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Irganox[®] 1330

Phenolic Primary Antioxidant for Processing and Long-Term Thermal Stabilization

Characterization

Irganox 1330 – a sterically hindered phenolic antioxidant – is as highly effective stabilizer for organic substrates such as polymers, synthetic fibers, elastomers, adhesives, waxes, oils and fats. It protects these substrates against thermo-oxidative degradation.

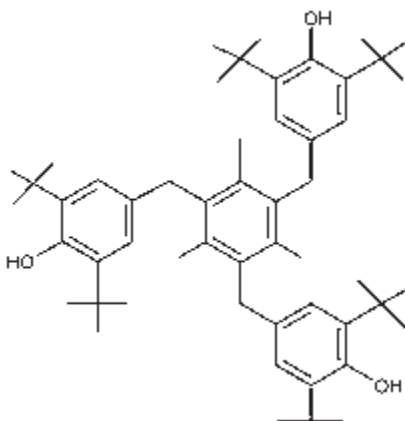
Chemical name

3,3',3'',5,5',5''-Hexa-tert-butyl-.alpha,.alpha',.alpha''-(mesitylene-2,4,6-triyl) tri-p-cresol

CAS number

1709-70-2

Chemical formula



Molecular weight

775 g/mol

Applications

Irganox 1330 is used in polyolefins e.g. polyethylene, polypropylene, polybutene for the stabilization of pipes, molded articles, wires and cables, dielectric films, etc.. Furthermore, it is applied in other polymers such as engineering plastics like linear polyesters, polyamides, and styrene homo- and copolymers. It may also be used in PVC, polyurethanes, elastomers, adhesives, and other organic substrates.

Features/benefits

Irganox 1330 has good compatibility with most substrates, high resistance to extraction and is odorless. It offers also excellent dielectrical properties. The product can be used in combination with other additives such as costabilizers (e.g. thioethers, phosphites, phosphonites), light stabilizers and other functional stabilizers. The effectiveness of the blends of Irganox 1330 with Irgafos 168 (Irganox B-blends) is particularly noteworthy. Irganox 1330 is particularly recommended for polyolefin applications requiring good water extraction resistance combined with low color development. Furthermore, Irganox 1330 reduces water carry-over in polypropylene tape extrusion.

Product forms

Irganox 1330	white, free-flowing powder
Irganox 1330 FF	white, free-flowing granules

Guidelines for use

In polyolefins, the concentration levels for Irganox 1330 range typically between 0.05 % and 0.3 % depending on substrate, processing conditions and long-term thermal stability requirements. The optimum level is application specific. Concentration levels of Irganox 1330 in hot melt adhesives range from 0.2 % to 1 %, in synthetic tackifier resins, Irganox 1330 concentration ranges between 0.1 % and 0.5 %. Extensive performance data of Irganox 1330 in various organic polymers and applications are available upon request.

Physical Properties

Melting range	240–245 °C
Flashpoint	321 °C
Vapor pressure	2 E-11 Pa
Density (20 °C)	1.04 g/ml

Bulk density	
Powder	530–630 g/l
FF	480–570 g/l

Solubility (20 °C)	g/100g solution
Acetone	18
Chloroform	28
Ethyl acetate	27
n-Hexane	1
Methanol	3
Methylene chloride	34
Water	≤0.01

Health & Safety

Irganox 1330 exhibits a very low order of oral toxicity and does not present any abnormal problems in its handling or general use.

Detailed information on handling and any precautions to be observed in the use of the product(s) described in this leaflet can be found in our relevant health and safety information sheet.

Note

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