

PRODUCT INFORMATION

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Ciba has committed to Responsible Care and Product Stewardship as a corner stone of its environmental, health and safety policy and management practices. Its business processes aim at minimizing business and regulatory non-compliance risks and at establishing sustainable relationships through the whole value chain from vendors to end users in an environment of increasing chemicals control regulation and product liability worldwide.

Disclaimer: The information provided below is based on the technical information available at the date of publication.

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Product Trade Name: **IRGANOX® B 225**

- Material Safety Data Sheet-



Irganox_B_225_MSD refer to the attachment I
S.pdf

- Technical Data Sheet-



Irganox_B_225_TDS refer to the attachment II
.pdf

PRODUCT INFORMATION

CHEMICAL NAME : MIXTURE OF ADDITIVES FOR PLASTIC MATERIAL STABILISATION

CASRN : PREPARATION

PRODUCT INFORMATION

COMPOSITIONAL DETAIL

CONSTITUENTS

<i>Constituent</i>	<i>NONE OF THE SUBSTANCES LISTED ARE USED IN THE PRODUCTION OF or INTENTIONALLY ADDED DURING THE PROCESSING OF THIS PRODUCT</i>
Aromatic amines (German list)	<i>NONE OF THE SUBSTANCES LISTED ARE USED IN THE PRODUCTION OF or INTENTIONALLY ADDED DURING THE PROCESSING OF THIS PRODUCT</i>
Asbestos	
Azo compounds	
Bisphenols	
Boranes	
Chlorinated paraffins	
Chlorinated solvents	
Creosote	
Dioxins/furans	
Natural rubber latex	<i>NONE OF THE SUBSTANCES LISTED ARE USED IN THE PRODUCTION OF or INTENTIONALLY ADDED DURING THE PROCESSING OF THIS PRODUCT</i>
Nonylphenol / Nonylphenol ethoxylates	
Octylphenol /Octylphenol ethoxylates	
Organo-cadmium pigments	
Organo-tin compounds	
Penta/octabrom/decabromo-diphenyl ethers	
Phthalates incl EU regulated (di-isononyl, di 2ethylhexyl, di-n-octyl, di-n-decyl, butylbenzyl, di-butyl)	
Polybrominated biphenyls/terphenyls	
Polybrominated/chlorinated organic compounds	
Polychlorinated biphenyls/terphenyls	

TRACE METALS

This information is based on random analysis & not quality control nor part of a specification, nor may it be construed as a warranty, express or implied.



Irganox_B_225.xls refer to the attachment III

END ARTICLE COMPLIANCE STATEMENTS

Compliance with EU Directive 2002/95/EC (**"ROHS"-Electrical & Electronic Equipment**) under which Hg, Cd, Pb, Cr VI and PBB, PBDPE are to be reduced to below Pb 0.1%, Hg 0.1%, Cd 100 ppm, Cr VI 0.1% by July 2006 . Note the Constituents table above & information on trace metals given above.

- **YES-** the product conforms to the requirements as known June 2005.



PRODUCT INFORMATION

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Compliance with EU Directive 2002/96/EC (*Waste Electrical & Electronic Equipment WEEE*) under which Hg, PCB, PCT; CFC, HCFC; HFC; hydrocarbons, plastic-containing brominated flame retardants asbestos, ozone depleting substances (see Annex II) are restricted. Note the Constituents table & information on trace metals given above.

- **YES**- the product conforms to the requirements

Note: customers must also refer to the attached msds for hazard classification (defined by Directive 67/548/EEC)

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Date of last amendment: 5.8.2005
Document validity/ next revision date: 24 months from last amendment

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Safety Data Sheet according to Directive 91/155/EEC

IRGANOX B 225

Revision 23.07.2003

(dd.mm.yyyy)

1. Identification of the Substance/Preparation and the Company/Undertaking

Product name	IRGANOX B 225
Chemical identification	Mixture of additives for plastic material stabilisation
CAS Number	Preparation
Use	Stabiliser
Producer/Supplier	CIBA SPEZIALITÄTENCHEMIE AG KLYBECKSTRASSE 141 POSTFACH 4002 BASEL SWITZERLAND
Phone Number	+41 (61) 6361111
Telefax	+41 (61) 6361212
Information	Product Safety and Regulatory Affairs
Telefax	+41 (61) 6368601
Emergency Phone Number (24h)	+41 (61) 6965151

2. Composition/Information on Ingredients

The product contains no substances classified as hazardous to health or the environment in concentrations which should be taken into account according to EC directives.

3. Hazards Identification

Not classified as hazardous according to the EU directives.
No special hazards known.

