



# FHR Polypropylene P5M6K-080

Flint Hills Resources, LP - Polypropylene Random Copolymer

Monday, September 19, 2016

## General Information

### Product Description

DESCRIPTION: Random copolymer for injection molding.  
FEATURES: Clarified. Produced without animal derived components or phthalates.  
STERILIZATION: Gamma radiation, ETO, E-beam and autoclave\*  
APPLICATIONS: Syringes, medical device components.

\*This product is not recommended for autoclave sterilization in the presence of aqueous solutions.

### General

Material Status	• Commercial: Active		
Regional Availability	• North America		
Additive	• Clarifier		
Features	• Autoclave Sterilizable • E-beam Sterilizable • Ethylene Oxide Sterilizable	• High Clarity • No Animal Derived Components • Radiation Sterilizable	• Random Copolymer
Uses	• Medical Devices	• Medical/Healthcare Applications	
Agency Ratings	• DMF Unspecified Rating • FDA 21 CFR 177.1520(c) 3.1a • ISO 10993 Part 5	• USP 661 • USP 85 • USP 88	• USP Class VI
RoHS Compliance	• Contact Manufacturer		
Forms	• Pellets		
Processing Method	• Injection Molding		

## ASTM & ISO Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	0.900 g/cm <sup>3</sup>	0.900 g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	27 g/10 min	27 g/10 min	ASTM D1238
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength (Yield)	4500 psi	31.0 MPa	ASTM D638
Tensile Elongation (Yield)	14 %	14 %	ASTM D638
Flexural Modulus			ASTM D790
1% Secant	140000 psi	966 MPa	
Tangent	145000 psi	1000 MPa	
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	1.4 ft·lb/in	75 J/m	ASTM D256
Gardner Impact (73°F (23°C))	239 in·lb	27.0 J	ASTM D5420
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Rockwell Hardness (R-Scale)	85	85	ASTM D785
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	178 °F	81.0 °C	
Peak Melting Temperature	293 to 306 °F	145 to 152 °C	ASTM D3418

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## Flint Hills Resources, LP - Polypropylene Random Copolymer

Optical	Typical Value (English)	Typical Value (SI)	Test Method
Haze (25.0 mil (635 µm))	6.5 %	6.5 %	ASTM D1003

### Additional Information

Notice regarding medical applications:

This Flint Hills product meets certain requirements for use in medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that this Flint Hills product is safe, lawful and technically suitable for the intended use. Flint Hills encourages its customers to review their application with a Flint Hills technical representative to ensure that this product is not used in ways for which it was not intended. Flint Hills makes no warranties (express or implied), promises or guarantees concerning the suitability of this product for use in any given medical application.

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.