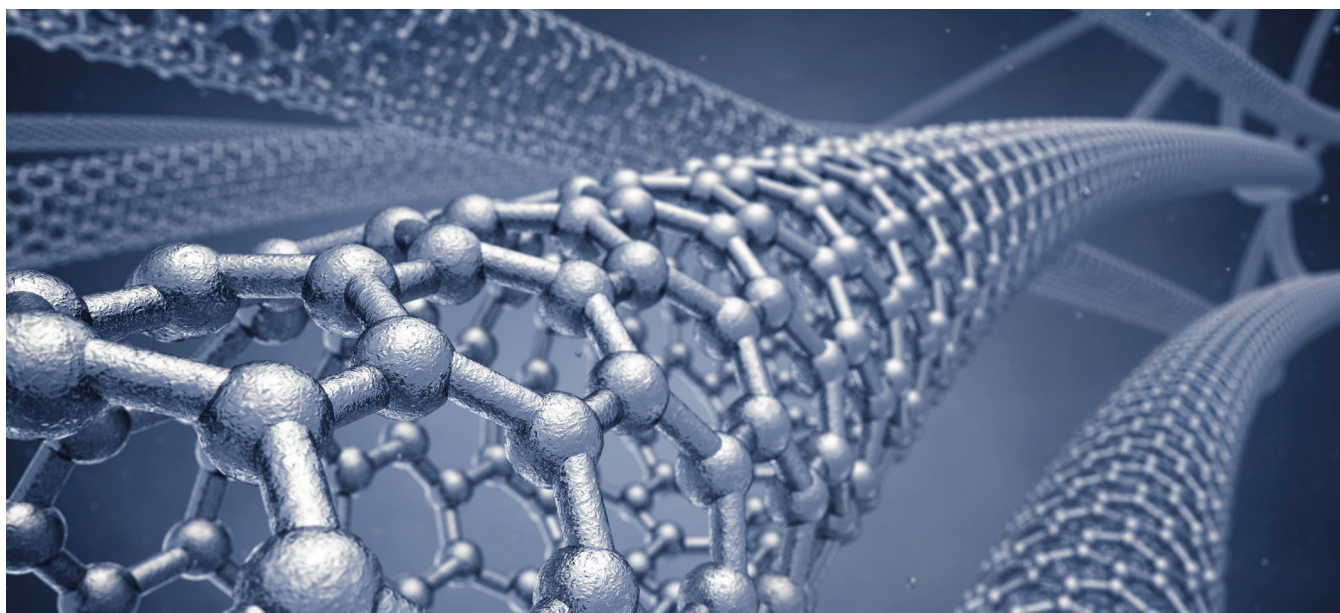


## Insight™ MCNC03-PA 12 CNT Masterbatches

Insight™ MCNC03 is a Polyamide 12 (PA 12) 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	1.41	1.41	ASTM D792
MELT POINT	176 °C	349 °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: It is recommended to dry the masterbatch for 6-8 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.

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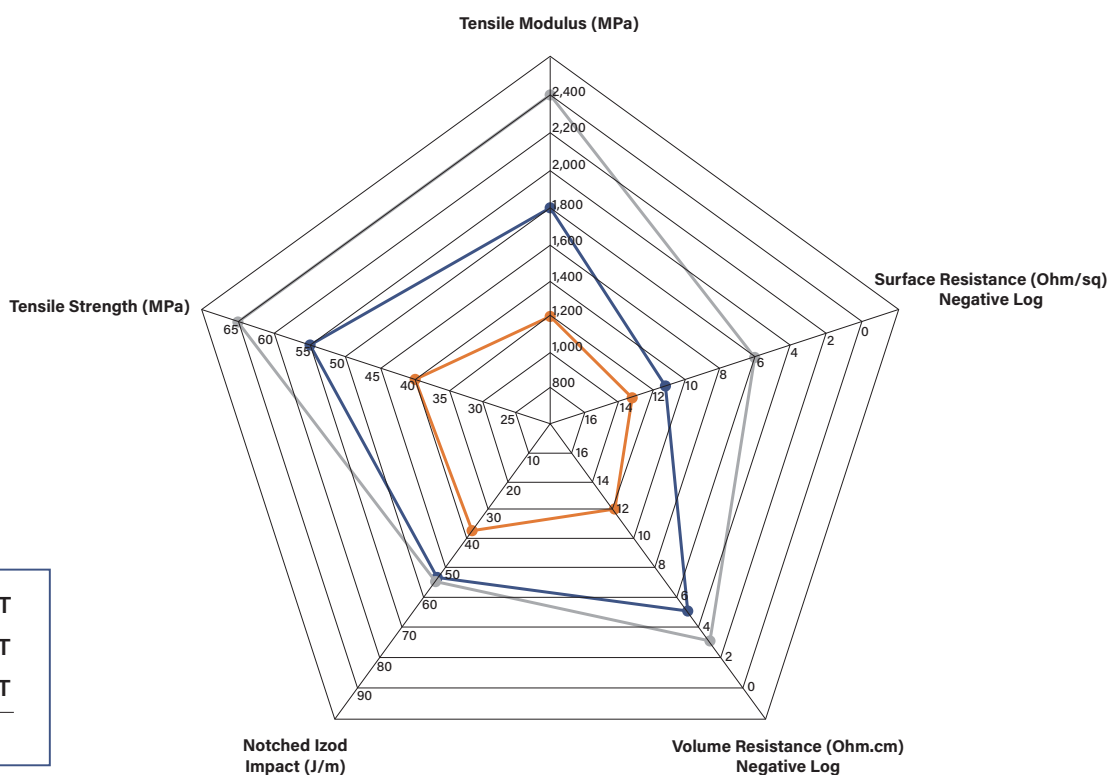


## Insight™ MCNC03-PA 12 CNT Masterbatches

The data below summarizes the mechanical and electrical properties of Insight Polymers MCNC03 Nylon 12 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 12 - 0% CNT	PA 12 - 2% CNT	PA 12 - 4% CNT	
TENSILE MODULUS (MPa)	1200	1800	2400	
TENSILE STRENGTH (MPa)	40	55	65	
ELONGATION@BREAK (%)	150	19	15	
NOTCHED IZOD IMPACT (J/m)	39	54	55	
UN-NOTCHED IZOD IMPACT (J/m)	1600	1200	1600	
SURFACE RESISTIVITY (Ohm/sq)	<1E+13	<1E+11	<1E+06	
VOLUME RESISTIVITY (Ohm.cm)	<1E+12	<1E+05	<1E+03	

### PA12



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