4. First Aid Measures

Skin contact

Wash off with soap and plenty of water. Do not use organic solvents.

Eye contact

Rinse immediately with plenty of water for at least 15 minutes. In case of eye irritation, seek medical attention.

Inhalation

Move to fresh air. In case of irritation of respiratory system or mucous membranes, seek medical attention. If affected person feels unwell, seek medical advice. In case of prolonged exposure, seek medical attention.

Ingestion

Immediately give plenty (> 500 ml) of water (if possible charcoal slurry). In case of spontaneous vomiting be sure that vomitus can freely drain due to danger of suffocation. Give water repeatedly. Artificial induction of vomiting should be restricted to first aid staff. Give nothing by mouth in cases of unconsciousness or convulsion. Seek medical advice.

5. Fire-Fighting Measures

Suitable extinguishing media

Water spray, Foam, Carbon dioxide (CO₂), Dry powder

Extinguishing media which must not be used for safety reasons

High volume water jet

Exposure hazards

Contaminated water from fire hoses or sprinklers, etc., must be prevented from draining into watercourses, sewers, or the ground water. Sufficient measures must be taken to retain water used for extinguishing. Contaminated water and soil

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must be disposed of in conformity with local regulations.

Special protective equipment for firefighters

Wear full protective clothing. Wear self-contained breathing apparatus.

Combustion products

Oxides of carbon; Oxides of phosphorus; Toxic gases/vapours

6. Accidental Release Measures

Personal precautions

Do not breathe vapours/dust. Remove all sources of ignition. Avoid contact with skin, eyes and clothing.

Environmental precautions

Do not flush into surface water, sanitary sewer or ground water system.

Methods for cleaning up

Use mechanical handling equipment. Collect the spilled product into suitable containers, which must be tightly sealed and properly labelled. Avoid dust formation.

7. Handling and Storage

Handling

Avoid dust formation and ignition sources. Ensure good local exhaust ventilation. Do not eat, drink or smoke at the workplace.

Storage

Keep away from food and drink. Store in the original container securely closed.

Caution, keep this product well sealed. Keep in cool, dry place. Close containers immediately after use. Danger! Explosion risk. Risk of explosion if an air-dust mixture forms. Avoid creating dusty conditions. Empty only into earthed containers. If container is larger than 2000 liter in volume, or when flammable solvents are present inert container or use a system otherwise designed to prevent or contain an explosion -- seek expert advice.

8. Exposure Controls / Personal Protection

Exposure limit(s)

CIEL-TWA Ciba internal exposure limit (8 hour time weighted average)

10 mg/m³

This CIEL-value corresponds to the exposure limit for total dust.

Technical measures/Precautions

No special precautions required.

Respiratory protection

Effective dust mask.

Hand protection

Protective gloves

Eye protection

Suitable goggles or face protection

Skin and body protection

Working clothes , Closed footwear

9. Physical and Chemical Properties

Form	powder
Colour	white to off-white
Odour	odourless
Melting/freezing temperature	109 - 180 °C
Boiling point/range	not tested
Relative density 20 °C	1.0 - 1.2 g/cm ³
Flash point	> 150 °C
Ignition Temperature	> 380 °C
Oxidising properties	not tested

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Self-ignition temperature	not tested
Water solubility 23 °C	< 0.01 %
Vapour pressure 20 °C	< 0.01 Pa
Partition coefficient; Log Pow	not tested
pH-value	not tested
Explosive properties	not tested

10. Stability and Reactivity

Decomposition temperature	> 350 °C
Shock Sensitivity	No
Conditions to avoid	Static discharges.
Materials to avoid	Strong acids, strong bases and strong oxidising agents.
Hazardous decomposition products	Oxides of carbon, Oxides of phosphorus, Toxic gases/vapours

11. Toxicological Information

Acute oral toxicity <i>Rat</i>	LD50 > 2000 mg/kg	Conventional Method
Acute dermal toxicity <i>Rat</i>	LD50 > 2000 mg/kg	Conventional Method
Acute Inhalation Toxicity	not tested	
Acute eye irritation/corrosion <i>Rabbit</i>	not irritant	Conventional Method
Acute dermal irritation/corrosion <i>Rabbit</i>	not irritant	Conventional Method
Acute skin sensitisation <i>Guinea pig</i>	not sensitising	Conventional Method

12. Ecological Information

Acute toxicity to fish	not tested
Acute toxicity to daphnia	not tested
Acute toxicity to bacteria	not tested
Acute toxicity to algae	not tested
Biodegradability	not tested

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Ecotoxic effects

Do not discharge product uncontrolled into the environment.

