



Mill Oil – Corrosion Preventative for Sheet Metal

1 Scope

1.1 Material Description. This specification details the requirements for mill oil formulations used to protect sheet metal surfaces against corrosion and stains. The mill oils must be compatible with current production pretreatment and paint system processes. These requirements apply for all substrates and surface treatments listed in GMW14019.

1.2 Symbols. Not applicable.

1.3 Applicability. Normally applied on coils and blanks at mills for corrosion and stain protection during storage and shipping.

1.4 Remarks. Any deviations from this requirement must be specified on the Metal Parts Specification (MPS) sheet or the purchase order.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3059 GMW14019

2.3 Additional References.

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

3 Requirements

3.1 Chemical Requirements. No silicone or lanolin compound of any kind is allowed in the material.

3.2 Coating Mass. Refer to GMW14019 for mill oil coating mass measurement methods and coating mass requirements.

3.3 Corrosion Resistance. Sheet metal coated with the mill oil must not exhibit corrosion rust or staining under normal shipping, handling or storage conditions which would impair processing the sheet. Corrosion test methods are listed in GMW14019.

3.4 Process Compatibility Requirements. Mill oils must be tested for compatibility with structural adhesives/sealers, welding, paint cleaning/pretreatment, and Electro-deposition Primer (ELPO) per GMW14019.

4 Manufacturing Process

4.1 Waste Treatment. The material must be compatible with existing waste treatment processes so that total removal can be achieved. The supplier shall be responsible to make known the processing procedures for any component of the material for which the waste treatability is in question.

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.

5.3 Inspection and Rejection. All shipments of material or parts under contract or purchase order manufactured to this specification shall be equivalent in every respect to the initial samples approved by Engineering. There shall be no changes in either formulation or manufacturing processes permitted without prior notification and approval by Engineering. Lack of notification by the supplier constitutes grounds for rejection of any shipment. While samples may be taken from incoming shipments and checked for conformance to this specification, the supplier shall accept the responsibility for incoming shipments meeting this specification without dependence upon purchaser's inspection.

The series of tests used to approve each batch of product along with acceptance limits will be agreed upon by the purchaser and seller. The laboratory providing the certificate of analysis must also participate in a proficiency testing program (round robin) that is approved by the Fuels, Fluids, and Lubricants Global Subsystem Leadership Team (GSSLT) or designate. The Fuels, Fluids, and Lubricants GSSLT or designate must receive copies of the proficiency testing reports directly from the test program administrator.

5.4 Initial Source Approval. No shipment shall be made by any supplier until representative initial production samples have been approved by the Fuels, Fluids, and Lubricants Global Subsystem Leadership Team or designees meeting the requirements of this specification.

5.5 Material Safety Data Sheets/Safety Data Sheets (MSDS/SDS). For new product submissions, or when a change in chemical composition of an existing product has occurred, a complete copy of the Material Safety Data Sheet/Safety Data Sheet must be submitted in compliance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) requirements or other country-specific MSDS/SDS requirements. In addition, product MSDS/SDS submissions must be in compliance with specific country General Motors TMC003 Material Safety Data Sheet/Safety Data Sheet guidance documents where available.

5.6 All materials supplied to this standard must comply with the requirements of the International Material Data System (IMDS) and GMW3059, **Restricted and Reportable Substances**.

6 Approved Sources

Materials supplied to this specification must be approved by General Motors.

The appropriate GM Materials Engineering department(s) must confirm material as meeting the requirements of this specification. Any test data sheets of material submitted to General Motors for such confirmation (e.g., during Production Part Approval Process (PPAP)) under this material specification must list all properties and must apply corresponding test methods of this material specification.

A list of approved materials can be found in MATSPC. This GM Material File is provided to third parties to reduce redundant testing of materials. If an approved material is used, the part supplier can use MATSPC reference for Production Part Approval Process (PPAP) approval. If the decision is made to use a not yet approved material, contact Body Manufacturing Engineering for details on the approval process. The material approval process must be completed prior to PPAP start date of the part supplied to General Motors.

7 Notes

7.1 Glossary.

MATSPC: Global repository of GM approved materials for corresponding GM Engineering Standards.

7.2 Acronyms, Abbreviations, and Symbols.

ELPO	Electro-deposition Primer
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
GSSLT	Global Subsystem Leadership Team
IMDS	International Material Data System
MPS	Metal Parts Specification
MSDS	Material Safety Data Sheet
PPAP	Production Part Approval Process
SDS	Safety Data Sheet

