

ADVANCENE™ EM-5204-UVH

High Density Polyethylene Resin

Overview:

ADVANCENE™ EM-5204-UVH High Density Polyethylene (HDPE) resin is a hexene copolymer with very narrow molecular weight distribution and produced via advanced gas phase PE process and is intended for use in injection molding applications. This resin has been designed to provide excellent processability for molders and to meet the rigorous performance characteristics of applications requiring excellent stackability, environmental stress crack resistance and impact strength.

Applications:

- Injection molded pails
- Industrial parts
- Caps and closures
- Shipping containers.

Additives:

Thermal and UV Stabilizers are included

Complies with:

- Europe EU 10/2011 followed by its amended.
- U.S. FDA 21 CFR 177.1520(c)3.1a

| Physical Properties | Nominal Value (SI) | Test Method |
|---|-------------------------|-------------------------|
| Density | 0.952 g/cm ³ | ASTM D792 |
| Melt Index (190°C/2.16 kg) | 4.7 g/10min | ASTM D1238, ISO 1133 |
| Environmental Stress-Cracking Resistance (50°C, 100% Igepal, F50) | 24 Hours | ASTM D1693 ¹ |

| Mechanical Properties | Typical Value (SI) | Test Method |
|------------------------------|------------------------|--|
| Tensile Strength at Yield | 25.0 MPa | ASTM D638 ¹ , ISO 527 |
| Tensile Strength at Break | 25.0 MPa | |
| Elongation at Yield | 9.5 % | |
| Elongation at Break | 1100 % | |
| Flexural Modulus 1% Secant | 1100 MPa | ASTM D790B ¹ , ISO 178 |
| Flexural Modulus 2% Secant | 950 MPa | |
| Tensile Impact strength | 84.0 KJ/m ² | ASTM D1822 ^{1,2} , ISO 8256 |
| Durometer Hardness (Shore D) | 59.0 | ASTM D2240 ¹ , ISO/IEC 17025:1999 |

| Thermal Properties | Nominal Value (SI) | Test Method |
|---|--------------------|--------------------------------------|
| Brittleness Temperature | <-76°C | ASTM D746 ¹ , ISO-974 (E) |
| Deflection Temperature under load 66 psi (0.45 MPa), Unannealed | 72 °C | ASTM D648 ¹ , ISO 75 |
| Vicat Softening Temperature | 129 °C | ASTM D1525, ISO 306 |

Processing Conditions

- Screw speed = 15 – 40 rpm.
- Temperature setting from 200°C - 250°C.

Notes:

1 Molded and tested in accordance with ASTM D4976

2 Type S

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

Availability:

This product is supplied in 25 kg bags in secured pallets of 60 bags (1.500 MT net). It is also supplied in jumbo bags of 1000 kg capacity.

Storage:

The product should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product. More information on storage can be found on the Safety Information Sheet for this product.

Safety:

The product is not classified as a hazardous mixture.

Dust and fines from the product carry a risk of dust explosion. All equipment should be properly earthed. Inhalation of dust should be avoided as it may cause irritation of the respiratory system. Small amounts of fumes are generated during processing of the product. Proper ventilation is therefore required.

A Safety Information Sheet is available on request. Please contact your ETHYDCO representative for more details on various aspects of safety, recovery and disposal of the product.

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.

Related documents:

Most datasheets and statements are available on ETHYDCO website www.ethydc0-eg.com. If more information is required, please contact an ETHYDCO representative for information.

Disclaimer:

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications

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