Technical Information
Plastic Additives

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Irganox® 565

Phenolic Primary Antioxidant for Processing and Long-Term Thermal Stabilization

Characterization

Irganox® 565 is a high molecular weight, non-staining, multifunctional phenolic antioxidant primarily used as a post-polymerization process stabilizer for unsaturated elastomers.

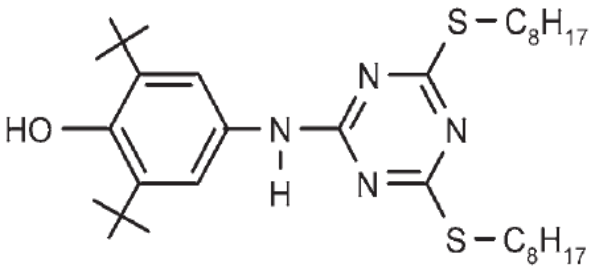
Chemical name

2,6-Di-tert-butyl-4-(4,6-bis(octylthio)-1,3,5-triazin-2-ylamino) phenol

CAS number

991-84-4

Chemical formula



Molecular weight

589 g/mol

Applications

Irganox® 565 is a highly effective antioxidant for a variety of elastomers including polybutadiene (BR), polyisoprene (IR), emulsion styrene butadiene (SBR), nitrile rubber (NBR), carboxylated SBR Latex (XSBR), and styrenic block copolymers such as SBS and SIS. Irganox® 565 is also used in adhesives (hot melt, solvent-based), natural and synthetic tackifier resins, EPDM, ABS, high impact polystyrene, polyamides, and polyolefins.

Features/benefits

Irganox® 565 is highly effective at low concentrations, matching the performance of other stabilizers at higher levels. It is non-staining and due to its low volatility, Irganox® 565 is not lost during polymer processing, drying or storage. Irganox® 565 can be used in a wide variety of applications. In unsaturated elastomers, Irganox® 565 prevents gel formation, maintains excellent polymer color, and prevents changes to molecular weight (e. g. Mooney viscosity).

Product forms

Irganox® 565	white to yellowish powder
Irganox® 565 DD	white to yellowish pellets
Irganox® 565 G	white to yellowish granulate

Guidelines for use

Use levels of Irganox® 565 vary by polymer and range from 0.05 % to 0.5 %. Extensive performance data are available on request in many of the substrates mentioned above.
The relatively low melting point allows easy dispersion in elastomeric substrates by commonly used melt com-pounding techniques or it can be incorporated into process streams by dissolving in suitable organic solvents or aromatic extender oils.

Physical Properties

Melting range	91 – 96 °C
Flashpoint	285 °C
Vapor pressure (20 °C)	1.3 E-8 Pa
Specific gravity (20 °C)	1.09 g/ml

Solubility (20° C)	**g/100 g solution**
Acetone	20
Benzene	43
Chloroform	39
Ethyl acetate	46
n-Hexane	6
Methanol	1.4
Water	< 0.01

Handling & Safety

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 safety data sheet.

Note

The descriptions, designs, data and information contained herein are presented in good faith and are based on BASF's current knowledge and experience. They are provided for guidance only, and do not constitute the agreed contractual quality of the product or a part of BASF's terms and conditions of sale.

Because many factors may affect processing or application/use of the product, BASF recommends that the reader carry out its own investigations and tests to determine the suitability of a product for its particular purpose prior to use. It is the responsibility of the recipient of product to ensure that any proprietary rights and existing laws and legislation are observed. No warranties of any kind, either expressed or implied, including, but not limited to, warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth herein, or that the products, descriptions, designs, data or information may be used without infringing the intellectual property rights of others. Any descriptions, designs, data and information given in this publication may change without prior information. The descriptions, designs, data and information furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for the descriptions, designs, data or information given or results obtained, all such being given and accepted at the reader's risk.

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