

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.03.2023

Version number 1

Revision: 14.03.2023

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

- **1.1 Product identifier**
- **Trade name:** Triphenylphosphine
- **Article number:** 943
- **CAS Number:**
603-35-0
- **EC number:**
210-036-0
- **Registration number** 01-2119475464-32
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Chemical for the synthesis and/or formulation of industrial products
Chemical.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Möller Chemie GmbH & Co. KG
Bürgerkamp 1
D-48565 Steinfurt
Tel.: 02551/9340-0
Fax: 02551/9340-60
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1B H317 May cause an allergic skin reaction.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** *Danger*

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· Hazard statements

- H302 Harmful if swallowed.*
- H318 Causes serious eye damage.*
- H317 May cause an allergic skin reaction.*
- H372 Causes damage to organs through prolonged or repeated exposure.*

· Precautionary statements

- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- P310 Immediately call a POISON CENTER/doctor.*
- P321 Specific treatment (see on this label).*
- P330 Rinse mouth.*
- P362+P364 Take off contaminated clothing and wash it before reuse.*
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

· 2.3 Other hazards

The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.

· Results of PBT and vPvB assessment**· PBT:**

The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).

· vPvB:

The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

SECTION 3: Composition/information on ingredients

· 3.1 Substances**· CAS No. Description**

603-35-0 triphenylphosphine

· Identification number(s)**· EC number:** 210-036-0**· Nanoform**

particle properties

Particle size distribution: 854.0 µm (D50, volume distribution, ISO 13320-1)

Particles < 100 µm 9.2%

Particles < 10 µm 0.2%

Particles < 4 µm

The substance/product is not shipped in a solid or granular state marketed or used.

SECTION 4: First aid measures

· 4.1 Description of first aid measures**· General information:**

First aiders pay attention to self-protection.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air.

Immediately inhale corticosteroid metered dose aerosol. Physician assistance required.

· After skin contact: Wash off immediately with plenty of water, sterile protective bandage, dermatologist.**· After eye contact:**

Rinse opened eye for several minutes under running water.

Seek medical treatment.

· After swallowing: Rinse mouth immediately and then drink 200-300 ml of water, doctor's help.

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- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Water, foam, alcohol-resistant foam, fire extinguishing powder
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Dust can form explosive mixtures in the air.
In case of fire, the following can be released:
Phosphorus oxides
Nitrogen oxides, carbon oxides
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus and chemical protective clothing.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Avoid inhalation.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Avoid dust formation.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about fire - and explosion protection:**
Protect against electrostatic charges.
Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep container tightly closed Keep us in a cool, well-ventilated place.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:**
Store only in the original container.
Keep container tightly sealed.
- **Storage class:** 6.1 C

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· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**· **Ingredients with limit values that require monitoring at the workplace:** Not required.· **DNELs**

worker:

Long-term exposure - systemic and local effects, inhalation: 0.5 mg/m³· **PNECs**

Fresh water: No hazard potential.

Seawater: No hazard potential.

Sporadic release: No hazard potential.

Sewage treatment plant: No hazard potential.

Sediment (fresh water): No hazard potential.

Sediment (sea water): No hazard potential.

Soil: No hazard potential.

· **Additional information:** The lists valid during the making were used as basis.· **8.2 Exposure controls**· **Appropriate engineering controls** No further data; see item 7.· **Individual protection measures, such as personal protective equipment**· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Store protective clothing separately.

Do not breathe dust. Avoid dust formation.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**

Tightly sealed goggles

· **Body protection:** chemical protective suit

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Solid
· Colour:	white to pale yellowish
· Odour:	Mild
· Odour threshold:	Not determined.
· Melting point/freezing point:	81.3 - 81.6 °C
· Boiling point or initial boiling point and boiling range	377.7 °C (1.013,25 hPa)
· Flammability	Product is not flammable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	180 °C
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· pH	Not applicable.
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water at 22 °C:	<165 mg/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 88 °C:	0.0000012 hPa
· Density and/or relative density	
· Density:	1.055 - 1.194 g/cm ³ (20-100°C)
· Relative density	Not determined.
· Vapour density	Not applicable.
· Particle characteristics	See item 3.

· 9.2 Other information

· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Auto-ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Change in condition	
· Evaporation rate	Not applicable.

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void

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- | | |
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| · Corrosive to metals | Void |
| · Desensitised explosives | Void |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** With proper handling and storage, no dangerous reactions occur.
- **10.2 Chemical stability**
The product is stable if the regulations / instructions for storage and handling are observed.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
The product may contain explosive fine dust or this may be caused by abrasion during transport and decanting processes.
- **10.4 Conditions to avoid**
Temperature: > 370°C
Avoid dust formation.
- **10.5 Incompatible materials:** Strong oxidizing agents
- **10.6 Hazardous decomposition products:**
No hazardous decomposition products if stored and handled as prescribed/indicated become.
Possible decomposition products:
carbon oxides
phosphorus oxides

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
 - **Acute toxicity**
Harmful if swallowed.
 - **LD/LC50 values relevant for classification:**
- | | | |
|------------|----------|---------------|
| Inhalative | LC50/ 4h | 12 mg/l (rat) |
|------------|----------|---------------|
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
 - **Serious eye damage/irritation**
Causes serious eye damage.
 - **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure**
Causes damage to organs through prolonged or repeated exposure.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.
 - **11.2 Information on other hazards**
 - **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
Fish toxicity:
LC50/96 h > 10.000 mg/l (*Leuciscus idus*)
Aquatic invertebrates:
EC50/48 h > 5 mg/l (*Daphnia magna*)
Microorganisms:
EC50/30 min > 10.000 mg/l (*Pseudomonas putida*)

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- **12.2 Persistence and degradability** Heavily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** The product is not considered to be persistent, bioaccumulating nor toxic (PBT).
- **vPvB:** The product is not considered to be persistent or very bioaccumulative (vPvB).
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
*Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.*

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
*Disposal according to local regulations.
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---|-----------------|
| <ul style="list-style-type: none"> · 14.1 UN number or ID number · ADR, ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class | Void |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: | Not applicable. |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user | Not applicable. |
| <ul style="list-style-type: none"> · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| <ul style="list-style-type: none"> · UN "Model Regulation": | Void |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product safety department

· **Contact:** Mrs. Steyer

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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