

## Technical Information



# PLEXIGLAS® Reflect™ MI7M-66204

## Overview

Plexiglas® Reflect™ resin offers enhanced reflectance when compared to other plastics and matches the high performance of coated metal and coated plastic.

Plexiglas® Reflect™ resin is formulated to exhibit excellent UV resistance and weatherability, and is easily processed using injection molding or extrusion. This new product can be used in combination with lenses made from other Plexiglas® resins, including our Plexiglas® Diffuse™ resins.

### THICK LAYER APPLICATIONS

Plexiglas® Reflect™ MI7M-66204 resin is specifically formulated to be blended with other Plexiglas® resins to offer a cost effective balance of excellent reflection performance, impact resistance, and low gloss in a wide range of extruded thicknesses.

### THIN LAYER APPLICATIONS

Plexiglas® Reflect™ MI7M-66204 resin is specifically designed to offer excellent reflection performance in very thin layers and is suitable for use in film or co-extrusion processes. Please ask us for details!

### BENEFITS

Plexiglas® Reflect™ MI7M-66204 resin provides OEMs and optics suppliers with:

- Outstanding reflectivity to increase light output vs. other plastics
- Diffuse reflective, white surfaces (Matte)
- Compatibility with LEDs and other light sources
- Excellent UV resistance and weatherability
- Ease of processing (extrusion, co-extrusion, thermoforming, and cutting)
- Co-extrudable with Plexiglas® Diffuse™ resins in profile applications
- A lightweight alternative to coated metal

| Physical                                       | Nominal Value (English) | Nominal Value (SI)     | Test Method             |
|------------------------------------------------|-------------------------|------------------------|-------------------------|
| Density                                        | 1.25 g/cm <sup>3</sup>  | 1.25 g/cm <sup>3</sup> | ASTM D792               |
| Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)       | 1.4 g/10 min            | 1.4 g/10 min           | ASTM D1238              |
| Molding Shrinkage - Flow                       | 3.0E-3 to 6.0E-3 in/in  | 0.30 to 0.60 %         | ASTM D955               |
| Water Absorption (24 hr)                       | 0.30 %                  | 0.30 %                 | ASTM D570               |
| Mechanical                                     | Nominal Value (English) | Nominal Value (SI)     | Test Method             |
| Tensile Modulus                                | 334000 psi              | 2300 MPa               | ASTM D638               |
| Tensile Strength (Break)                       | 6670 psi                | 46.0 MPa               | ASTM D638               |
| Tensile Elongation (Break)                     | 21 %                    | 21 %                   | ASTM D638               |
| Flexural Modulus                               | 348000 psi              | 2400 MPa               | ASTM D790               |
| Flexural Strength (Break)                      | 10000 psi               | 69.0 MPa               | ASTM D790               |
| Impact                                         | Nominal Value (English) | Nominal Value (SI)     | Test Method             |
| Notched Izod Impact (73°F (23°C))              | 0.51 ft-lb/in           | 27 J/m                 | ASTM D256               |
| Hardness                                       | Nominal Value (English) | Nominal Value (SI)     | Test Method             |
| Rockwell Hardness (M-Scale)                    | 62                      | 62                     | ASTM D785               |
| Thermal                                        | Nominal Value (English) | Nominal Value (SI)     | Test Method             |
| Deflection Temperature Under Load <sup>1</sup> |                         |                        | ASTM D648               |
| 66 psi (0.45 MPa), Annealed                    | 219 °F                  | 104 °C                 |                         |
| 264 psi (1.8 MPa), Annealed                    | 212 °F                  | 100 °C                 |                         |
| Vicat Softening Temperature                    |                         |                        |                         |
| --                                             | 225 °F                  | 107 °C                 | ASTM D1525 <sup>2</sup> |
| --                                             | 208 °F                  | 98.0 °C                | ASTM D1525 <sup>3</sup> |

| Flammability       | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--------------------|-------------------------|--------------------|-------------|
| Flame Rating       | HB                      | HB                 | UL 94       |
| Optical            | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Reflectance        |                         |                    | ASTM E903   |
| 1.8E-5 in (450 nm) | 97.1 %                  | 97.1 %             |             |
| 2.2E-5 in (550 nm) | 98.2 %                  | 98.2 %             |             |
| 2.6E-5 in (650 nm) | 98.6 %                  | 98.6 %             |             |

