SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

| Revi | sion number: 1 | | Revision date: | 10/03/2018 |
|--|--|---|--------------------|--------------|
| SECTION 1: Identification of the su | bstance/mixture and of the | e company/undertaking | | |
| 1.1 Product identifiers | | | | |
| Product name: | Terephthaloyl Chloride | | | |
| Product code: | T0017 | | | |
| | | | | |
| 1.2 Relevant identified uses of the subs Identified uses: | tance or mixture and uses ad Reagents. | vised against | | |
| 1.3 Details of the supplier of the safety Supplier: | data sheet | | | |
| TCI EUROPE N.V. | | | | |
| Boerenveldseweg 6 | | | | |
| Haven 1063 | | | | |
| B-2070 Zwijndrecht | | | | |
| Telephone: +32(0)3 735 07 00 | | | | |
| E-mail: sales-eu@tcichemicals. | com | | | |
| 1.4 Emergency telephone number: | +32(0)70 245 245 | | | |
| n.4 Emergency telephone number. | 132(0)10 243 243 | | | |
| SECTION 2: Hazards identification | | | | |
| 2.1 Classification of the substance or m | ixture | | | |
| Corrosive to metals | | Category 1 | | |
| Acute toxicity (Inhalation) | | Category 3 | | |
| Skin corrosion/irritation | | Category 1B | | |
| Serious eye damage/eye irritation | | Category 1 | | |
| Specific target organ toxicity - Sing | | Organs | | |
| 2.2 Label elements Pictograms or hazard symbols | | | | |
| | Denger | | | |
| Signal word | Danger | tolo | | |
| Hazard statements | H290-May be corrosive to me H331-Toxic if inhaled. H314-Causes severe skin bur H371-May cause damage to o P260-Do not breathe dust/fun | rns and eye damage. organs : Organs | | |
| Precautionary statements | P280-Wear protective gloves, | , protective clothing, face protection. WALLOWED: Rinse mouth. Do NOT induce | e vomiting. Immedi | ately call a |
| | Rinse skin with water or show | 63-IF ON SKIN (or hair): Take off immediate ver. Immediately call a POISON CENTER or | | |
| | Immediately call a POISON C | | | U U |
| | | N EYES: Rinse cautiously with water for sev | | |
| 2.2. Other because | lenses, if present and easy to | do. Continue rinsing. Immediately call a PC | DISON CENTER or | doctor. |
| 2.3 Other hazards | | | | |
| Results of PBT and vPvB assessmen | | | | |
| PBT: | Not applicable | | | |
| vPvB: | Not applicable | | | |

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SECTION 3: Composition/information on ingredients

| 3.1 Substances | |
|-------------------|--|
| Components: | Terephthaloyl Chloride |
| Percent: | >99.0%(GC)(T) |
| CAS RN: | 100-20-9 |
| EC-No: | 202-829-5 |
| Synonyms: | Terephthaloyl Dichloride |
| Chemical Formula: | C ₈ H ₄ Cl ₂ O ₂ |
| | |

SECTION 4: First aid measures 4.1 Description of first aid measures Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Skin contact: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Eye contact: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Inmediately call a POISON CENTER or doctor/physician. 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: Immediately call a POISON CENTER or doctor/physician. Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

4.2 Most important symptoms and effects, both acute and delayed No data available

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: Unsuitable extinguishing media: | Dry chemical, carbon dioxide. Water |
| 5.2 Special hazards arising from the substance or mixture | Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. Carbon dioxide, Carbon monoxide, Hydrogen chloride |
| 5.3 Advice for firefighters | Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so. When extinguishing fire, be sure to wear personal protective equipment |
| SECTION 6: Accidental release mea | asures |
| 6.1 Personal precautions, protective equipment and emergency procedures | Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc |
| 6.2 Environmental precautions | Prevent product from entering drains |
| 6.3 Methods and materials for containment and cleaning up | Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Do not allow contact with water. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment. |
| 6.4 Reference to other sections | For disposal see section 13. |
| SECTION 7: Handling and storage | |
| 7.1 Precautions for safe handling | Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated. Avoid contact with skin, eyes and clothing. May develop pressure. Open carefully. Use corrosive resistant equipment. |
| 7.2 Conditions for safe storage, including any incompatibilities | Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store under inert gas. Protect from moisture. Store locked up. Store away from incompatible materials such as oxidizing agents. Moisture-sensitive |
| 7.3 Specific end use(s) | No further relevant information available. |

| SECTION 8: Exposure controls/personal protection | |
|--|---|
| 8.1 Control parameters | No data available |
| 8.2 Exposure controls | Install a closed system or local exhaust. Also install safety shower and eye bath. |
| Respiratory protection: | Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations. |
| Hand protection: | Impervious gloves. |
| Eye protection: | Safety goggles. A face-shield, if the situation requires. |
| Skin and body protection: | Impervious protective clothing. Protective boots, if the situation requires. |

