



Primer, Anaerobic

1 Scope

1.1 Material Description. Primer is a curing agent for anaerobic adhesives. It will cure these adhesives on inactive metallic or non-metallic surfaces as well as speed their cure on active metallic surfaces (see Table 1).

Table 1: Surface Activity

Slow or Inactive Surfaces	Slow or Inactive Surfaces	Active Surfaces
Zinc	Anodizes	Steel
Cadmium	Passivated Surfaces	Iron
Aluminum	Bright Platings	Brass
Stainless Steel	Ceramics	Bronze
Titanium	Thermoset Plastics	Copper
Silver	Not applicable	Not applicable
Gold	Not applicable	Not applicable

1.1.1 These primers, or more correctly activators, contain mostly organic solvents with a percentage of a catalytic agent. When applied, the solvent evaporates leaving a thin film of curing agent. Adhesive is then applied over the surface and cures when parts are joined.

1.1.2 The primer can be used with all anaerobic adhesives. Fixtures all grades in 1 minute to 5 minute and full cures them in 6 h.

1.1.3 This primer has an on part life of one (1) month. Primed parts must be kept clean if stored. Once adhesive is, applied over primed surfaces parts must be, joined within 5 minutes. Adhesives are, cured through a 0.08 mm gap maximum.

1.1.4 Available in aerosol spray, and ready to use liquid. Suited for batch dipping of large numbers of parts since it is not affected by exposure to air. Can also be brush or spray applied with commercial equipment.

1.2 Symbols. Not applicable.

1.3 Applicability. Recommended for thread locking, sealing, retaining and bonding applications.

1.4 Remarks. See 4.4 in 9986499 for reference to suitably clean surfaces.

2 References

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

2.1 External Standards/Specifications.

ASTM D56	ASTM D445	ASTM D1505	ISO 845
ASTM D297	ASTM D1084	EPA Method 24	

2.2 GM Standards/Specifications.

9986499	GMW3059	GMW15735
GMW3016	GMW14270	

2.3 Additional References.

 None.

3 Requirements

3.1 See Table 2.

Table 2: Initial Qualification Requirements

Properties	Values	Test Methods
Color	Yellow or Amber	Visual
Carrier Solvent	Acetone/Isopropanol	See MSDS
Viscosity at 20 °C	1 mPa s to 5 mPa s (1 cP to 5 cP)	ASTM D445, ASTM D1084 (Method B)
Flash Point	-8 °C (+17 °F)	ASTM D56 (Tagliabue)
Density/Specific Gravity, 25 °C	0.79 sp.g ± 0.05 sp.g	ASTM D1505 Hydrometer
Toxicity/Health and Safety	Not applicable	GMW3059
Shelf Life/Storage Stability	Two (2) Year	GMW15735
Volatile Organic Compounds	15.0% Maximum	GMW3016, EPA Method 24

Note: Material Safety Data Sheet (MSDS), Centipoise (cP).

3.1.1 Specific Gravity. To be determined, and set as part of the specification, at the time of approval. For uncured adhesive/sealant use the ASTM D297 pycnometer method or ISO 845.

3.1.2 Storage Stability (see 4.3.2 in GMW15735). The material when conditioned to the recommended supplier storage conditions; 8 °C to 21 °C must be capable of passing all the performance requirements in Table 2.

3.1.2.1 Shipping Stability (see 4.3.1 in GMW15735). As shipped, the material shall be capable of passing all the performance requirements in Table 2. Run the low temperature stability Cycle B.

3.1.2.2 Shelf Life. The shelf life of the liquid, as shipped, in closed containers shall be a minimum of 12 months at a temperature not to exceed 28 °C. Shelf life of the material commences upon receipt of the material from the manufacturer. In such cases where the shelf life exceeds the minimum 12 month requirement, the manufacturer shall identify and affix a "Do Not Use After" date on the shipping container that shall establish the shelf life; but in no case shall that be less than the minimum 12 months. Under no circumstances should, expired adhesive/sealant be used for production build.

3.2 All materials supplied to this standard must comply with GMW3059, **Restricted and Reportable Substances**, including the requirement to submit a full material composition disclosure to GM via the International Material Data System (IMDS) or via a completed GMW3059 report form.

4 Manufacturing Process

4.1 Identification. The following information shall appear on each container: GM part number; manufacturer's identification, part number, and batch number; date of manufacture; and quantity and weight of material.

4.2 Expanded Use of Approved Liquid. After the initial production approval by all plants and volume is completed, any future increased volume use of approved primer such as a new assembly line or processes in any GM plant or new plant must be, re-evaluated for North American Environmental Protection Agency (EPA) compliance using the productive material review (PMRV) process. The production design release engineer or resident manufacturing engineering can initiate this process.

5 Rules and Regulations

5.1 Legal Regulations. All materials must satisfy applicable laws, rules, regulations and recommendations valid in the country of usage.

5.2 Language. In the event of conflict between the English and domestic language, the English language shall take precedence.