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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product: Antioxidant 168	**Revision date:** 2026-10-29	**Version:** 1.0	**Brand:** Richest

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product name	Antioxidant 168
Synonyms	Tris(2,4-di-tert-butylphenyl) phosphite; AO-168; Irgafos 168 equivalent
CAS No.	31570-04-4
EC No.	250-709-6
Molecular formula	C42H63O3P
Molecular weight	646.92 g/mol
Relevant identified uses	Secondary (phosphite) antioxidant for polyolefins, ABS, PC, PVC, PU, polyester, PP, PS, PBT, PET, PMMA, TPE and other polymers.
Uses advised against	None
Company	Richest Group Ltd.
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SECTION 2: Hazards identification

GHS Classification	Not classified as hazardous according to Regulation (EC) No 1272/2008
Pictogram(s)	None
Signal word	None
Hazard statement(s)	None
Precautionary statement(s)	None

Other hazards	Fine dust may form explosive mixtures with air.

SECTION 3: Composition/information on ingredients

Component	Tris(2,4-di-tert-butylphenyl) phosphite
CAS No.	31570-04-4
EC No.	250-709-6
Classification	Not classified as hazardous
Concentration (%)	≤100 %

SECTION 4: First aid measures

If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician if symptoms occur.
In case of skin contact	Take off contaminated clothing. Wash off with soap and plenty of water. Consult a physician if irritation occurs.
In case of eye contact	Rinse eyes with plenty of water as a precaution. Remove contact lenses if present and easy to do. Consult a physician if irritation persists.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician if feeling unwell.
Most important symptoms and effects	No specific symptoms known (BASF SDS)
Indication of any immediate medical attention	No specific antidote; treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None known.
Special hazards arising from the chemical	Carbon oxides, phosphorus oxides may be formed in the event of fire.
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency	Avoid dust formation. Avoid breathing vapours, mist, gas or dust. Use personal protective equipment. Ensure adequate ventilation.

procedures	
Environmental precautions	Do not let product enter drains. Avoid release to the environment.
Methods and materials for containment and cleaning up	Sweep up or absorb with inert material and place into a suitable, closed container for disposal.

SECTION 7: Handling and storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

SECTION 8: Exposure controls/personal protection

Occupational exposure limit values	No occupational exposure limits established
Biological limit values	No biological exposure index (BEI) established.
Appropriate engineering controls	Ensure adequate ventilation. Provide safety shower and eyewash station.
Eye/face protection	Tightly fitting safety goggles (EN 166).
Skin protection	Handle with chemical-resistant gloves.
Body protection	Wear protective work clothing.
Respiratory protection	Use suitable respirator when dusts or mists are generated.
Thermal hazards	No specific thermal hazards under normal conditions of use.

SECTION 9: Physical and chemical properties

Physical state	Powder (crystalline)
Colour	White
Odour	Odourless
Melting point / freezing point	183 - 187 °C
Boiling point or initial boiling point and boiling range	Not applicable (non-volatile solid)
Flammability	Not classified as flammable
Lower and upper explosion limit /	Not applicable

flammability limit	
Flash point	> 200 °C
Auto-ignition temperature	400 °C
Decomposition temperature	Thermal decomposition >350 °C
pH	Not applicable (practically insoluble in water)
Kinematic viscosity	Not applicable (solid)
Solubility	Practically insoluble in water; soluble in organic solvents such as toluene and chloroform
Partition coefficient n-octanol/water	>6 (calculated, 20-25 °C)
Vapour pressure	< 1 x 10^-6 hPa at 20 °C (negligible)
Density and/or relative density	1.03 g/cm3 at 20 °C
Relative vapour density	Not applicable (non-volatile solid)
Particle characteristics	Crystalline powder

SECTION 10: Stability and reactivity

Reactivity	No hazardous reactions if stored and handled as prescribed; not corrosive to metals (BASF SDS)
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Dust explosion hazard; incompatible with strong oxidizing agents, strong acids, strong bases (BASF SDS)
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides, phosphorus oxides.

SECTION 11: Toxicological information

Acute toxicity - Oral / Inhalation / Dermal	LD50 Oral - Rat - > 5,000 mg/kg LD50 Dermal - Rabbit - > 2,000 mg/kg Inhalation: No data available
Skin corrosion/irritation	Skin - Rabbit: No skin irritation (OECD 404)
Serious eye damage/irritation	Eyes - Rabbit: No eye irritation (OECD 405)
Respiratory or skin sensitization	Guinea pig: Does not cause skin sensitisation (OECD 406)
Germ cell mutagenicity	Ames test (Salmonella typhimurium): negative

Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	Not classified (no fertility-impairing effect in animal studies)
STOT - single exposure	Not classified (based on available data)
STOT - repeated exposure	Not classified (no adverse effects after repeated exposure in animal studies)
Aspiration hazard	No aspiration hazard expected

SECTION 12: Ecological information

Toxicity to fish / daphnia / algae	Toxicity to fish: LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h Toxicity to daphnia: EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h Toxicity to algae: EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h
Persistence and degradability	Not readily biodegradable.
Bioaccumulative potential	Low potential for bioaccumulation (large molecular size; practically insoluble in water).
Mobility in soil	Strong adsorption to soil expected; low mobility.
Other adverse effects	None known

SECTION 13: Disposal considerations

Product disposal methods	Offer surplus and non-recyclable product to a licensed disposal company. Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of as unused product.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	Not regulated as dangerous goods
UN Proper Shipping Name	Not regulated as dangerous goods
Transport hazard class(es)	Not regulated as dangerous goods
Packing group	Not applicable
Environmental hazards (Marine pollutant)	No
Special precautions for user	No special precautions required during transport.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	EINECS: Listed; TSCA: Listed; IECSC: Listed; DSL: Listed; AICS: Listed; ENCS/ISHL: Listed; ECL: Listed; PICCS: Listed.

SECTION 16: Other information

Full text of H-Statements	None (not classified as hazardous)
Revision date	2026-10-29
Version	1.0

Abbreviations and acronyms: CAS: Chemical Abstracts Service; EC: European Commission; EINECS: European Inventory of Existing Commercial Chemical Substances; ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road; RID: Regulation concerning the International Carriage of Dangerous Goods by Rail; IMDG: International Maritime Dangerous Goods; IATA: International Air Transport Association; TWA: Time Weighted Average; STEL: Short Term Exposure Limit; LD50: Lethal Dose 50%; LC50: Lethal Concentration 50%; EC50: Effective Concentration 50%; PBT: Persistent, Bioaccumulative and Toxic; vPvB: very Persistent and very Bioaccumulative; SDS: Safety Data Sheet.

References: ECHA - European Chemicals Agency, https://echa.europa.eu/; IPCS - International Chemical Safety Cards (ICSC), http://www.ilo.org/; HSDB - Hazardous Substances Data Bank; eChemPortal - OECD Global Portal to Information on Chemical Substances; ERG - Emergency Response Guidebook by U.S. DOT.

Disclaimer: The information in this SDS is only applicable to the specified product and is provided in good faith. It is based on the knowledge available to Richest Group Ltd. at the date of issue and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute any guarantee of the properties of the product. Richest Group Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.