TECHNICAL DATA SHEET

Product Name
EL-Lene™

Product Type
Octene Copolymer PE for Rotational Moulding

Product Grade
M3504DXP

Product Description

M3504DXP is natural powder of DOWLEX™ NG 2429.01G which is a linear-low density polyethylene octene copolymer for rotational moulding applications. M3504DXP is specifically designed for applications requiring excellent environmental stress crack resistance and impact strength combined with low warpage and good processing. It is fully heat and UV stabilized resulting in a wide processing latitude, good color retention, and long life expectancy. Both of them are recommended for large and thick tanks with a generous radius and curve.

Typical Applications

- Diesel fuel tanks
- Boat and tractor parts
- Chemical storage containers

Product Characteristics

- Excellent ESCR
- Excellent chemical resistance
- High impact strength
- Enhanced outdoor performance with proven UV-protection recipe

International Compliance

- Meet the requirements of U.S. Food and Drug Administration (FDA) 21 CFR Part 177.1520 (c), paragraph 3.1a, for food contact under conditions of use C-H (21 CFR 176.170(c) Table 2), for all food types

Physical Properties

Property	Test Method	Typical Values	Unit
Resin Properties			
Melt Flow Rate @ 190°C, 2.16 kg	ISO 1133	4.0	g/10 min
Density	ISO 1183	0.935	g/cm^3
Melting Point	DSC	125 (257)	°C (°F)
Crystallization Point	DSC	105 (221)	°C (°F)
Heat Distortion Temperature, 0.455 MPa	ISO 75	60 (140)	°C (°F)
Heat Distortion Temperature, 1.82 MPa	ISO 75	41 (106)	°C (°F)
Vicat Softening Point	ISO 306/ A120	118 (224)	°C (°F)
Mechanical Properties			
Tensile Strength-at-Yield	ISO 527-2	17 (2460)	MPa (psi)
Tensile Strength-at-Break	ISO 527-2	25 (3600)	MPa (psi)
Elongation-at-Break	ISO 527-2	800	%
Flexural Modulus, 1% Secant	ISO 178	640 (92800)	MPa (psi)
Surface Hardness	ISO 868	57	Shore D
ARM Impact Strength @ -40 °C	ARM Method (5.5 mm rotomoulded sample)	25 (101)	J/mm (lb-ft)
ESCR (100% Antarox)	ASTM D 1693	>1,000	hrs, F_{50}

Note: the given values are typical values measured on the product. Values herein are not to be constructed as a product specification.

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Processing Guidelines

Moulding cycles depend on mould materials and its wall thickness, oven temperature, and shot size. Typical oven temperatures should be set between 250 and 300 °C. The recommended PIAT for M3504DXP is about 235 °C. M3504DXP requires 10% longer cooking time than normal butene grades.

Points of Concerns
Finishing rotational parts by flaming, using scrap/filler in compound formulation, or dryblending pigment > 0.3% can decrease mechanical properties of rotational parts, which is not recommended.

Product Technical Assistance
For technical assistance or further information on this product or any other SCG Chemicals' products, please contact your SCG ICO Polymers / SCG Performance Chemicals technical service at the address or telephone number as specified below.

Product Available Form

- Natural Powder (M3504DXP)

Product Packaging

- 25 kg loose bag
- 25 kg bag on pallet

Storage

- Store in original container in tidy according to the manual of Handling and Storage from Thai Polyethylene Company Limited.
- Product(s) should be stored in dry and dust free location at temperature below 50 °C and protected from direct sunlight and/or heat, well-ventilated area, away from incompatible materials and food and drink, as this may lead to quality deterioration, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.
- Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
- The storage area should be stable and not be slopped.

Safety

- The product is not classified as a hazardous material.
- Please see our Material Safety Data Sheet for details on various aspects of safety, recovery, and disposal of the products; for more information, contact your SCG ICO Polymers / SCG Performance Chemicals technical service

Recycling

- The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.
- Please see our Material Safety Datasheet for details on various aspects of safety, recovery and disposal of the products; for more information, contact your SCG ICO Polymers / SCG Performance Chemicals technical service.

Related Documents

- The latest version of this document will be available at our website, www.scgchemicals.co.th, or can be obtained from the SCG ICO Polymers / SCG Performance Chemicals technical service.
- The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.
    - Material Safety Datasheet
    - Statement on compliance to food contact regulations

Disclaimer

- The product can be used only for the application as specified here above.
- To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information.
- We make no warranties which extend beyond the description contained herein. Nothing herein shall constitute any implied warranty of merchantability or fitness for a particular purpose.
- It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.
- No liability can be accepted in respect of the use of our products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.