NORDEL™ IP 4820

The Dow Chemical Company - Hydrocarbon Rubber

Tuesday, October 13, 2015

General Information

Product Description

NORDEL IP 4820 Hydrocarbon Rubber is a crystalline ethylene-propylene-diene terpolymer (EPDM). It has a low viscosity for excellent flow characteristics and hot green strength. It has been designed for property modification of thermoset rubber and thermoplastic polyolefin compounds including polyethylene and polypropylene. It can be crosslinked via traditional techniques including sulfur, phenolic, peroxide, irradiation, and hydrosylilation. NORDEL IP 4820 is developmental and made via INSITE* technology.

Main Characteristics:

- Highly crystalline
- Medium diene
- Low molecular weight
- High green strength

- Complies with
  - U.S. FDA 21 CFR 177.2600 (See NOTES 1)
  - U.S. FDA 21 CFR 177.1520 (See NOTES 1 & 2)
  - U.S. FDA 21 CFR 175.105 (See NOTES 3)
  - Consult the regulations for complete details.

Applications:

- High hardness extrusions and moldings
- Plastics modification

Storage and Handling:
The quality of EPDM products may be affected by exposure to artificial or natural light.
This product should be stored indoors in its original packaging and out of direct sunlight.

NOTES:
(1) Can be used in contact with all foods except water in oil emulsions, high or low fat, and low moisture fats and oil.
(2) Compliant as a blend component in compliant polymers at levels up to 25% for conditions of use E through G.
(3) Adhesives only.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Agency Ratings	• FDA 21 CFR 175.105 [1]	• FDA 21 CFR 177.1520 [2]	• FDA 21 CFR 177.2600 [3]
Forms	• Pellets		

ASTM & ISO Properties [4]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.912		ASTM D297
Melt Mass-Flow Rate (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Mooney Viscosity [5] (ML 1+4, 257°F)	20	MU	ASTM D1646
Ethylene Content	85.0	wt%	ASTM D3900
Ethylidene Norbornene (ENB) Content	4.9	wt%	ASTM D6047
Ash Content	< 0.1	wt%	ASTM D5667
Molecular Weight Distribution	Narrow		Internal Method

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Physical	Nominal Value	Unit	Test Method
Propylene Content	10.1	wt%	ASTM D3900
Residual Transition Metal	< 10	ppm	Internal Method
Total Volatiles	< 0.4	wt%	Internal Method

Thermal	Nominal Value	Unit
Melting Temperature	194	°F

Notes

[1] Adhesives only.

[2] Can be used in contact with all foods except water in oil emulsions, high or low fat, and low moisture fats and oil. Compliant as a blend component in compliant polymers at levels up to 25% for conditions of use E through G.

[3] Can be used in contact with all foods except water in oil emulsions, high or low fat, and low moisture fats and oil.

[4] Typical properties: these are not to be construed as specifications.

[5] Estimated value

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