**Notes**

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> Annealing Cycle: 16 hours @ 90°C (194°F)

<sup>2</sup> Rate A (50°C/h), Loading 1 (10 N)

<sup>3</sup> Rate A (50°C/h), Loading 2 (50 N)

## Technical Information



# TRINSEO™

### trinseo.com

The principles of Responsible Care® and sustainability influence the production of printed literature for Trinseo PLC and its affiliated companies. As a contribution towards the protection of our environments, Trinseo's printed literature is produced in small quantities and on paper containing recovered/post-consumer fiber and using 100 percent soy-based ink whenever possible.

#### Product Stewardship

Trinseo and its affiliated companies have a fundamental concern for all who make, distribute, and use their products and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products so that appropriate steps may be taken to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Trinseo products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

#### Customer Notice

Customers are responsible for reviewing their manufacturing processes and their applications of Trinseo products from the standpoint of human health and environmental quality to ensure that Trinseo products are not used in ways for which they are not suitable. Trinseo personnel are available to answer questions and to provide reasonable technical support. Trinseo product literature, including safety data sheets, should be consulted prior to the use of Trinseo products. Current safety data sheets are available from Trinseo.

No freedom from infringement of any patent owned by Trinseo or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the customer is responsible for determining whether products and the information in this document are appropriate for the customer's use and for ensuring that the customer's workplace and disposal practices are in compliance with applicable legal requirements. Although the information herein is provided in good faith and was believed to be accurate when prepared, Trinseo assumes no obligation or liability for the information in this document.

#### NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS

TRINSEO REQUESTS THAT CUSTOMERS REFER TO TRINSEO'S MEDICAL APPLICATION POLICY [HTTP://WWW.TRINSEO.COM/MEDICAL.HTM](http://www.trinseo.com/medical.htm) BEFORE CONSIDERING THE USE OF TRINSEO PRODUCTS IN MEDICAL APPLICATIONS. THE RESTRICTIONS AND DISCLAIMERS SET FORTH IN THAT POLICY ARE INCORPORATED BY REFERENCE.

For more information on products, innovations, expertise, and other services available from Trinseo, visit [www.trinseo.com](http://www.trinseo.com), or in the U.S. contact us at +1-855-TRINSEO (+1-855-874-6736).

#### DISCLAIMER

TRINSEO MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, IN THIS DOCUMENT; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE (INCLUDING MEDICAL APPLICATIONS) ARE EXPRESSLY EXCLUDED. SINCE THE CONDITIONS AND METHODS OF USE OF THE INFORMATION AND PRODUCTS REFERRED TO ARE BEYOND TRINSEO'S KNOWLEDGE AND CONTROL, TRINSEO DISCLAIMS ANY AND ALL LIABILITY FOR LOSSES OR DAMAGES THAT MAY RESULT FROM RELIANCE ON THE INFORMATION OR USE OF THE PRODUCTS DESCRIBED HEREIN. TRINSEO MAKES NO WARRANTIES, EXPRESS OR IMPLIED, THAT THE USE OF ANY TRINSEO PRODUCT WILL BE FREE FROM ANY INFRINGEMENT CLAIMS.

#### GENERAL NOTICE

Any photographs of end-use applications in this document represent potential end-use applications but do not necessarily represent current commercial applications, nor do they represent an endorsement by Trinseo of the actual products. Further, these photographs are for illustration purposes only and do not reflect either an endorsement or sponsorship of any other manufacturer for a specific potential end-use product or application, or for Trinseo, or for specific products manufactured by Trinseo. If products are described as "experimental" or "developmental": (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Trinseo to change specifications and/or discontinue production, and (4) although Trinseo may from time to time provide samples of such products, Trinseo is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

For additional information not covered by the content of this document or to ensure you have the latest version of this document available, please refer to our website at [www.trinseo.com/contact](http://www.trinseo.com/contact).

Follow us at:



Copyright ©Trinseo (2024) All rights reserved.  
™ Trademark of Trinseo S.A. or its affiliates  
®Responsible Care is a service mark of the American  
Chemistry Council



# TRINSEO™