For more information and technical assistance contact:

Chevron Phillips Chemical Company LP
P.O. Box 4910
The Woodlands, TX 77387-4910
800.231.1212

PREMIUM EXTRUSION AND RIGID PACKAGING RESINS

Marlex HMN® TR-945 / HMN TR-945G

HIGH DENSITY POLYETHYLENE

These hexene copolymers are tailored for rotational molding applications that require:

- Wide process windows
- Good impact strength
- Good flow combined with fair ESCR
- High modulus

Typical applications for HMN TR-945 and HMN TR-945G include items such as:

- Large tanks and other high modulus parts
- Ductwork

These resins are available in:

- Pellet form - HMN TR-945
- 35 US mesh powder - HMN TR-945G

These resins meet these specifications:

- ASTM D4976 - PE 233
- FDA 21 CFR 177.1520(c) 3.2a, use conditions B through H per 21 CFR 176.170(c) Table 2. Single use articles contacting food types I, II, IV-B, VI-A, VI-B, VII-B, and VIII. Repeated use articles contacting all food types defined in 21 CFR 176.170(c) Table 1.
- FMVSS.302 burn test
- Long term UV stabilization – ASTM 2565 (Cycle 1): Greater than **UV-16**

NOMINAL PHYSICAL PROPERTIES[1], [2]	English	SI	Method
Density	---	0.946 g/cm^3	ASTM D1505
Melt Index, 190/2.16	---	6.0 g/10 min	ASTM D1238
ESCR, Condition A (100% Igepal), F50	70 h	70 h	ASTM D1693
ESCR, Condition A (10% Igepal), F 50	25 h	25 h	ASTM D1693
Durometer Hardness, Type D (Shore D)	63	63	ASTM D2240
Vicat Softening Temperature, Loading 1, Rate A	244°F	118°C	ASTM D1525
Brittleness Temperature, Type A, Type I specimen	-103°F	-75°C	ASTM D746
Melting Temperature	266°F	130°C	ASTM D3418
Crystallization Temperature	235°F	113°C	ASTM D3418
ROTATIONAL MOLDED PROPERTIES[1] [3]	**English**	**SI**	**Method**
Impact Strength, 1/8" (3.2 mm) thickness, -40 C°	68 ft·lb	92 J	ARM Impact
Impact Strength, 1/4" (6.35 mm) thickness, -40 C°	165 ft·lb	223 J	ARM Impact
Tensile Strength at Yield, 2 in/min, Type IV bar	2,900 psi	20 MPa	ASTM D638
Elongation at Break, 2 in/min, Type IV bar	460%	460%	ASTM D638
Flexural Modulus, Tangent - 16:1 span:depth, 0.5 in/min	132,000 psi	910 MPa	ASTM D790
Flexural Modulus, 1% Secant - 16:1 span:depth, 0.5 in/min	107,000 psi	740 MPa	ASTM D790
Heat Deflection Temperature, 66 psi, Method A	147°F	64°C	ASTM D648
Heat Deflection Temperature, 264 psi, Method A	111°F	44°C	ASTM D648

1. The nominal properties reported herein are typical of the product, but do not reflect normal testing variance and therefore should not be used for specification purposes. Values are rounded.
2. The physical properties were determined on compression-molded specimens that were prepared in accordance with Procedure C of ASTM D4703, Annex A1.
3. Properties were measured on rotational molded samples with 1/8" (3.17 mm) average thickness, unless otherwise noted. The average peak internal air temperature during molding was above 400º

Revision Date September, 2011

Another quality product from Chevron Phillips Chemical Company LP The Woodlands, Texas