# OTTO CHEMIE PVT LTD

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----------ISO 9001: 2015----------

MATERIAL SAFETY DATA SHEET

**SECTION 1 Product identifiers**
Product name : Triphenyl phosphite, 97%
Product Code : T 2335
CAS-No. : 101-02-0

**SECTION 2: Hazards identification**
2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Skin sensitization (Category 1), H317
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410
For the full text of the H-Statements mentioned in this Section, see Section 16.
2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

| | |
|---|---|
| Signal Word | Warning |
| Hazard statement(s) | |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| Precautionary statement(s) | |
| P261 | Avoid breathing mist or vapors. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/ eye protection/ face protection. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. |
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| Supplemental Hazard Statements | none |

Reduced Labeling (<= 125 ml)
Pictogram

| | |
|---|---|
| Signal Word | Warning |
| Hazard statement(s) | |
| H317 | May cause an allergic skin reaction. |
| Precautionary statement(s) | |
| P261 | Avoid breathing mist or vapors. |
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| Supplemental Hazard Statements | none |

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients**
3.2 Mixtures
Formula : C18H15O3P
Molecular weight : 310,28 g/mol

| Component | Classification | Concentration |
|---|---|---|
| triphenyl phosphite | | |
| CAS-No. 101-02-0<br>EC-No. 202-908-4<br>Index-No. 015-105-00-7 | Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H319, H317, H400, H410<br>Concentration limits:<br>>= 5 %: Skin Irrit. 2, H315; >= 5 %: Eye Irrit. 2, H319;<br>M-Factor - Aquatic Acute: 10 | <= 100 % |
| Phenol | | |
| CAS-No. 108-95-2<br>EC-No. 203-632-7<br>Registration01-2119471329-32-number XXXX | Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Muta. 2; STOT RE 2; Aquatic Chronic 2; H301, H331, H311, H314, H318, H341, H373, H411<br>Concentration limits:<br>>= 3 %: Skin Corr. 1B, H314; 1 - < 3 %: Skin Irrit. 2, H315; 1 - < 3 %: Eye Irrit. 2, H319; | >= 0,25 - < 1% |

*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**
4.1 Description of first-aid measures
General advice
Show this material safety data sheet to the doctor in attendance.
If inhaled
After inhalation: fresh air.
In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
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
Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
Oxides of phosphorus
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

**SECTION 6: Accidental release measures**
6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions
Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb® ).
Dispose of properly. Clean up affected area.
6.4 Reference to other sections
For disposal see section 13.

**SECTION 7: Handling and storage**
7.1 Precautions for safe handling
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Tightly closed.
Moisture sensitive.
Storage class
Storage class (TRGS 510): 10: Combustible liquids
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

**SECTION 8: Exposure controls/personal protection**
8.1 Control parameters
Ingredients with workplace control parameters
8.2 Exposure controls
Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Skin protection
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).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L
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).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L
Body Protection
protective clothing
Respiratory protection
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.
These measures have to be properly documented.
Control of environmental exposure
Do not let product enter drains.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

| | |
|---|---|
| a) Physical state | liquid |
| b) Color | clear |
| c) Odor | No data available |
| d) Melting point/freezing point | Melting point/range: 22 - 24 °C – lit |
| e) Initial boiling point and boiling range | 360 °C - lit. |
| f) Flammability (solid, gas) | No data available |
| g) Upper/lower flammability or explosive limits | No data available |
| h) Flash point | 210 °C |
| i) Autoignition temperature | > 400 °C<br>at 1013,250 hPa |
| j) Decomposition temperature | No data available |
| k) pH | No data available |
| l) Viscosity | Viscosity, kinematic: 17,7 mm2/s at 20 °C<br>Viscosity, dynamic: No data available |
| m) Water solubility | No data available |
| n) Partition coefficient: n-octanol/water | No data available |
| o) Vapor pressure | >= 0,00 hPa at 25 °C |
| p) Density | 1,184 g/mL at 25 °C - lit. |
| Relative density | No data available |
| q) Relative vapor density | No data available |
| r) Particle characteristics | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | none |

9.2 Other safety information
No data available

**SECTION 10: Stability and reactivity**

10.1 Reactivity
Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .
Contains the following stabilizer(s):
Phenol (0,5 %)
10.3 Possibility of hazardous reactions
Violent reactions possible with:
Strong oxidizing agents
acids
10.4 Conditions to avoid
Strong heating.
10.5 Incompatible materials
No data available
10.6 Hazardous decomposition products
In the event of fire: see section 5

