

ELASTOCYL™

CNT elastomers concentrates

ELASTOCYL™ X1-EPDM MB

Oil Extended Ethylene Propylene Diene Terpolymer – Carbon nanotubes masterbatch

General Information

Description

ELASTOCYL™ X1-Rubber is a development product range that demonstrates the performance of carbon nanotubes (CNT) dispersion in elastomers. Optimal CNT dispersion provides customers the benefits and performance improvements offered by this new class of additives. CNT are frequently used in synergy with other commonly used fillers. This minimizes reformulations and accelerates product innovation.

ELASTOCYL™ X1-EPDM MB is high performance masterbatch of is an oil extended terpolymer grade with a very high molecular weight, medium diene content, medium ethylene content and a broad molecular weight distribution, loaded with **20 wt.% of Nanocyl's MWCNTs (NC7000™)**.

Key Applications

- ESD (Electrostatic Discharge) and electrically conductive parts
- Automotive, Railway, Industrials, Energy

Benefits

- Excellent electrical conductivity at low loading
- Excellent surface finish
- Retention of key mechanical properties
- Ease of processing

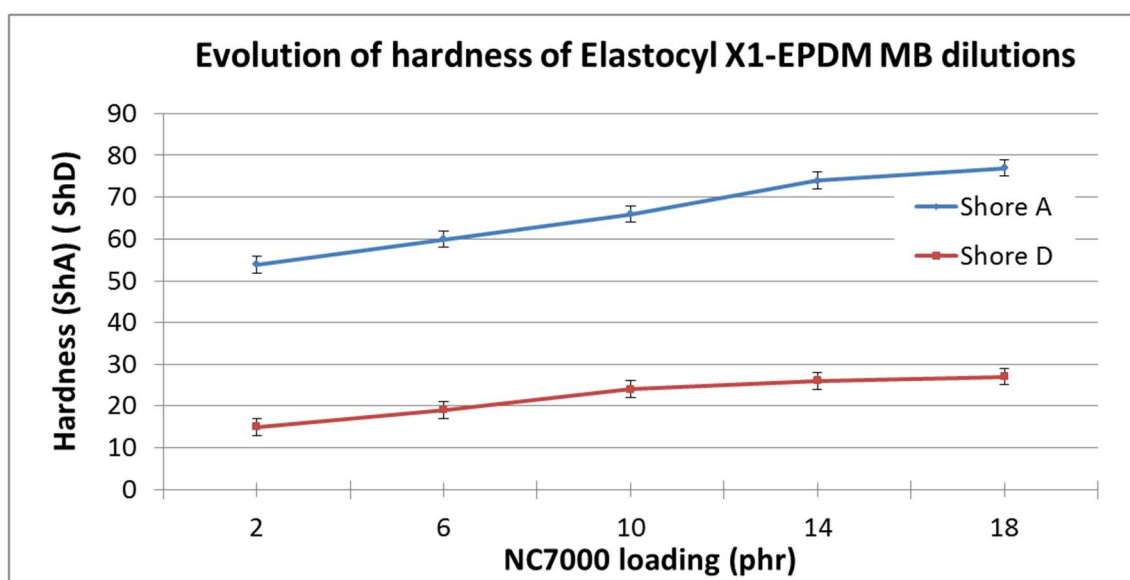
Technical Data

Main characteristics

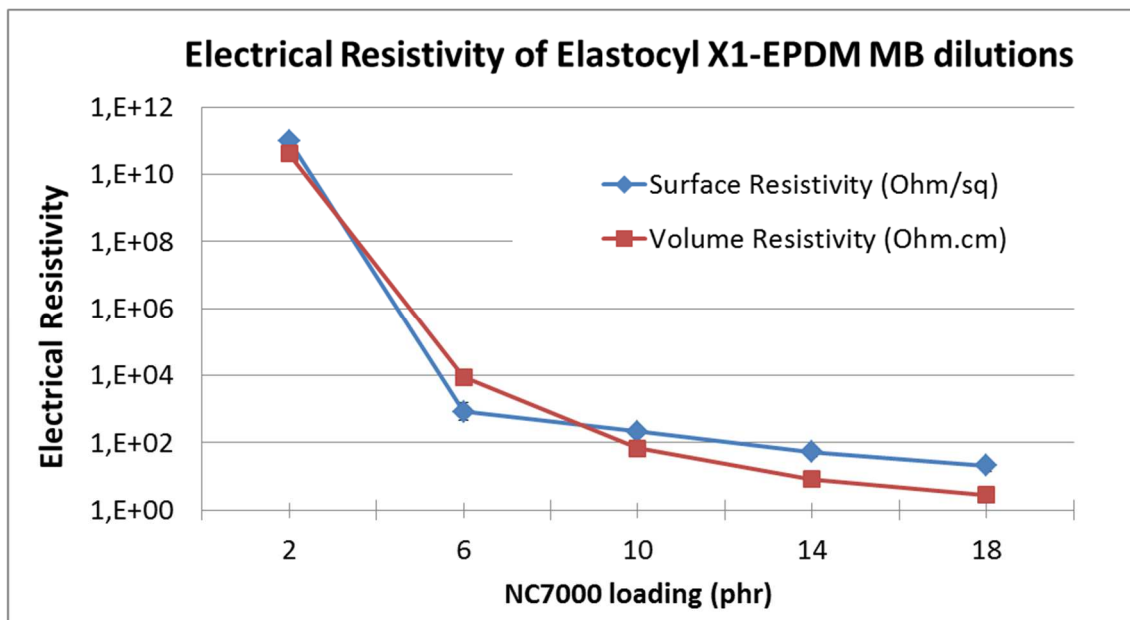
The following table shows the main characteristics of the masterbatch **raw material**:

ENB	Ethylene content	Oil Content	Mooney Viscosity ML1+4, 257°F(125°C)
4.5 wt%	64 wt. %	75 phr or 55 wt. %	52

Evolution of the Hardness with the dilution of this masterbatch



Percolation Curves for Electrical Volume and Surface Resistivity



Electrical resistivity measurement in accordance with Nanocyl standard method.

General Processing Guidelines

ELASTOCYL™ X1-EPDM MB could be blended with equipment used for rubbers.

ELASTOCYL™ X1-EPDM MB could be considered as another component to achieve a new EPDM formulation.

