



PERFORMANCE PROPERTIES

NOFIA HM5000

DESCRIPTION

Nofia HM5000 is a polyphosphonate. Polyphosphonates are phosphorus-based additives suitable for flame retarding both thermoplastics (elastomers) and thermoset resins. Nofia HM5000 is soluble in a range of organic solvents and enables production of transparent flame retardant thermoset resins.

BENEFITS AND FEATURES

- *Maintains transparency in final product*
- *Highly soluble in thermoset processing solvents*
- *Easy to process in thermoplastic applications*
- *Achieves solid flame retardant performance: UL-94 V0 rating*

RESIN SYSTEMS

PBT, PET, TPEE, TPU, UPE

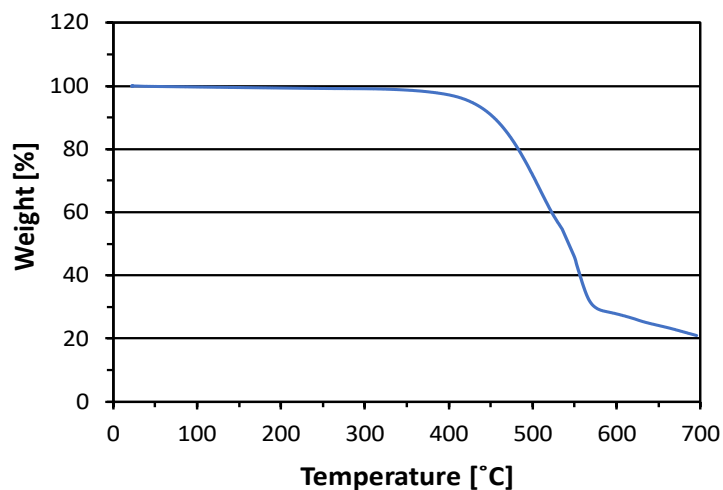
PRODUCT APPLICATIONS

Wire and cable, Building and construction (decorative laminates, wall panels), film, sheet and fiber

TYPICAL PROPERTIES

Typical Properties	Nofia HM5000
Appearance	Pellets; off-white
Phosphorous Content [wt%]	10.5
MVR (145°C/1.2kg) [ml/10 min]	14
T _g [°C]	95
Optical Characteristics	Transparent
Soluble in	MEK, DMF, Styrene, MMA
Insoluble in	Water, Hexane
TGA Decomposition 5wt% (air) [°C]	≥ 420

TGA Graph of Nofia HM5000 in Air



HANDLING AND USE

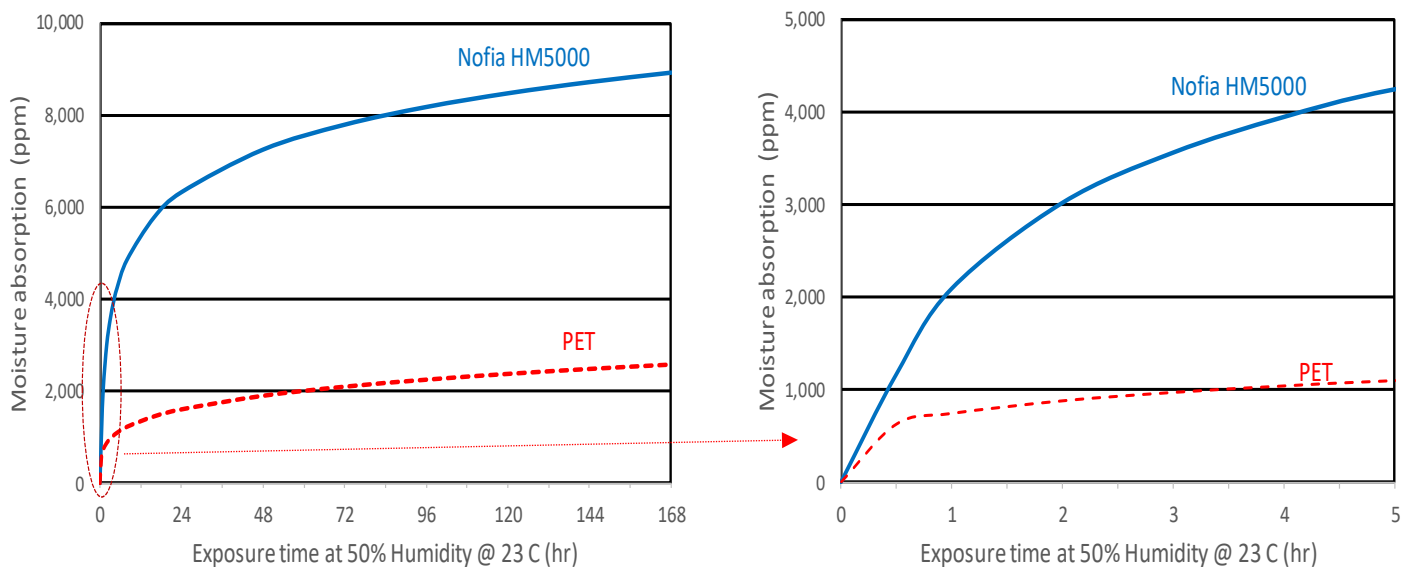
Nofia flame-retardants are considered non-hazardous materials when handled in accordance with standard industrial hygiene practices. Material Safety Data Sheets are available. You are encouraged to read and understand these documents before using the product.

DRYING CONDITIONS

Nofia phosphonates are hygroscopic materials and quickly absorb moisture from the atmosphere. The presence of moisture will hydrolyze the polymer in the melt phase at high temperature especially > 200°C, reducing the molecular weight. Therefore, it is critical that the material is thoroughly dried prior to melt processing (<50 – 200 ppm moisture). For recommendations on drying, please refer to FRX Polymers' Technical Bulletin "Nofia Phosphonates Drying Recommendations".

Drying: 80°C for at least 12 Hours
 Desiccant dryer with dew point -40°C
 Max Moisture Content 0.02 wt%

Moisture Absorption of Nofia HM5000



The information presented herein is believed to be accurate and reliable but is subject to change. It is presented without guarantee or responsibility on the part of FRX Polymers. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. Additional information relating to the product can be obtained from the Material Safety Data Sheet. Nothing in this Data Sheet shall be construed to modify any of FRX Polymers standard terms and conditions of sale nor shall be construed to constitute a representation or warranty, express or implied, regarding the product's characteristics use, quality safety merchantability or fitness for a particular purpose. Nothing contained herein shall constitute permission or recommendation to practice any intellectual property without the permission of the owner.

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