PERFORMANCE PROPERTIES

NOFIA OL1001 & OL3001

DESCRIPTION

Nofia OL1001 and Nofia OL3001 are oligomeric, reactive flame retardants (FRs). The oligomers are phosphorus-based additives with phenolic hydroxyl end groups suitable for flame retarding thermoset resins such as unsaturated polyesters, epoxies, and polyurethanes. The oligomers are highly soluble in the typical solvents used in thermoset resin processing and enable production of transparent FR thermoset resins..

BENEFITS AND FEATURES

- *Contain reactive end groups for incorporation into resins*
- *Maintain transparency in final product*
- *Highly soluble in thermoset processing solvents*
- *Achieves solid flame retardant performance: UL-94 V0 rating*

RESIN SYSTEMS

Epoxy and Polyurethanes

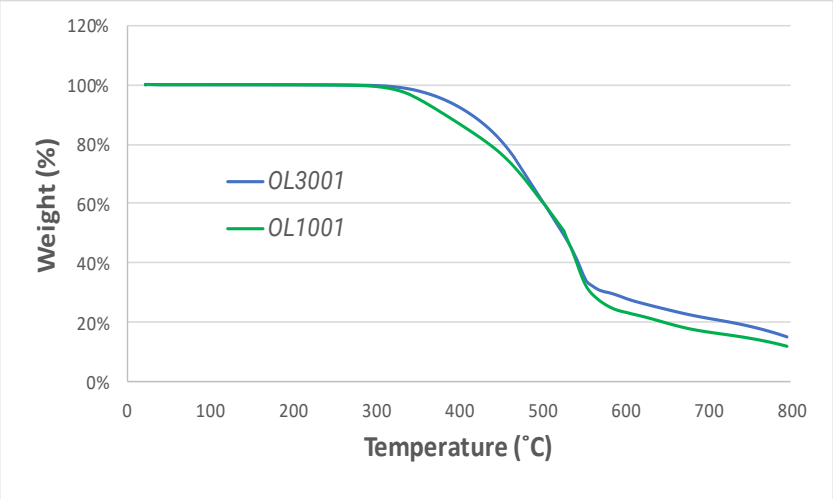
PRODUCT APPLICATIONS

Copper Clad Laminates for Printed Circuit Boards, Structural Composites, Coatings, Foams, Adhesives

TYPICAL PROPERTIES

Typical Properties	Nofia OL1001	Nofia OL3001
Appearance	coarse granules, white	coarse granules, white
Phosphorus Content (wt %)	9.0	10.0
Average Molecular Weight (Mn)	1,400	2,500
Glass Transition Temp (°C)	90	90
Hydroxyl Number (mg KOH/g)	75	50
Temperature at 5% weight loss (°C)	330	375
Optical Characteristics	Transparent	Transparent
Soluble in:	Methyl ethyl ketone (MEK) , Acetone, Methyl cellosolve, Dimethylformamide (DMF)	Methyl ethyl ketone (MEK), Acetone, Methyl cellosolve, Dimethylformamide (DMF)
Insoluble in:	Water, hexane	Water, hexane

TGA Graph of Nofia Oligomers 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 oligomers should be handled and stored in dry conditions and should be dried if used in moisture sensitive reactions.

Drying:	*75ºC for at least 6 Hours*
	Desiccant dryer with dew point -40°C
	Max Moisture Content 0.02 wt%

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