Dilution ratio will depend on the targeted mechanical and electrical properties. Do not hesitate to contact us.

Commercial/Safety Information

Packaging

ELASTOCYL™ X1-EPDM MB is available in 3-10 mm thickness milled sheets in different packaging:

- Cardboard/carton box, 5 kg
- Cardboard/carton box, 10 kg

Minimum Order Quantity

Nanocyl's minimum order quantity for ELASTOCYL™ X1-EPDM MB is 5 kg.

Custom Grades

Besides the commercial grades, Nanocyl is able to toll-compound any type of EPDM and any NC7000 loading to meet its clients' specifications.

Health and Safety

A Material Safety Data Sheets (MSDS) is available to provide both workers and emergency personnel with the proper procedures for handling or working with the ELASTOCYL™ X1-EPDM MB. This MSDS includes information such as physical data (form and color, melting point, etc.), handling and storage recommendations, first aid measures and ecological information. The Safety Data Sheet is provided with any order and should be observed.

Disclaimer

The information contained in this TDS is believed to be accurate to the best of Nanocyl's knowledge and belief at the time of the TDS publication. The information is intended to be used as a guideline and for informational purpose only. Consequently Nanocyl DOES NOT WARRANT that the information or the related products are fit for any particular purpose or use by User and it is for User to check for itself the fitness of the information and/or the related products, including regarding the non-infringement of third parties intellectual property right whether related products are used alone or in combination with other products. Nanocyl shall NOT BE LIABLE, whether contractually or in tort, for damages caused through the use or the reliance on this information and/or the related products.