

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 _l (minimum torque) | ASTM D5289 | dNm | 2.0 |
| M _h (maximum torque) | ASTM D5289 | dNm | 13.6 |
| M _h - M _l (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 |

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

| 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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