SECTION 9: Physical and chemical properties

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| 9.1 Information on basic physical and cl | |
| Physical state (20°C): | Solid |
| Form: | Crystal - Powder |
| Colour: | White - Almost white |
| Odour: | Musty |
| pH: | No data available |
| Melting point/freezing point: | 83°C |
| Boiling point/range: | 266°C |
| Flash point: | No data available |
| Evaporation rate(Butyl Acetate=1): | No data available |
| Flammability(solid, gas): | No data available |
| Flammability or explosive limits: | |
| Lower: | No data available |
| Upper: | No data available |
| Vapour pressure: | 2.7Pa/25°C |
| Vapour density: | 7 |
| Relative density: | No data available |
| Solubility(ies): | |
| [Water] | No data available |
| [Other solvents] | |
| Very soluble: | Benzene |
| Soluble: | Ether, Toluene, Ketones |
| Partition coefficient: | 0.88 |
| n-octanol/water: | |
| Autoignition temperature: | No data available |
| Decomposition temperature: | No data available |
| Dynamic Viscosity: | No data available |
| Kinematic viscosity: | No data available |
| 9.2 Other safety information | No data available |
| SECTION 10: Stability and reactivity | |
| 10.1 Reactivity | No data available |
| 10.2 Chemical stability | Stable under proper conditions. |
| | |

10.3 Possibility of hazardous reactions Decomposes in contact with water and liberates toxic gases.

10.4 Conditions to avoid Moisture

10.5 Incompatible materials Oxidizing agents, Strong bases, Water, Alcohols, Amines

10.6 Hazardous decomposition products Carbon dioxide, Carbon monoxide, Hydrogen chloride

SECTION 11: Toxicological information

| 11.1 Information on toxicological effects | |
|---|--|
| Acute Toxicity: | orl-rat LD50:2500 mg/kg |
| | ihl-rat LC50:700 mg/m ³ /4H |
| | skn-rbt LD:>200 mg/kg |
| Skin corrosion/irritation: | No data available |
| Serious eye damage/irritation: | No data available |
| Respiratory or skin sensitization: | No data available |
| Germ cell mutagenicity: | No data available |
| Carcinogenicity: | |
| IARC = | No data available |
| NTP = | No data available |
| Reproductive toxicity: | orl-rat TDLo:4122 mg/kg (26W pre) |
| STOT-single exposure: | No data available |
| STOT-repeated exposure: | No data available |
| Aspiration hazard: | No data available |
| RTECS Number: | WZ1797000 |
| | |

SECTION 12: Ecological information 2.1 Toxicity

| 12.1 LOXICITY | |
|-------------------------------------|-------------------|
| Fish: | No data available |
| Crustacea: | No data available |
| Algae: | No data available |
| 12.2 Persistence and degradability | No data available |
| 12.3 Bioaccumulative potential | No data available |
| 12.4 Mobility in soil | |
| Log Pow: | 0.88 |
| Soil adsorption (Koc): | No data available |
| Henry's Law (PaM ³/mol): | No data available |
| 12.5 Results of PBT and vPvB assess | ment |
| PBT: | Not applicable |
| vPvB: | Not applicable |
| 12.6 Other adverse effects | No data available |

12.6 Other adverse effects

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

| SECTION 14: Transport informat | ion |
|-----------------------------------|-------------------------------|
| 14.1 UN number | 2923 |
| 14.2 UN proper shipping name | |
| ADR/RID | Corrosive solid, toxic, n.o.s |
| IMDG/IMO | Corrosive solid, toxic, n.o.s |
| ICAO/IATA | Corrosive solid, toxic, n.o.s |
| 14.3 Transport hazard class(es) | |
| ADR/RID | 8: Corrosive |
| Subsidiary risk: | 6.1: Toxic substance. |
| IMDG/IMO | 8: Corrosive |
| Subsidiary risk: | 6.1: Toxic substance. |
| | 8: Corrosive |
| Subsidiary risk: | 6.1: Toxic substance. |
| 14.4 Packaging group | |
| ADR/RID | П |
| IMDG/IMO | П |
| ICAO/IATA | II |
| 14.5 Environmental hazards | |
| Marine pollutant | - |
| 14.6 Special precautions for user | No data available |
| SECTION 15: Regulatory informa | ation |

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Substance of Very High Concern (SVHC) according to the Not listed REACH Regulations (EC) No.1907/2006

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

| SECTION 16: Other information | |
|-------------------------------|-----------------|
| Prepared by: | TCI EUROPE N.V. |
| Issue date: | 10/03/2018 |

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

End of Safety Data Sheet