



ELRASA - DBDPOx™ (Decabromodiphenyl Oxide (DBDPO))

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	Free flowing micronized white to off white powder
Physical Form	Free flowing micronized white to off white powder
Odor	Odorless
Molecular Weight	959.2 g/mol
Specific Gravity	3.4 - 3.5
Density	3.0 g/cm ³
Viscosity	Not applicable (solid material)
Refractive Index	1.738
Assay / Purity	97% (HPLC, Wt.%)
Chemical Properties	
Ionic Nature	Non-ionic
Incompatibilities	Strong oxidizing agents.
Hazardous Decomposition Products	When heated to decomposition, may release carbon monoxide, carbon dioxide, hydrogen bromide, and other toxic fumes.
Thermal Properties	
Melting Point	305 °C
Boiling Point	Not applicable (decomposes)
Flash Point	241.4 °C
Decomposition Temperature	~425 °C
Thermal Stability	Good thermal stability. A 5% weight loss is observed when heated to 354 °C.
Solubility	
Solubility in Water	Practically insoluble (<0.1 µg/L at 25°C).
Solubility in Ethanol	Soluble
Solubility in Methanol	Slightly soluble
Solubility in Acetone	Slightly soluble



Property	Specification
Solubility in Benzene	Slightly soluble

2. Processing Methods

Flame Retardant High Impact Polystyrene (HIPS)

This formulation demonstrates the use of DBDPO in combination with antimony trioxide, a common synergist, to achieve flame retardancy in HIPS plastic.

Key Ingredients	Indicative Dosage (% w/w)
High Impact Polystyrene (HIPS)	86%
Decabromodiphenyl Oxide (DBDPO)	10%
Antimony Trioxide	4%

3. Dosing by Application

Application	Recommended / Max Dosage
High Impact Polystyrene (HIPS)	10 - 12%
Polypropylene (PP)	15 - 20%
Acrylonitrile Butadiene Styrene (ABS)	12 - 15%
Epoxy/Glass Fiber Composites	40 - 50% (to achieve V-1 to V-0 rating)
Textile Coatings	Varies based on substrate and desired rating
Elastomers, Wire & Cable	Formulation dependent

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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