**SECTION 11: Toxicological information**

11.1 Information on toxicological effects
Mixture
Acute toxicity
Acute toxicity estimate Oral - 1.480 mg/kg
(Calculation method)
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and

gastrointestinal tract.
LD50 Oral - Rat - male - 1.590 mg/kg
(OECD Test Guideline 401)
Acute toxicity estimate Inhalation - 4 h - > 5 mg/l - dust/mist(Calculation method)
Symptoms: Possible symptoms:, mucosal irritations
LC50 Inhalation - Rat - male and female - 1 h - > 6,7 mg/l - aerosol
(OECD Test Guideline 403)
Acute toxicity estimate Dermal - > 2.000 mg/kg
(Calculation method)
LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg
(OECD Test Guideline 402)
Skin corrosion/irritation
Mixture causes skin irritation.
No data available
Serious eye damage/eye irritation
Mixture causes serious eye irritation.
Eyes - Rabbit
Result: Irritating to eyes. - 7 d
(OECD Test Guideline 405)
Respiratory or skin sensitization
Mixture may cause an allergic skin reaction.
- Mouse
Result: May cause sensitization by skin contact.
(OECD Test Guideline 429)
Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
Carcinogenicity
No data available
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
11.2 Additional Information
Endocrine disrupting properties
Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 15 mg/kg
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.
Components
triphenyl phosphite
Acute toxicity
LD50 Oral - Rat - male - 1.590 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 1 h - > 6,7 mg/l - aerosol
(OECD Test Guideline 403)
LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg
(OECD Test Guideline 402)
Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Irritating to eyes. - 7 d
(OECD Test Guideline 405)
Respiratory or skin sensitization
- Mouse
Result: May cause sensitization by skin contact.
(OECD Test Guideline 429)
Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - male and female
Result: negative
Carcinogenicity
No data available
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
Aspiration hazard
No data available
Phenol
Acute toxicity
Oral: No data available
Acute toxicity estimate Inhalation - 0,51 mg/l - dust/mist
(Expert judgment)
LD50 Dermal - Rat - female - 660 mg/kg
(OECD Test Guideline 402)
Skin corrosion/irritation
Skin - In vitro study
Result: Causes burns.
(OECD Test Guideline 431)
Serious eye damage/eye irritation
Eyes - Rabbit
Result: Corrosive
(OECD Test Guideline 405)
Causes serious eye damage. Risk of blindness!
Respiratory or skin sensitization
Sensitisation test: - Guinea pig
Result: negative
Remarks: (IUCLID)
Germ cell mutagenicity
Suspected of causing genetic defects.
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: positive
Test Type: Mutagenicity (mammal cell test): micronucleus.
Test system: Chinese hamster ovary cells
Result: positive
Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure. - Nervous system, Kidney, Liver, Skin
Aspiration hazard
No data available

**SECTION 12: Ecological information**

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 0,14 % - Not readily biodegradable.

(OECD Test Guideline 301D)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Components

triphenyl phosphite

No data available

Phenol

Toxicity to fish flow-through test LC50 - Onchorhynchus clarki - 8,9 mg/l - 96 h

(US-EPA)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Ceriodaphnia dubia (water flea) - 3,1 mg/l - 48 h

(US-EPA)

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (algae) - 61,1 mg/l - 96 h

(US-EPA)

Toxicity to bacteria static test IC50 - microorganisms - 21 mg/l - 24 h

Remarks: (ECHA)

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

No data available

**SECTION 14: Transport information**

14.1 UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphite)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (triphenyl phosphite)

IATA: Environmentally hazardous substance, solid, n.o.s. (triphenyl phosphite)

14.3 Transport hazard class(es)

| | | |
|---|---|---|
| ADR/RID: 9 | IMDG: 9 | IATA: 9 |

14.4 Packaging group

| | | |
|---|---|---|
| ADR/RID: III | IMDG: III | IATA: III |

14.5 Environmental hazards

| | | |
|---|---|---|
| ADR/RID: yes | IMDG Marine pollutant: yes | IATA: yes |

14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

**SECTION 15: Regulatory information**

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

: ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

**Section 16: Other Information**

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.