We create chemistry

Irganox® 1520 L

Chemical Nature

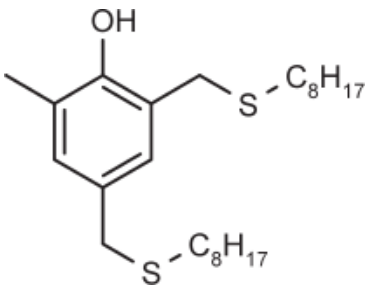
Irganox 1520 L is a multifunctional phenolic antioxidant that protects organic substrates such as elastomers, plastics, adhesives, sealants, oils and lubricants from thermo-oxidative degradation during processing and long-term heat aging.

Key Features & Benefits

- Non-staining, non-discoloring
- Low volatility
- Stable to light and heat

Chemical Composition

4,6-Bis(octylthiomethyl)-o-cresol



Properties

Typical Properties

Appearance		low viscous, pale yellow liquid
CAS number		110553-27-0
Molecular weight	g/mol	424.7
Melting range	°C	~ 12 – 15
Flash point	°C	> 200
Vapor pressure at 25°C	Pa	2.0 E-5
Specific gravity at 20°C	g/ml	0.98
Dynamic viscosity at 20°C	cps	85 – 90

Solubility at 20°C (g/100g solution)

Acetone	> 50
Chloroform	> 50
Ethanol	> 50
Ethyl acetate	> 50
n-Hexane	> 50
Methanol	> 50
Methylene chloride	> 50
Toluene	> 50
Water	≤ 0.01

* These typical values should not be interpreted as specifications.

Applications

Irganox 1520 L is a multifunctional phenolic antioxidant for organic substrates such as elastomers, plastics, adhesives, sealants, oils and lubricants. It effectively protects the substrate against thermo- oxidation during processing and long-term heat aging. It is non-staining, non-discoloring, low in volatility, and stable to light and heat.

Irganox 1520 L is an effective stabilizer in a wide range of solution polymerized, emulsion polymerized and thermoplastic elastomers including BR, SBR, NBR, IR, SBS and SIS, as well as natural rubber. It is effective both as a raw elastomer and compound stabilizer. It is also effective in various adhesive, sealant and latex applications.

Irganox 1520 L is recommended for applications such as:

- Organic substrates
- Natural rubber
- Elastomers, plastics
- Adhesives, sealants
- Oils, lubricants

Processing

Irganox 1520 L is not recommended for odor sensitive hot-melt adhesives or their raw materials.

Irganox 1520 L can be used alone, at low levels and without co-stabilizers. Where necessary, it can be used with other additives such as secondary antioxidants, light stabilizers and other functional stabilizers. The effectiveness of these products in a wide range of elastomers coupled with extensive food contact approvals makes Irganox 1520 L an excellent choice where consolidation of antioxidant systems is desirable. In addition, the low viscosity and liquid nature of Irganox 1520 L makes bulk delivery and storage very convenient.

Recommended Concentrations

The amount of Irganox 1520 L required for optimum performance should be determined in laboratory trials covering a concentration range. Concentrations as high as 1.0% or more may be used depending on the substrate, processing conditions, requirements of the end application, and long-term thermal stability requirements.

Normal use levels range between 0.05 – 0.3%.

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measure described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Irganox 1520 L.

Storage

Please refer to the “Handling and Storage of Polymer Dispersions” brochure.

Important

WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, THEY ARE PROVIDED FOR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, BASF RECOMMENDS THAT THE READER MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR A PARTICULAR PURPOSE PRIOR TO USE. 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, OR THAT THE PRODUCTS, DESCRIPTIONS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF BASF'S TERMS AND CONDITIONS OF SALE. FURTHER, 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.

Irganox is a registered trademark of BASF Group.

© BASF Corporation, 2025

Responsible Care®
Good Chemistry at Work

BASF Corporation is fully committed to the Responsible Care® initiative in the USA, Canada, and Mexico.
For more information on Responsible Care® go to:
U.S.: www.basf.us/responsiblecare_usa
Canada: www.basf.us/responsiblecare_canada
México: www.basf.us/responsiblecare_mexico

BASF Corporation
Dispersions and Resins
11501 Steele Creek Road
Charlotte, North Carolina 28273
Phone: (800) 251 – 0612
Email: CustCare-Charlotte@basf.com
www.basf.us/dpsolutions