

## SAFETY DATA SHEET

Creation Date 14-May-2010

Revision Date 19-Jan-2018

Revision Number 4

### 1. Identification

**Product Name** Benzyltriphenylphosphonium chloride

**Cat No. :** AC106210000; AC106210250; AC106211000; AC106215000

**CAS-No** 1100-88-5

**Synonyms** None

**Recommended Use** Laboratory chemicals.

**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

##### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### **Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                                  |            |
|--------------------------------------------------|------------|
| Acute oral toxicity                              | Category 2 |
| Acute Inhalation Toxicity - Dusts and Mists      | Category 2 |
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Fatal if swallowed  
Causes skin irritation  
Causes serious eye damage  
Fatal if inhaled  
May cause respiratory irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear respiratory protection  
Wear protective gloves/protective clothing/eye protection/face protection

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Immediately call a POISON CENTER or doctor/physician  
Call a POISON CENTER or doctor/physician if you feel unwell

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a POISON CENTER or doctor/physician

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Rinse mouth

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component                                       | CAS-No    | Weight % |
|-------------------------------------------------|-----------|----------|
| Phosphonium, triphenyl(phenylmethyl)-, chloride | 1100-88-5 | >95      |

### 4. First-aid measures

|                                    |                                                                                                                                                                                    |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>                 | Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.                                                  |
| <b>Skin Contact</b>                | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.                                     |
| <b>Inhalation</b>                  | Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required. |
| <b>Ingestion</b>                   | Call a physician immediately. Clean mouth with water.                                                                                                                              |
| <b>Most important symptoms and</b> | Causes eye burns.                                                                                                                                                                  |

**effects****Notes to Physician**

Treat symptomatically

**5. Fire-fighting measures****Suitable Extinguishing Media** Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.**Unsuitable Extinguishing Media** No information available**Flash Point** > 300 °C / > 572 °F**Method -** No information available**Autoignition Temperature****Explosion Limits****Upper** No data available**Lower** No data available**Sensitivity to Mechanical Impact** No information available**Sensitivity to Static Discharge** No information available**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**Hydrogen chloride gas Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>) Oxides of phosphorus Phosphorus trihydride (phosphine)**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA****Health**  
4**Flammability**  
1**Instability**  
1**Physical hazards**  
N/A**6. Accidental release measures****Personal Precautions** Ensure adequate ventilation. Use personal protective equipment.**Environmental Precautions** See Section 12 for additional ecological information.**Methods for Containment and Clean Up** Wear self-contained breathing apparatus and protective suit. Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not let this chemical enter the environment.**7. Handling and storage****Handling** Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Use only in area provided with appropriate exhaust ventilation.**Storage** Keep in a dry, cool and well-ventilated place. Keep container tightly closed.**8. Exposure controls / personal protection****Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.**Personal Protective Equipment**

|                                 |                                                                                                                                                                                                                                                   |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye/face Protection</b>      | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.                                                                       |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.                                                                                                                                                                         |
| <b>Respiratory Protection</b>   | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                            |

## 9. Physical and chemical properties

|                                               |                          |
|-----------------------------------------------|--------------------------|
| <b>Physical State</b>                         | Powder Solid             |
| <b>Appearance</b>                             | Off-white                |
| <b>Odor</b>                                   | Odorless                 |
| <b>Odor Threshold</b>                         | No information available |
| <b>pH</b>                                     | No information available |
| <b>Melting Point/Range</b>                    | 337 °C / 638.6 °F        |
| <b>Boiling Point/Range</b>                    | No information available |
| <b>Flash Point</b>                            | > 300 °C / > 572 °F      |
| <b>Evaporation Rate</b>                       | Not applicable           |
| <b>Flammability (solid,gas)</b>               | No information available |
| <b>Flammability or explosive limits</b>       |                          |
| Upper                                         | No data available        |
| Lower                                         | No data available        |
| <b>Vapor Pressure</b>                         | No information available |
| <b>Vapor Density</b>                          | Not applicable           |
| <b>Specific Gravity</b>                       | No information available |
| <b>Solubility</b>                             | soluble                  |
| <b>Partition coefficient; n-octanol/water</b> | No data available        |
| <b>Autoignition Temperature</b>               |                          |
| <b>Decomposition Temperature</b>              | > 323°C                  |
| <b>Viscosity</b>                              | Not applicable           |
| <b>Molecular Formula</b>                      | C25 H22 Cl P             |
| <b>Molecular Weight</b>                       | 388.86                   |

