



SURFACE VEHICLE STANDARD

J1804™

APR2016

Issued 1987-06
Revised 1989-06
Stabilized 2016-04

Superseding J1804 JUN1989

Corrosion Preventive Compound, Topside Vehicle Corrosion Protection

RATIONALE

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- 1. Scope**—This specification covers corrosion preventive compounds for spray application to vehicle body cavities
- 2. References**
- 2.1 Applicable Publications** —The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.
- 2.1.1 ASTM PUBLICATIONS**—Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.
- ASTM B 117-85—Method of Salt Spray (Fog) Testing
- ASTM D 609—Method for Preparation of Steel Panels for Testing Paint, Varnish, Lacquer, and Related Products
- ASTM D 2247—Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
- ASTM D 4585-86a—Practice for Testing the Water Resistance of Coatings Using Controlled Condensation
- 2.1.2 GENERAL MOTORS PUBLICATION**—Available from General Motors, Boise Cascade, 13301 Stephens Road, Warren, MI 48089.
- GM9985470
- 2.1.3** Although this document contains reference to certain automotive industry tests, it only reflects interest in selecting what is felt to be the easiest and most useful tests for evaluation of topside cavity rust preventives. It does not suggest that the tests of other vehicle manufacturers are of lesser value or validity.
- 2.1.3.1 Test Methods**
- | | |
|-------------------------------|---|
| Salt Spray | ASTM B 117-85 |
| Detergent Resistance | ASTM B 117-85 |
| QUV Aging | ASTM B 117-85 |
| Impact | |
| High Temperature Flow | |
| SCAB | |
| Solvent Washoff | POD VB 65-1 Maintenance Bulletin V-5-65 |
| | MIL-C-62218A |
| Cleveland Condensing Humidity | ASTM D 4585-86a (formerly ASTM D 2247 Annex A2) |

3. Requirements

- 3.1 Qualification**—Corrosion preventive compounds furnished under this specification shall meet all the performance requirements herein. These compounds shall not have an undesirable effect on the performance of products used in the manufacture of the vehicle and with which the rust preventive is likely to come into contact.
- 3.1.1 Any change in formulation shall necessitate requalification.
- 3.2 Material**—The corrosion preventive compound may be a water based or solvent based product which is fluid, homogeneous, free from grit and abrasives, and non-toxic.
- 3.3 Film Characteristic**—The corrosion preventive compound shall readily adhere to surfaces commonly encountered in underbody and inner body cavities of vehicles. The film shall not exhibit evidence of alligating, cracking, peeling, blistering, humidity condensate wash-off, or other degradation.
- 3.4 Color**—None specified.
- 3.5 Sprayability and Low Temperature Fluidity**—The rust preventive compound shall be sprayable from 10 to 38 °C (50 to 100 °F).
- 3.6 Condition in Container**—The compound shall exhibit no settling, separation, skinning, or lumpiness.
- 3.7 Low Temperature Stability**—The compound shall show no evidence of separation or nonhomogeneity at a temperature as low as –29 °C (–20 °F).
- 3.8** Manufacturer's recommended application procedure(s) shall ensure that the film thickness required for performance compliance with this specification be achieved in field application.
- 3.9** When tested as specified, the compound shall conform to the following requirements at the manufacturer's recommended film thickness for actual field application.

TABLE 1—

TEST	TEST METHOD	REQUIREMENT
Salt Spray	ASTM B 117-85	No more than 3 corrosion dots, each no larger than 1 mm (0.04 in) in diameter.
Detergent Resistance	ASTM B 117-85	1) No evidence of sagging or channeling and no more than a 10% area loss of the coating from the surface. 2) No more than 3 corrosion dots, each no larger than 1 mm (0.04 in) in diameter.
QUV Thermal Aging	ASTM B 117-85	1) No surface failure such as peeling, cracking, alligating or blistering. 2) No more than 3 corrosion dots, each no larger than 1 mm (0.04 in) in diameter.
Reverse Impact	Gardner	No apparent loss of adhesion or cracking.
High Temperature Flow Wet	Refer to section 3.15	No failure at 121 °C (250 °F) at manufacturer's recommended wet film thickness.
Dry	Refer to section 3.15	No failure at 150 °C (302 °F) at manufacturer's recommended dry film thickness.
SCAB	Refer to section 3.16	1) Rating of 8 minimum. 2) No more than 3 corrosion dots each no larger than 1 mm (0.04 in) in diameter.
Solvent-Washoff	POD VB65-1 Maintenance Bulletin V-5-65 MIL-C-62218A	The coating shall resist the washing action of its own solvent in enclosed areas. There shall be no evidence of washing, such as sagging, channeling, or removal of the coating from the test surface.