Information on classification

This preparation is not classified relating to its environmental hazards applying the conventional method described in EU Directive 1999/45/EC, Annex III.

13. Disposal Considerations

Waste from residues / unused products

Residual chemical should be disposed by incineration or by other modes of disposal in compliance with local legislation.

Contaminated packaging

Contaminated packaging material should be treated equivalent to residual chemical. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

14. Transport Information

Flash point	> 150 °C
ADR/RID	Class: Free
IMO	Class: Free
ICAO	Class: Free

15. Regulatory Information

Classification	Classification not required
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16. Other Information

R-phrases from chapter 2 -

Essential changes Section 1 ; Section 2 ; Section 3 ; Section 11 ; Section 12

IRGANOX is a registered trademark.

Important

THIS MATERIAL IS NOT INTENDED FOR USE IN PRODUCTS FOR WHICH PROLONGED CONTACT WITH MUCOUS MEMBRANES, BODY FLUIDS OR ABRADED SKIN, OR IMPLANTATION WITHIN THE HUMAN BODY, IS SPECIFICALLY INTENDED, UNLESS THE FINISHED PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH NATIONALLY AND INTERNATIONALLY APPLICABLE SAFETY TESTING REQUIREMENTS. BECAUSE OF THE WIDE RANGE OF SUCH POTENTIAL USES, CIBA IS NOT ABLE TO RECOMMEND THIS MATERIAL AS SAFE AND EFFECTIVE FOR SUCH USES AND ASSUMES NO LIABILITY FOR SUCH USES.

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.



Ciba® IRGANOX® B 225

Synergistic Processing and Long-Term Thermal Stabilizer System

Characterization	IRGANOX B 225 - a processing and long-term thermal stabilizer system - is a syner-gistic blend of IRGAFOS 168 and IRGANOX 1010.	
Chemical name	50 % IRGAFOS 168 ; 50 % IRGANOX 1010	
CAS number	Preparation	
Structure	IRGAFOS 168	IRGANOX 1010
Molecular weight	646.9 g/mol	1178 g/mol
Applications	IRGANOX B 225 is used in polyolefins and olefin-copolymers such as polyethylene, polypropylene, polybutene and ethylene-vinylacetate copolymers. The blend can also be used in other polymers such as engineering plastics, styrene homo- and copolymers, polyurethanes, elastomers, adhesives, and other organic substrates. IRGANOX B 225 can be used in combination with light stabilizers of the TINUVIN and CHIMASSORB range.	
Features/benefits	<p>IRGANOX B 225 is a convenient blend addressing a range of stabilization needs. The relatively high phenolic antioxidant content of IRGANOX B 225 addresses applications requiring more long-term thermal stability. In the recommended applications IRGANOX B 225 provides significant benefits, such as</p> <ul style="list-style-type: none"> • Maintenance of original melt flow • Low color formation • Long-term-thermal stability <p>IRGAFOS 168 - an organophosphite of low volatility and particularly resistant to hydrolysis - protects during processing organic polymers which are prone to oxidation. IRGANOX 1010 - a hindered phenolic antioxidant - contributes synergistically to the polymer's stabilization during processing and provides long-term thermal stability by preventing thermo-oxidative degradation during service life. Performance can be improved in synergistic combinations with other Ciba additives (e.g. thioethers). Blends of IRGANOX 1010 and IRGAFOS 168 with HP-136 (IRGANOX HP products) are particularly effective.</p>	
Product forms	Code:	IRGANOX B 225
	Appearance:	Powder: white, free-flowing powder FF: white, free-flowing granules

Guidelines for use	In polyolefins, the concentration levels for IRGANOX B 225 range typically between 0.1% and 0.25% depending on substrate and processing conditions. The optimum level is application specific. Extensive performance data of IRGANOX B 225 in various organic polymers and applications are available upon request.		
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Physical Properties	<i>Bulk Density</i>	Powder	530 - 630 g/l
		FF	480 - 570 g/l

Handling & Safety	IRGANOX B 225 requires no special safety measures, provided the usual precautions for handling chemicals are observed. Avoid dust formation and ignition sources. For more detailed information please refer to the material safety data sheet.		
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Registration	The registration status for IRGANOX B 225 is derived from the single components. The components are registered in:		
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Australia	AICS
Canada	DSL
China	IECSC
EU	ELINCS
Japan	ENCS
Korea	ECL
New Zealand	TSA
Philippines	PICCS
Switzerland	BUWAL
USA	TSCA

They are approved in many countries for use in food contact applications. For detailed information refer to our Positive List or contact your local sales office.

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