

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

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

1.1 Product identifier

Identification of the substance	Irgafos 168
CAS number	31570-04-4
Alternative name(s)	tris(2,4-di-tert-butylphenyl) phosphite
Article number	A0063517

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	General use
--------------------------	-------------

1.3 Details of the supplier of the safety data sheet

Chemos GmbH & Co. KG
Sonnenring 7
84032 Altdorf
Germany

Telephone: +49 871-966346-0
Telefax: +49 871-966346-13
e-mail: chemos@chemos.de
Website: <http://www.chemos.de/>

e-mail (competent person)	chemos@chemos.de
---------------------------	------------------

1.4 Emergency telephone number

Emergency information service	+49 89 1 92 40
-------------------------------	----------------

Poison centre				
Country	Name	Postal code/ city	Telephone	Telefax
United Kingdom	National Poison Information Centre Medical Toxicology Unit	SE14 5ER Lon- don	+44 171 635 91 91	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS
This substance does not meet the criteria for classification.

2.2 Label elements

Labelling
not required

2.3 Other hazards

Results of PBT and vPvB assessment
According to the results of its assessment, this substance is not a PBT or a vPvB.

Irgafos 168Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

SECTION 3: Composition/information on ingredients**3.1 Substances**

Name of substance	Irgafos 168
Identifiers	
CAS No	31570-04-4
EC No	250-709-6
Molecular formula	C42H63O3P

SECTION 4: First aid measures**4.1 Description of first aid measures**

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media

Water, Foam, ABC-powder

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), Phosphorus oxides (PxOy)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)
this information is not available

Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	4.1 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	1.2 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear protective gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Colour	white
Odour	characteristic
Melting point/freezing point	185.2 °C at 1,013 hPa
Boiling point or initial boiling point and boiling range	>400 °C at 1,013 hPa
Flammability	this material is combustible, but will not ignite readily

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not applicable
Kinematic viscosity	not relevant

Solubility(ies)

Water solubility	<5 µg/l at 20 °C
------------------	------------------

Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
Soil organic carbon/water (log KOC)	10 (ECHA)

Vapour pressure	0 Pa at 20 °C
-----------------	---------------

Density and/or relative density

Density	1,021 kg/m³ at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics

Particle size	16.24 µm
---------------	----------

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
--	--

Other safety characteristics

Solvent content	100 %
Solid content	100 %

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

Hints to prevent fire or explosion

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

This substance does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
carbon dioxide generation	6 %	28 d

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Henry's law constant	16.3 Pa m ³ /mol at 25 °C
The Organic Carbon normalised adsorption coefficient	10 (ECHA)

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Information on this property is not available.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

SECTION 14: Transport information

- | | | |
|-------------|--|---|
| 14.1 | UN number or ID number | not assigned |
| 14.2 | UN proper shipping name | not assigned |
| 14.3 | Transport hazard class(es) | none |
| 14.4 | Packing group | not assigned |
| 14.5 | Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 | Special precautions for user | |
| | Provisions for dangerous goods (ADR) should be complied within the premises. | |
| 14.7 | Maritime transport in bulk according to IMO instruments | |
| | The cargo is not intended to be carried in bulk. | |

Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - Additional information

not assigned

International Maritime Dangerous Goods Code (IMDG) - Additional information

not assigned

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

not assigned

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Relevant provisions of the European Union (EU)

Deco-Paint Directive

VOC content	100 %
-------------	-------

Industrial Emissions Directive (IED)

VOC content	100 %
-------------	-------

- 15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	Identification of the substance: Tris(2,4-ditert-butylphenyl) phosphite	Identification of the substance: Irgafos 168	yes
1.1	Registration number (REACH): this information is not available		yes
1.4	Emergency information service: This number is only available during the following office hours: Mon - Thu 08:00 AM - 05:00 PM, Fri 08:00 AM - 12:00 PM	Emergency information service: +49 89 1 92 40	yes
1.4		Poison centre: change in the listing (table)	yes
2.1	Classification according to Regulation (EC) No 1272/2008 (CLP): This substance does not meet the criteria for clas- sification in accordance with Regulation No 1272/ 2008/EC.	Classification acc. to GHS: This substance does not meet the criteria for clas- sification.	yes
3.1	Name of substance: Tris(2,4-ditert-butylphenyl) phosphite	Name of substance: Irgafos 168	yes
5.2	Hazardous combustion products: Nitrogen oxides (NO _x), Carbon monoxide (CO), Carbon dioxide (CO ₂), Phosphorus oxides (P _x O _y)	Hazardous combustion products: Carbon monoxide (CO), Carbon dioxide (CO ₂), Phosphorus oxides (P _x O _y)	yes
8.1	Control parameters: This information is not available.	Control parameters: Occupational exposure limit values (Workplace Ex- posure Limits) this information is not available	yes
9.1	Appearance		yes
9.1	Other safety parameters		yes
9.1		Lower and upper explosion limit: not determined	yes
9.1	Evaporation rate: not determined		yes
9.1	Explosion limits of dust clouds: not determined		yes
9.1		Decomposition temperature: not relevant	yes
9.1		Kinematic viscosity: not relevant	yes
9.1		Density and/or relative density	yes
9.1	Vapour density: this information is not available		yes
9.1	Viscosity: not relevant (solid matter)		yes
9.1	Explosive properties: none		yes
9.1	Oxidising properties: none		yes
9.1		Relative vapour density: information on this property is not available	yes

Irgafos 168

Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

Section	Former entry (text/value)	Actual entry (text/value)	Safety-rel- evant
9.1		Particle characteristics	yes
9.2		Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant	yes
9.2		Other safety characteristics	yes
11.1	Classification according to GHS (1272/2008/EC, CLP): This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.	Classification acc. to GHS: This substance does not meet the criteria for classification.	yes
11.2		Information on other hazards: There is no additional information.	yes
12.4	Mobility in soil: Data are not available.	Mobility in soil	yes
12.5	Results of PBT and vPvB assessment: Data are not available.	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes
12.6	Other adverse effects: Data are not available.	Endocrine disrupting properties: Information on this property is not available.	yes
14.3	Transport hazard class(es): not assigned	Transport hazard class(es): none	yes
14.4	Packing group: not assigned to a packing group	Packing group: not assigned	yes
16		Abbreviations and acronyms: change in the listing (table)	yes
16	Key literature references and sources for data: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU. Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	Key literature references and sources for data: Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances

Irgafos 168Version number: GHS 2.0
Replaces version of: 2019-05-08 (GHS 1)

Revision: 2023-03-20

Abbr.	Descriptions of used abbreviations
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.