow from horizontally scribed line the length of panel	4 h at 95 °C
Detergent Wash Resistance ^{Note 5}	No more than slight loss of coating	
Gravelometer Corrosion Cycle ^{Note 6}	Rating of good or better	GMW14124, Cycle G
Rubber and Plastic Compatibility ^{Note 7}	Comparable to standard	
Oil Compatibility ^{Note 8}	Comparable to standard	
Tack Free ^{Note 9}	At room temperature	
Freeze Thaw Cycle ^{Note 10}	No detrimental effects after three (3) cycles	

Note 1: Material must be readily removable from a painted surface up to 12 h after application with soap and water. The material is to be removable up to 168 h after application with 9981062 naphtha without paint degradation

Note 2: Xenon test to be the same as SAE J2527 except ultraviolet (UV) temperature to be 50 °C and humidity temperature to be 46 °C.