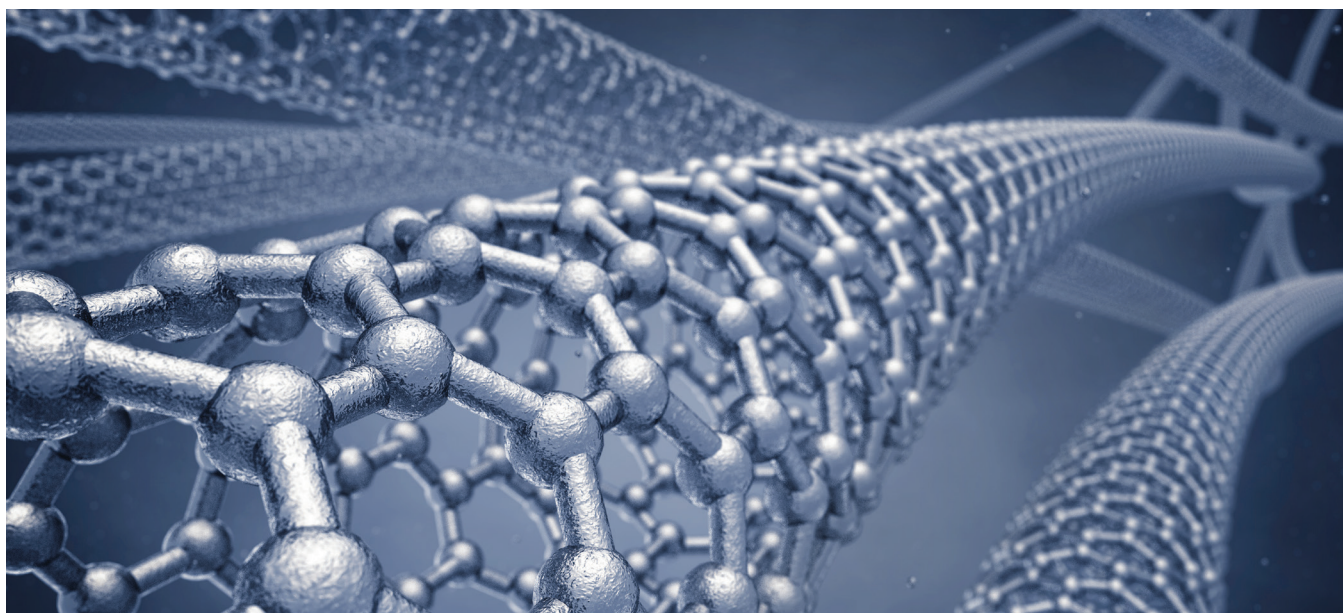


Insight™ MANCO3-PA 6 CNT Masterbatches

Insight™ MANCO3 is a Polyamide 6 (PA 6) based CNT masterbatch with a 15% by weight loading of unique CNT technology that improves physical properties as well as electrical conductivity at various levels with various loadings.



GENERAL	SI METRIC	ENGLISH	TEST METHOD
SPECIFIC GRAVITY	1.17	1.17	ASTM D792
MELT POINT	220 °C	428 °F	ASTM D3418

PROCESSING NOTES

Unless otherwise stated, all data was generated from typical values of injection molded samples.

These data are typical and not to be construed as a specification.

Drying: PA 6 is Hygroscopic and requires drying before processing. It is recommended to dry the masterbatch for 2-4 hours at 175°F (80°C) using a desiccant air dryer.

RECOMMENDED USAGE:

Recommended usage levels are 10-30% by weight of the Masterbatch to achieve 2-7% CNT loading.

The information in this Data Sheet are provided for reference only and are based on preliminary data. Final Data Sheet properties will be updated as soon as possible. This information is not a substitute for user testing to determine fitness for use and the user is responsible for ensuring safe and lawful use of the product. No express or implied warranties are provided. No representations are made, and no liability is assumed arising from or relating to the product.

