#### **Technical Information**

Page 1 of 2

TI/EVK 1021 e September 2010 **Plastic Additives** 

# We create chemistry

® = registered trademark of BASF SE

## Irganox<sup>®</sup> 259

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

Hexamethylene bis(3-(3,5-di-tert.-butyl-4-hydroxyphenyl)propionate)

Irganox 259, a sterically hindered phenolic antioxidant, is an efficient, nondiscoloring stabilizer for organic substrates such as plastics, synthetic fibers, and elastomers.

**Chemical name** 

Characterization

**CAS** number

**Chemical formula** 

35074-77-2

Molecular weight

Applications

Features/benefits

**Product forms** 

**Guidelines for use** 

630 g/mol

Irganox 259 is especially suited for the stabilization of polyacetals. Its use is also recommended in other polymers such as polyesters, polyolefins, polyols, polyurethanes, elastomers, adhesives, and other organic substrates.

Irganox 259 provides excellent processing and long-term thermal stability as well as excellent initial resin color. It has good compatibility with most substrates, low volatility, and is resistant to extraction.

#### Irganox 259

Irganox 259 is recommended for use in polyacetal homopolymers and copolymers at concentrations of 0.05% - 0.5% depending on the polymer type, method of incorporation, application, and degree of stability required. It is easily dispersed into the polymer by conventional extrusion compounding techniques.

white to off-white powder

Suggested use concentrations for Irganox 259 in polyesters, polyolefins, polyols, polyurethanes, elastomers, and adhesives range from 0.05% - 1.0% depending on the substrate and the stability required.

The product can be used alone or in combination with other additives such as light stabilizers (e.g. ultraviolet absorbers, hindered amines), costabilizers (e.g. phosphites, thioethers, hydroxylamines), and other functional stabilizers. Performance data for Irganox 259 alone and in combination with other additives are available on request in a variety of substrates.

Physical Properties	Melting range	103–108 °C
	Flashpoint	280 °C
	Vapor pressure (20 °C)	1.3 E-8 Pa
	Density (20 °C)	1.08 g/ml
	Bulk density	
	Powder	550–650 g/l
	Solubility (20 °C)	g/100 g solution
	Acetone	36
	Benzene	39
	Chloroform	47
	Ethyl acetate	25
	n-Hexane	1.5
	Methanol	1.7
	Paraffin oil	< 0.1
	Water	< 0.01
	Volatility (TGA, air at 20 K/min)	
	Temperature at 1 % weight loss	270 °C
	Temperature at 10 % weight loss	335 °C
Health & Safety	Irganox 259 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 no	ot constitute the agreed contrac-
	tual quality of the product or a part of BASF's te	erms and conditions of sale.
	Because many factors may affect processing o	r 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 part	ticular 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 reg	
	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