



## Adhesive, Tape, Clear Polyethylene Terephthalate (PET)

### 1 Scope

This specification covers the material requirements and limited performance values for a clear tape made from polyester coated on one side with high temperature resistant acrylic adhesive. This clear colored film and adhesive material has a thickness range of 70 µm to 600 µm.

**1.1 Material Description.** This polyester product is developed to maintain full adhesion properties in extreme environmental conditions between -40 °C and 130 °C. The adhesive is formulated to adhere to clean, dry, relatively smooth surfaces as well as adhesion onto itself in a wrap situation. The tape comes in rolls that can be slit in various widths which can be specified on a part drawing. Commonly, this tape will be used for cable/hose bundling, dissimilar metal separation, and to replace attaching clips in some cases.

**1.2 Symbols.** Not applicable.

**1.3 Applicability.** This tape is primarily to be used in underhood applications where elevated temperatures are common and exposure to lubricant coolant is possible.

### 2 References

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

#### 2.1 External Standards/Specifications.

ASTM D882                      ASTM D1000

#### 2.2 GM Standards/Specifications.

GMW3059

### 3 Requirements

**3.1 Material Requirements.** See Table 1.

Table 1: Physical Properties

| Properties        | Values             | Test Method |
|-------------------|--------------------|-------------|
| Adhesion to Steel | 250 N/m            | ASTM D1000  |
| Tensile Strength  | 13 000 kPa minimum | ASTM D882   |
| Elongation        | 110% minimum       | ASTM D882   |

N/m = Newtons per meter

#### 3.2 Form and Quality.

**3.2.1 Shelf Life.** Material shall pass all requirements of the specification after aging material in the original containers for 90 days @ 35 °C.

**3.2.2 Packing.** Tape to be furnished in evenly and uniformly wound rolls, adhesive side in on suitable cores polyester.

#### 3.3 Test Procedures.

**3.3.1 Conditioning.** The rolls shall be conditioned at standard laboratory temperature 23 °C ± 2 °C and 50% ± 5% humidity for 24 h.

## 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.

**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.

**5.5** 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.

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 approved material already listed is used, the part supplier can use GM Material File reference for Production Part Approval Process (PPAP) material approval. If the decision is made to use a not yet approved material, contact GM Materials 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.

|             |                                                                        |
|-------------|------------------------------------------------------------------------|
| <b>GHS</b>  | Globally Harmonized System of Classification and Labeling of Chemicals |
| <b>IMDS</b> | International Material Data System                                     |
| <b>MSDS</b> | Material Safety Data Sheet                                             |
| <b>PET</b>  | Polyethylene Terephthalate                                             |
| <b>PPAP</b> | Production Part Approval Process                                       |
| <b>SDS</b>  | Safety Data Sheet                                                      |

## 8 Coding System

This standard shall be referenced in other documents, drawings, etc., as follows:

Adhesive tape per 9985581