MT 2025-07 V3

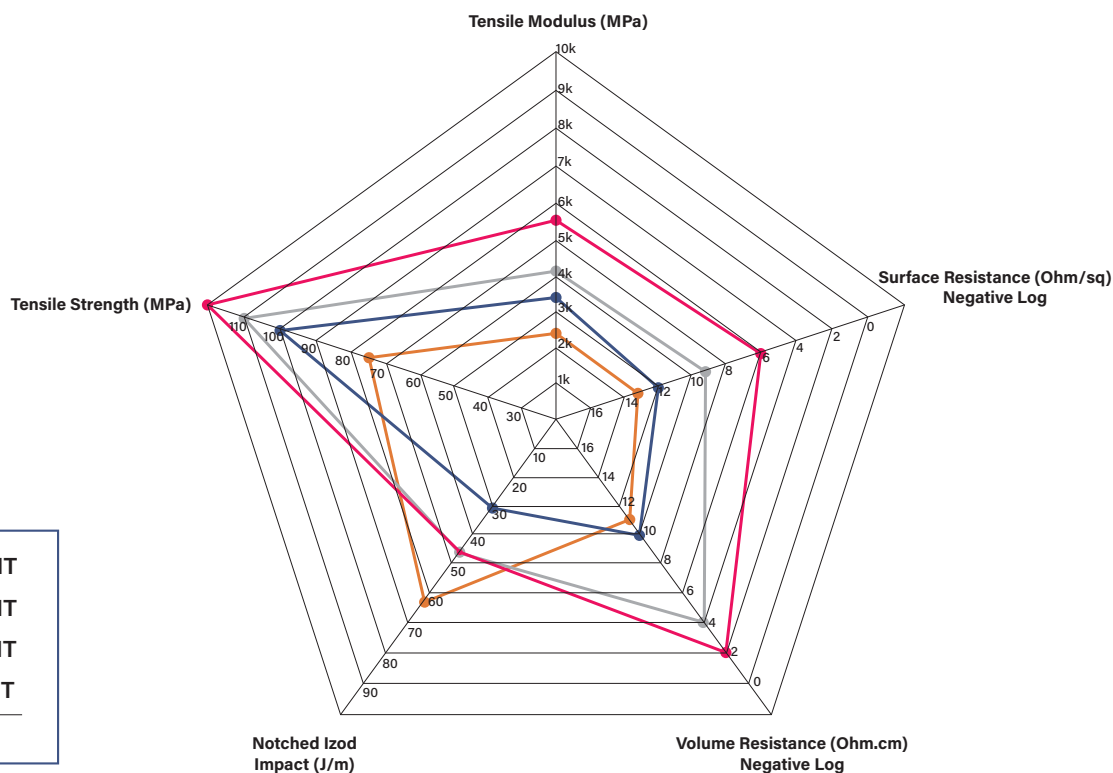


Insight™ MANCO3-PA 6 CNT Masterbatches

The data below summarizes the mechanical and electrical properties of Insight Polymers MANCO3 Nylon 6 15% Carbon Nanotube (CNT) Masterbatch that has been let down to 3%, 5%, and 7% total CNT loading by weight. The addition of CNT results in improvements to Tensile Modulus, Tensile Strength, and Electrical Resistance with some effect to impact strength. The data summarized in the table and multi-axis spider chart below are based on injection molded ASTM test specimens.

POLYMER (% BY WEIGHT)	PA 6 - 0% CNT	PA 6 - 3% CNT	PA 6 - 5% CNT	PA 6 - 7% CNT
TENSILE MODULUS (MPa)	2500	3500	4100	5700
TENSILE STRENGTH (MPa)	76	100	110	120
ELONGATION@BREAK (%)	35	6	4	2
NOTCHED IZOD IMPACT (J/m)	62	30	48	47
UN-NOTCHED IZOD IMPACT (J/m)	1600	1300	880	890
SURFACE RESISTIVITY (Ohm/sq)	1E+13	<1E+12	<1E+09	<1E+06
VOLUME RESISTIVITY (Ohm.cm)	1E+11	<1E+10	<1E+04	<1E+02

PA 6



The information in this Data Sheet are provided for reference only and are based on preliminary data. Final Data Sheet properties will be updated as soon as possible. This information is not a substitute for user testing to determine fitness for use and the user is responsible for ensuring safe and lawful use of the product. No express or implied warranties are provided. No representations are made, and no liability is assumed arising from or relating to the product.

MT 2025-07 V3