

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 1 of 11

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Triphenylphosphine > 98 % pellets

REACH Registration Number: 01-2119475464-32-XXXX
CAS No: 603-35-0
EC No: 210-036-0

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Laboratory chemical

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
E-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
E-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290
Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 4; H302
Eye Dam. 1; H318
Skin Sens. 1; H317
STOT RE 1; H372

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Signal word:** Danger**Pictograms:****Hazard statements**

H302 Harmful if swallowed.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 2 of 11

- H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H372 Causes damage to organs (central nervous system, peripheral nervous system) through prolonged or repeated exposure if inhaled.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.
P501 Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: C18H15P
Molecular weight: 262,29 g/mol

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
603-35-0	triphenylphosphine			100 %
	210-036-0		01-2119475464-32-XXXX	
	Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, STOT RE 1; H302 H318 H317 H372			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
603-35-0	210-036-0	triphenylphosphine	100 %
	oral: LD50 = 700 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
In case of skin irritation, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 3 of 11

Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Allergic reactions

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible solids

Hazardous combustion products

In case of fire may be liberated:

Phosphorus oxides

Danger of dust explosion.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Avoid contact with skin, eyes and clothes.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe dust.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Take up carefully when dry. Take up dust-free and set down dust-free.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 4 of 11

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid dust formation.

Do not breathe dust.

Advice on protection against fire and explosion

Danger of dust explosion.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

Draw up and observe skin protection programme.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Store in a dry place.

Further information on storage conditions

storage temperature: +15°C - 25°C

Store in a place accessible by authorized persons only.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
603-35-0	triphenylphosphine			
Worker DNEL, long-term		inhalation	systemic	0,5 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,07 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,01 mg/kg bw/day

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 5 of 11

PNEC values

CAS No	Substance	
Environmental compartment		Value
603-35-0	triphenylphosphine	
Freshwater		0,165 mg/l
Freshwater (intermittent releases)		0,165 mg/l
Marine water		0,165 mg/l
Freshwater sediment		5540 mg/kg
Marine sediment		5540 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		1100 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 898 Butoject®
Recommended material: Butyl caoutchouc (butyl rubber) 0,7 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 720 Camapren®
Recommended material: CR (polychloroprene, chloroprene rubber) 0,65 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: dust formation
Filtering device with filter or ventilator filtering device of type: P2

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 6 of 11

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	light yellow
Odour:	characteristic
Odour threshold:	No data available
Melting point/freezing point:	78,5-81,5 °C
Boiling point or initial boiling point and boiling range:	377,74 °C
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	180 °C °C
Auto-ignition temperature:	425 °C
Decomposition temperature:	>370 °C
pH-Value:	No data available
Viscosity / kinematic:	No data available
Water solubility: (at 25 °C)	<0,0001 g/L
Solubility in other solvents	No data available
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	log Pow: 5,69
Dispersion stability:	No data available
Vapour pressure: (at 20 °C)	0,0000012 hPa
Vapour pressure: (at 50 °C)	0,00017 hPa
Density (at 20 °C):	1,94 g/cm ³
Relative density:	No data available
Bulk density:	500-600 kg/m ³
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Danger of dust explosion.

Sustaining combustion:

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

No data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 7 of 11

Solid content:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

Dust explosive, Dust explosion category: ST 3

SECTION 10: Stability and reactivity

10.1. Reactivity

Danger of dust explosion.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Violent reaction with:
Oxidising agent, strong
Strong acid

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated:
Phosphorus oxides

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
603-35-0	triphenylphosphine				
	oral	LD50 mg/kg 700	Rat	Study report (1952)	BASF-internal standard method, conducted

Irritation and corrosivity

Causes serious eye damage.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (triphenylphosphine)

Carcinogenic/mutagenic/toxic effects for reproduction

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 8 of 11

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. (triphenylphosphine)

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

No data available

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
603-35-0	triphenylphosphine					
	Acute fish toxicity	LC50 > 10000 mg/l	96 h	Leuciscus idus	Study report (1989)	other: DIN 38412 part 15
	Acute algae toxicity	ErC50 > 5 mg/l	72 h	other algae: Desmodesmus subspicatus CHODAT SAG 86	Study report (2002)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 5 mg/l	48 h	Daphnia magna	Study report (2002)	OECD Guideline 202
	Acute bacteria toxicity	EC50 mg/l () > 10000	0,5 h	Pseudomonas putida	Study report (2003)	other: DIN 38412 part 27

12.2. Persistence and degradability

< 20 %; 28 d

OECD-301C

Not readily biodegradable (according to OECD criteria)

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
603-35-0	triphenylphosphine	5,69

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 9 of 11

BCF

CAS No	Chemical name	BCF	Species	Source
603-35-0	triphenylphosphine	2640	fish	United States Enviro

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 10 of 11

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to Directive
2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D):

2 - obviously hazardous to water

Additional information

Dust explosive, Dust explosion category: ST 3

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,6,7,8,9,11,13.

Abbreviations and acronyms

Acute Tox: Acute toxicity

Eye Dam: Eye damage

Skin Sens: Skin sensitisation

STOT RE: Specific target organ toxicity - repeated exposure

ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H372 Causes damage to organs (central nervous system, peripheral nervous system) through prolonged or repeated exposure if inhaled.

H372 Causes damage to organs through prolonged or repeated exposure.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Triphenylphosphine > 98 % pellets

Revision date: 11.12.2023

Product code: 27240

Page 11 of 11

The receiver of our product is singularly responsible for adhering to existing laws and regulations.