

® = registered trademark of BASF SE

Irganox[®] 3114

Phenolic primary antioxidant for processing and long-term thermal stabilization

Characterization

Irganox 3114 – a sterically hindered phenolic antioxidant – is a highly effective, non discoloring stabilizer for organic substrates such as polymers, synthetic fibers, elastomers, adhesives, waxes, oils and fats. It protects these substrates against thermo-oxidative degradation and contributes to their light stability.

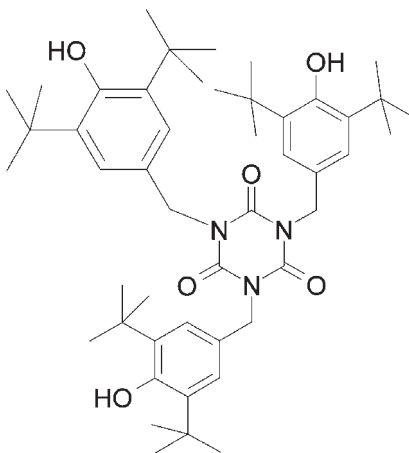
Chemical name

1,3,5-Tris(3,5-di-tert.-butyl-4-hydroxybenzyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione

CAS number

27676-62-6

Chemical formula



Molecular weight

784 g/mol

Applications and features/benefits

Irganox 3114 can be applied in polyolefins, namely polyethylene, polypropylene, polybutene as well as in other polymers such as styrene homo- and copolymers. It may also be used in linear polyesters, PVC, polyamides and polyurethanes, elastomers such as SBS, EPR, EPDM and other synthetic rubbers, adhesives, natural and synthetic tackifier resins and other organic substrates. Irganox 3114 has good compatibility with most substrates, high resistance to extraction, and low volatility. It is odorless and stable to light. 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 3114 with Irganox 168 (Irganox B-blends) is particularly noteworthy.

Product forms

Irganox 3114	white, free-flowing powder
Irganox 3114 FF	white, free-flowing granules

Guidelines for use

In polyolefins, the concentration levels for Irganox 3114 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. Extensive performance data of Irganox 3114 in various organic polymers and applications are available upon request.

Physical properties

Melting range	218–223 °C
Flashpoint	289 °C
Specific gravity (20 °C)	1.03 g/ml

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

Solubility (25 °C) **g/100 g solution**

Acetone	29
Chloroform	21
Ethanol	1.5
n-Hexane	0.6
Methanol	0.5
Water	0.01

Health & Safety

Irganox 3114 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