



Solvent, Isopropyl Alcohol

1 Scope

1.1 Material Description. This specification covers the physical, chemical and performance requirements for isopropyl alcohol.

1.2 Symbols. Not applicable.

1.3 Applicability. Material will be used for cleaning of surfaces prior to finishing operations, as a diluent for some compounds, and other purposes

2 References

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

2.1 External Standards/Specifications.

ASTM D56 ASTM D1298

ASTM D1078

2.2 GM Standards/Specifications.

GMW3059

2.3 Additional References.

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

3 Requirements

Materials submitted for qualification to this specification must meet all the physical, chemical, and performance requirements.

3.1 Physical Requirements.

3.1.1 Distillation Range, °C (ASTM D1078).

- Initial Boiling Point 80 °C minimum.
- 10% 81 °C minimum.
- 50% 82 °C maximum.
- End (Dry) Point 83 °C maximum.

3.1.2 Flash Point, °C (ASTM D56). 12 °C minimum.

3.1.3 Specific Gravity at 25 °C, (ASTM D1298). 0.78 to 0.79.

3.2 Chemical Requirements.

3.2.1 Identification. Gas chromatographic and infrared analysis will be used to identify, characterize and qualify new materials for approval to this specification. All subsequent lots of the approved material must be compositionally identical to the initial samples submitted for qualifications.

3.2.2 Purity. Minimum 99% purity by gas chromatographic assay. The material must be free of any suspended particles, corrosion products, undissolved water, silicones or any other materials detrimental to the painting process. Product must be essentially colorless and not impart any color to materials with which it is used.

3.2.3 Odor. The odor of the materials shall be reviewed in comparison with current production materials. Any significant change in the material's characteristics odor must be evaluated in a GM-approved laboratory and production trail. Any change in formulation must be reassessed for effect on odor.

3.2.4 Hazardous Materials Documentation. The supplier must provide all required safety documentation for Section 5 upon initial submission. Toxicity and flammability will be assessed by the Hazardous Materials Committee of the using plant to determine conditions for use. The supplier must comply with all governmental regulations regarding proper labeling of hazardous materials.

3.2.5 Solvent Emissions Compliance. The supplier must furnish to the using plant's Plant Engineering Department all information required to assess the effect of materials use on meeting governmental restrictions on the discharge of volatile organic compounds (VOC) and disposal of hazardous waste.

3.3 Performance Requirements. The material must perform satisfactorily in the specified production application. Failure to do so shall constitute reason for rejection regardless of compliance with other requirements of this specification.

4 Manufacturing Process

Not applicable.

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. Samples of components or materials released to a GM material specification shall be tested for conformity with the requirements of this material specification and approved by the responsible Engineering department prior to commencement of delivery of bulk supplies.

A new approval must be received for any changes, e.g., properties, manufacturing process, location of manufacture, etc. If not otherwise agreed, all testing and documentation normally required for initial release must be completed.

It is the responsibility of the supplier to inform the customer in a timely manner, without solicitation, and to include documentation of all modifications of materials and/or processes and to apply for a new release.

If not otherwise agreed, all release tests shall be repeated and documented by the supplier prior to commencement of delivery of non-conforming bulk supplies. In individual cases, a shorter test can be agreed to between the responsible Engineering department and the supplier.

5.4 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.

5.5 All materials supplied to this standard must comply with the requirements of GMW3059, Restricted and Reportable Substances for Parts.

6 Approved Sources

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

The appropriate GM Materials Engineering Department (Product Engineering or Manufacturing Engineering) must confirm materials as meeting the requirements of this specification. Only materials/sources listed in the GM Materials File (MATSPC) under this standard number have been qualified by Engineering as meeting the requirements of this standard.

7 Notes

7.1 Glossary.

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