## ACRYLITE® Sheet GMS

Polymethyl Methacrylate Acrylic

Evonik Cyro LLC

## Message:

ACRYLITE® GMS acrylic sheet meets and is certified to MIL-P-5425E for use in the aviation industry as a laminate part or as a stand alone sheet. It has the optical quality, hardness and sheet tolerance required by the industry. It is manufactured using equipment that is reserved for aviation acrylic products and is subjected to a rigorous optical inspection, the most critical in the industry. Current applications include instrument panels, wingtip lenses, dust covers, helicopter bubbles and aircraft canopies.

| General Information                    |                               |          |             |  |
|--|-------------------------------|----------|-------------|--|
| Features                               | Good Thermal Shock Resistance |          |             |  |
|  | High Clarity                  |          |             |  |
|  | Machinable                    |          |             |  |
|  |                               |          |             |  |
| Uses                                   | Aircraft Applications         |          |             |  |
|  | Laminates                     |          |             |  |
|  | Lenses                        |          |             |  |
|  |                               |          |             |  |
| Agency Ratings                         | MIL P-5425                    |          |             |  |
| Appearance                             | Clear/Transparent             |          |             |  |
|  | Colors Available              |          |             |  |
|  |                               |          |             |  |
| Forms                                  | Sheet                         |          |             |  |
| Processing Method                      | Thermoforming                 |          |             |  |
|  | Vacuum Forming                |          |             |  |
|  |                               |          |             |  |
| Physical                               | Nominal Value                 | Unit     | Test Method |  |
| Specific Gravity                       | 1.19                          | g/cm³    | ASTM D792   |  |
| Water Absorption (24 hr)               | 0.33                          | %        | ASTM D570   |  |
| Mechanical                             | Nominal Value                 | Unit     | Test Method |  |
| Tensile Strength                       | 75.8                          | MPa      | ASTM D638   |  |
| Tensile Elongation (Yield)             | 5.7                           | %        | ASTM D638   |  |
| Thermal                                | Nominal Value                 | Unit     | Test Method |  |
| Deflection Temperature Under Load (1.8 |                               |          |             |  |
| MPa, Unannealed)                       | 115                           | °C       | ASTM D648   |  |
| CLTE - Flow                            | 6.1E-5                        | cm/cm/°C | ASTM D696   |  |
| Flammability                           | Nominal Value                 | Unit     | Test Method |  |
| Burning Rate (6.35 mm)                 | 32                            | mm/min   | ASTM D635   |  |
| Optical                                | Nominal Value                 | Unit     | Test Method |  |
| Transmittance                          |                               |          |             |  |
| 1                                      | 92.3                          | %        | ASTM D1003  |  |

| 2                            | 92.6                         | %    | Internal Method |  |
|------------------------------|------------------------------|------|-----------------|--|
| Haze                         |                              |      |                 |  |
| 3                            | 0.40                         | %    | ASTM D1003      |  |
| 4                            | 0.40                         | %    | Internal Method |  |
| Additional Information       | Nominal Value                | Unit |                 |  |
| Internal Strain <sup>5</sup> | < 1.0                        | %    |                 |  |
| NOTE                         |                              |      |                 |  |
| 1.                           | After Accelerated Weathering |      |                 |  |
| 2.                           | Initial (MIL-P-8184F)        |      |                 |  |
| 3.                           | After Accelerated Weathering |      |                 |  |
| 4.                           | Initial (MIL-P-8184F)        |      |                 |  |
| 5.                           | MIL-P-8184F                  |      |                 |  |

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