## 10. Stability and reactivity

|                                         |                                                                                                                                         |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>                  | None known, based on information available                                                                                              |
| <b>Stability</b>                        | Hygroscopic. Light sensitive.                                                                                                           |
| <b>Conditions to Avoid</b>              | Exposure to light. Incompatible products. Exposure to moist air or water.                                                               |
| <b>Incompatible Materials</b>           | Bases, Strong oxidizing agents                                                                                                          |
| <b>Hazardous Decomposition Products</b> | Hydrogen chloride gas, Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Oxides of phosphorus, Phosphorus trihydride (phosphine) |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                                                                                                |
| <b>Hazardous Reactions</b>              | None under normal processing.                                                                                                           |

## 11. Toxicological information

### Acute Toxicity

Product Information  
Component Information

| Component                                       | LD50 Oral      | LD50 Dermal | LC50 Inhalation       |
|-------------------------------------------------|----------------|-------------|-----------------------|
| Phosphonium, triphenyl(phenylmethyl)-, chloride | 43 mg/kg (rat) | Not listed  | ca 0.15 mg/L/4h (Rat) |

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Risk of serious damage to eyes Irritating to respiratory system and skin

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component                                       | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------------------------------------|-----------|------------|------------|------------|------------|------------|
| Phosphonium, triphenyl(phenylmethyl)-, chloride | 1100-88-5 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** based on information available. May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component                                       | log Pow |
|-------------------------------------------------|---------|
| Phosphonium, triphenyl(phenylmethyl)-, chloride | 6.35    |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

UN-No UN3464

|                              |                                                 |
|------------------------------|-------------------------------------------------|
| <b>Proper Shipping Name</b>  | ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. |
| <b>Proper technical name</b> | Phosphonium, triphenyl(phenylmethyl)-, chloride |
| <b>Hazard Class</b>          | 6.1                                             |
| <b>Packing Group</b>         | II                                              |
| <b>TDG</b>                   |                                                 |
| <b>UN-No</b>                 | UN3464                                          |
| <b>Proper Shipping Name</b>  | Organophosphorus Compound, toxic, solid, n.o.s. |
| <b>Hazard Class</b>          | 6.1                                             |
| <b>Packing Group</b>         | II                                              |
| <b>IATA</b>                  |                                                 |
| <b>UN-No</b>                 | UN3464                                          |
| <b>Proper Shipping Name</b>  | ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. |
| <b>Hazard Class</b>          | 6.1                                             |
| <b>Packing Group</b>         | II                                              |
| <b>IMDG/IMO</b>              |                                                 |
| <b>UN-No</b>                 | UN3464                                          |
| <b>Proper Shipping Name</b>  | ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. |
| <b>Hazard Class</b>          | 6.1                                             |
| <b>Packing Group</b>         | II                                              |

## 15. Regulatory information

### International Inventories

| Component                                             | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-------------------------------------------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Phosphonium,<br>triphenyl(phenylmethyl)-,<br>chloride | X    | X   | -    | 214-154-3 | -      |     | X     | X    | X    | X     | X    |

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

**TSCA 12(b)** Not applicable

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA Occupational Safety and Health Administration**  
Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations** Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Creation Date** 14-May-2010

**Revision Date** 19-Jan-2018

**Print Date** 19-Jan-2018

**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**