



# Nordel® IP

 hydrocarbon rubber

A Product of DuPont Dow Elastomers

## Nordel® IP 5565

### Description

Nordel® IP 5565 is an amorphous, high diene, EPDM grade designed for extruded applications requiring fast cure rates. It is ideally suited for continuously cured dense and sponge profiles. Molded applications will also benefit from the fast cure response, allowing shorter cycle times.

### 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.

#### Typical Polymer Properties\*

Property	Value	Test Method
Mooney Viscosity ML 1 + 4 at 125°C	65	ASTM D-1646-96
Composition		
Ethylene, mass%	50	ASTM D-3900
Propylene, mass%	42.5	ASTM D-3900
ENB, mass%	7.5	ASTM D-6047
Molecular Weight Distribution	Medium	DuPont Dow PQ-E-034 and PQ-E-036
Product Density, g/cc	0.86	ASTM D-297-93
Product Form	25 kg bale	

\*These data are provided for description only and are not intended to serve as sales specifications.

**Nordel® IP 5565**  
**Typical Application Recipes**

	Heat-Resistant Peroxide Cured 1289A06-01	General Purpose Molding 1155A18-06	Dense Extruded Profile 1155A16-01	ASTM D3568 1155A18-04
Nordel® IP 5565	100	100	100	100
Zinc Oxide	—	5	5	5
Stearic Acid	—	—	1	1
N550 Black	50	—	130	80
N774 Black	—	125	—	—
Calcium Carbonate	—	—	50	—
Calcium Oxide (80%)	—	—	8	—
Paraffinic Oil	10	50	70	50
Sulfur	—	0.5	1.0	1.5
ZnDBC	—	1.5	1.0	2.0
MBTS	—	1.5	1.5	—
DPTT	—	0.8	0.8	—
MBT	—	—	—	1.0
TMQ	—	0.5	—	—
TMTD	—	0.8	0.8	0.5
DCP (40% active)	7	—	—	—
<b>Total</b>	<b>167</b>	<b>285</b>	<b>369</b>	<b>241</b>
<b>Compound Properties</b>				
<b>Mooney Viscosity, ML 1 + 4, 100°C</b>	120	74	73	63
Mooney Scorch				
Minimum	40	27	29	21
5-pt rise, min	10.9	8.3	12.5	9.8
10-pt rise, min	12.4	10.4	15.7	11.3
<b>MDR, 30 min chart, 0.5° arc</b>				
Test Temperature	<b>180°C</b>	<b>160°C</b>	<b>160°C</b>	<b>160°C</b>
M <sub>L</sub> , dN·m	2.9	2.0	2.0	1.5
M <sub>H</sub> , dN·m	30.4	18.3	19.8	20.3
t <sub>s1</sub> , min	0.3	1.3	1.5	1.2
t'50, min	0.9	3.1	1.9	3.7
t'90, min	2.8	9.3	3.5	16.4
t'95, min	3.6	17.4	6.3	21.0
<b>Vulcanizate Properties</b>				
<b>Original Physical Properties tested at 23°C</b>				
<b>Press cured, t'95 + 3 min at</b>	<b>180°C</b>	<b>160°C</b>	<b>160°C</b>	<b>160°C</b>
50% Modulus, MPa	1.7	1.9	2.4	1.9
100% Modulus, MPa	4.0	3.5	4.4	4.0
200% Modulus, MPa	12.3	6.2	7.6	7.8
300% Modulus, MPa	—	7.9	9.3	10.3
Tensile Strength, MPa	15.9	9.5	10.5	10.7
Elongation, %	226	383	344	301
Hardness, Shore A	63	69	73	64
<b>Tear Strength, Die C, kN/m</b>	30.4	30.8	31.6	26.0
<b>Compression Set, Method B</b>				
<b>Pellets cured to MDR t'95 + 15 min</b>				
After 22 hr at -25°C	37	43	59	31
After 22 hr at 100°C	3	38	55	30
After 70 hr at 125°C	7	65	82	60

(continued)

**Nordel® IP 5565 (continued)**  
**Typical Application Recipes**

	Heat-Resistant Peroxide Cured 1289A06-01	General Purpose Molding 1155A18-06	Dense Extruded Profile 1155A16-01	ASTM D3568 1155A18-04
<b>Change in Properties After Aging</b>				
<b>Aged in Air, 70 hr at 100°C</b>				
100% Modulus, % Change	—	41	79	27
Tensile Strength, % Change	—	6	14	-13
Elongation, % Change	—	-31	-47	-34
Hardness, Points Change	—	4	6	4
<b>Change in Properties After Aging</b>				
<b>Aged in Air, 70 hr at 125°C</b>				
100% Modulus, % Change	5	76	124	61
Tensile Strength, % Change	5	22	21	-4
Elongation, % Change	3	-44	-59	-45
Hardness, Points Change	3	4	10	6
<b>Temperature Retraction</b>				
TR-10, °C	-40	-40	-45	-41

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