SIGMA-ALDRICH

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Trimethylacetyl chloride
Product Number: T72605
Brand: Aldrich
Supplier: Sigma-Aldrich
3050 I-44 Service Drive
SAINT LOUIS, MO 63163
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5659
Emergency Phone #: (314) 775-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8008

2. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Flammable liquid, Highly toxic by inhalation, Harmful by ingestion, Corrosive
Other hazards which do not result in classification
Lachrymator.

GHS Classification
Flammable liquids (Category 2)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 1)
Acute toxicity, Dermal (Category 5)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Signal word: Danger
Hazard statement(s)
H225 Highly flammable liquid and vapour.
H315 Harmful if swallowed.
H335 May be harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.
H410 Harmful to aquatic life.

Precautionary statement(s)
P241 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P284 Wear respiratory protection.
P205 P251 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P310 + P338 If exposed or涉嫌: Immediately call a POISON CENTER or doctor/physician.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Pivaloyl chloride
Trimethylacetyl chloride
Formula: C9H12OCl
Molecular Weight: 178.58 g/mol

Component Concentration
Pivaloyl chloride
CAS-No.: 3352-32-2
EC-No.: 221-921-6

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Suitable extinguishing media
Dry powder
Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Never allow product to get in contact with water during storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type A3BEK (EN 14387) respirator canisters as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals. Flame resistant anti-static protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Clear, liquid

Colour
colourless

Safety data
pH
no data available

Melting point/freezing point
-56 °C (-69 °F)

Boiling point
125 °C (259 °F) - lit.

Flash point
19 °C (66 °F) - closed cup

Ignition temperature
300 °C (572 °F)

Autoignition temperature
no data available

Lower explosion limit
1.9 газ

Upper explosion limit
7.4 газ

Relative vapour density
4.16

Water solubility
no data available

Partition coefficient:
log Pow: 1.8

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Vapours may form explosive mixture with air. Reacts violently with water.

Conditions to avoid
Do not allow water to enter container because of violent excretion. Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture.

Materials to avoid
Alcohols, Oxidizing agents, Strong bases

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - rat: 920 mg/kg

Inhalation LC50
LC50 Inhalation - rat: 1 h - 500 mg/m3

Dermal LD50
LD50 Dermal - rat: 3,000 mg/kg

Other decomposition products - no data available
Other information on acute toxicity
no data available

Skin corrosion/irritation
Skin - rabbit - Severe skin irritation

Serious eye damage/eye irritation
Eyes - rabbit - Severe eye irritation

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation: May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

Skin: Harmful if absorbed through skin. Causes skin burns.

Eye: Causes eye burns.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea

Synergistic effects
no data available

Additional Information
RTECS: Not available

Toxicity to fishes
LC50 - Oncorhynchus mykiss (rainbow trout) - > 300 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 329 mg/l - 24 h

Toxicity to algae
EC50 - Desmodesmus subspicatus (green algae) - 75 mg/l - 96 h

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2438 Class: 6.1 (8, 3) Packing group I
Proper shipping name: Trimethylacetyl chloride
Marine pollutant: No

IMDG
UN number: 2438 Class: 6.1 (3, 6) Packing group I
Proper shipping name: TRIMETHYLACETYL CHLORIDE
Marine pollutant: No

IATA
UN number: 2438 Class: 8.1 (3, 8)
Proper shipping name: Trimethylacetyl chloride
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid. Highly toxic by inhalation. Harmful by ingestion. Corrosive

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title 302, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold limits established by SARA Title 303, Section 313.
SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15. OTHER INFORMATION

Further information
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