

® = registered Trademark of BASF SE

# Irganox<sup>®</sup> 245

## Phenolic Primary Antioxidant for Processing and Long-Term Thermal Stabilization

### Characterization

Irganox 245 is a sterically hindered phenolic antioxidant particularly suitable for organic substrates. It protects the substrates against thermo-oxidative degradation during manufacturing, processing and end-use. Irganox 245 is odorless, of low volatility, has a good color stability and exhibits high extraction resistance.

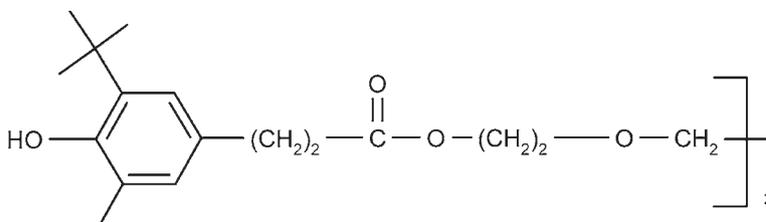
### Chemical name

Ethylene bis(oxyethylene) bis-(3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate)

### CAS number

36443-68-2

### Chemical formula



### Molecular weight

586.8 g/mol

### Applications

Irganox 245 is effective in styrene polymers, particularly impact modified polystyrenes, ABS, MBS, SB and SBR-latices as well as in POM homo- and copolymers. It is also very useful for the stabilization of polyurethanes, polyamides, thermoplastic polyesters, PVC and other polymers. In addition to imparting thermostability to the finished polymer Irganox 245 is effective as chain stopper during PVC polymerization.

### Features/benefits

Irganox 245 can be used in combination with other additives such as costabilizers (e.g. thioesters, phosphites, phosphonites, lactones), light stabilizers, and other functional stabilizers. The effectiveness of the blends of Irganox 245 with IRGAFOS 168 (Irganox B-blends) is noteworthy.

### Product forms

Irganox 245	white, free-flowing powder
Irganox 245 FF	white, free-flowing granules

### Guidelines for use

Already 0.05–0.1 % of Irganox 245 provides long-term thermal stability to the polymer. Concentrations up to 1.0 % can be used depending on the substrate and the requirements of the end application.

**Physical Properties**

Melting range	76–79 °C
Flashpoint	> 150 °C
Vapor pressure (20 °C)	4 E-8 Pa
Density (20 °C)	1.14 g/ml

**Solubility (20 °C)**

	<b>g/100 g solution</b>
Acetone	> 50
Benzene	18
Chloroform	> 40
Ethyl acetate	37
n-Hexane	< 0.1
Ethanol	10
Methanol	12
Methylene chloride	> 40
Toluene	6
Styrene	6
Polyetherol	~ 3
Water	< 0.01

**Volatility (TGA, air at 20 K/min)**

Temperature at 1 % weight loss	280 °C
Temperature at 10 % weight loss	330 °C

**Health & Safety**

Irganox 245 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**

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.

September 2010

BASF Schweiz AG  
Plastic Additives  
4057 Basel, Switzerland  
[www.performancechemicals.basf.com](http://www.performancechemicals.basf.com)