

Model formula for a conveyor belt Exxpro™ specialty elastomer grade 3745

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Conveyor belts formulated with Exxpro™ elastomers are more resistant to both heat and chemicals ensuring long-lasting reliability of your production process.

Material	Units	Amount
Exxpro specialty elastomer grade 3745	PHR ⁽¹⁾	100.0
Carbon black N330	PHR	60.0
Mistron vapor talc	PHR	20.0
Naphthenic oil	PHR	15.0
Aromatic and aliphatic hydrocarbon resin	PHR	3.0
Polyethylene powder	PHR	2.0
Stearic acid	PHR	2.0
Zinc oxide	PHR	2.0
Sulfur	PHR	1.0
Aryl phenol disulfide	PHR	1.0
Total (PHR)		206.0

Properties	Test method based on	Units and conditions	Typical values ⁽²⁾
Mooney viscosity ML (1+4) at 100°C	ASTM D1646	MU, 100°C	60.9
Mooney scorch (tested at 125°C)	ASTM D1646		
Time to 5pt rise	ASTM D1646	minutes	8.8
Time to 10pt rise	ASTM D1646	minutes	10.5
MDR rheometer	ASTM D5289	160°C; 30 minutes; 0.5 deg. arc	
M _i (minimum torque)	ASTM D5289	dNm	2.0
M _h (maximum torque)	ASTM D5289	dNm	13.6
M _h - M _i (delta torque)	ASTM D5289	dNm	11.6
Tc ₅₀ (time to 50% torque increase)	ASTM D5289	minutes	6.1
Tc ₉₀ (time to 90% torque increase)	ASTM D5289	minutes	12.7

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Properties	Test method based on	Units and conditions ⁽²⁾	Typical values ⁽³⁾
MDR rheometer	ASTM D5289	180°C; 30 minutes; 0.5 deg. arc	
M _l (minimum torque)	ASTM D5289	dNm	1.8
M _h (maximum torque)	ASTM D5289	dNm	13.6
M _h - M _l (delta torque)	ASTM D5289	dNm	11.8
Tc ₅₀ (time to 50% torque increase)	ASTM D5289	minutes	2.0
Tc ₉₀ (time to 90% torque increase)	ASTM D5289	minutes	4.9
Stress strain properties		tc90 + 2 minutes at 160°C ⁽²⁾	
Tensile strength	ASTM D412	MPa	12.6
Elongation at break	ASTM D412	%	318
Modulus 100%	ASTM D412	MPa	4.6
Modulus 200%	ASTM D412	MPa	8.9
Modulus 300%	ASTM D412	MPa	12.2
Energy to break	ASTM D412	joules	7.0
Peak load (die B)	ASTM D624	N	93.1
Tear resistance (die B) mean	ASTM D624	KN/m	47.0
Hardness	ASTM D2240	shore A	74.0
Rebound resilience	ASTMD 1054	%,23°C	13.4
Din abrasion	ASTM D5963	ARI	55

1. Parts per hundred rubber.

2. Values given are typical and should not be interpreted as a specification.

3. Samples cured Tc 90 + 2 at 160°C.

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