

Otto Chemie Pvt Ltd

An ISO 9001 : 2015 & GMP Certified Company
Office : No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)
Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Creation Date: 20-08-2026

Revision Date: 18-07-2021

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name: 2-Chloro-2-methylbutane, 98%
Product Code: C 2935
CAS No: 594-36-5

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet
Company identification
OTTO CHEMIE PVT LTD
No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

1.4. Emergency telephone number
Phone no. : + 91 98200 41841 (10 : 00 am – 06 : 00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)
Flammable liquids, Category 2
Skin irritation, Category 2
Eye irritation, Category 2
Specific target organ toxicity -
single exposure, Category 3,
Respiratory system
2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)
Hazard pictograms
Signal word
Hazard statements

H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Precautionary
statements

:
: Danger
: H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Prevention:
P210 Keep away from heat, hot surfaces, sparks,
open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off
immediately all contaminated clothing.
Rinse skin with 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.
Reduced Labelling (<= 125 ml)

Hazard pictograms
Signal word
Hazard Statements
Precautionary Statements
Supplemental Hazard
Statements

:
: Danger
none
none
none

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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.

Ecological information: 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.

Toxicological information: 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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : <|>tert</>-Amyl chloride

EC-No. : 209-836-2

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
2-Chloro-2- methylbutane	594-36-5 209-836-2	>= 90 - <= 100	

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Show this 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.

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 GHS label elements) 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

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

Specific hazards during fire fighting

:Combustible.

Pay attention to flashback.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

Hazardous combustion products

Carbon oxides

Hydrogen chloride gas

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5.3 Advice for firefighters

Special protective equipment 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.
Further information : Remove container from danger zone and cool with water.
Suppress (knock down) gases/vapours/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

Personal precautions : Advice for non-emergency personnel:

Do not breathe vapours, aerosols.

Avoid substance contact.

Ensure adequate ventilation.

Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

Wear appropriate personal protective equipment, as indicated in Section 8.

6.2 Environmental precautions

Environmental precautions

Do not let product enter drains.

Risk of explosion.

6.3 Methods and material for containment and cleaning up

Methods for 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. Chemisorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2 GHS label elements

7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions

Keep container tightly closed in a dry and well ventilated place. Keep away from heat and sources of ignition.

Storage class (TRGS 510) : 3, Flammable liquids

Recommended storage temperature

Recommended storage temperature if relevant, see product label.

Packaging material : Suitable material: Mild Steel Drum

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

8.2 Exposure controls

Individual protection measures, such as personal protective equipment (PPE)

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

Hand protection

Material : Nitrile rubber

Break through time : 10 min

Glove thickness : 0,4 mm

Protective index : Splash contact

Manufacturer : Camatril®

Material : Viton®

Break through time : 480 min

Glove thickness : 0,7 mm

Protective index : Full contact

Manufacturer : KCL 890 Vitoject®

Remarks : 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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D36124 Eichenzell, Internet: www.kcl.de).

Skin and body protection : Flame retardant antistatic 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 entrepreneur 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.

Environmental exposure controls

Advice : Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: colourless
Odour	: No data available
Melting point/ range	: -73 °C Method: lit.
Boiling point/boiling range	: 85 - 86 °C Method: lit.
Flammability	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: -10 °C Method: closed cup
Autoignition temperature	: No data available
Decomposition temperature	: No data available
pH	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Water solubility	: No data available

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Partition coefficient: noctanol/water	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Density	: 0,866 g/cm ³ (25 °C) Method: lit.
Relative vapour density	: No data available
9.2 Other information	
Explosives	: No data available
Oxidizing properties	: No data available
Burning rate	: No data available
Evaporation rate	: No data available
Molecular weight	: 106,59 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapours may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Conditions to avoid : Warming.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

For Hazardous combustion products in the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None.

by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Components:

2-Chloro-2-methylbutane:

Toxicity to fish : Remarks: No data available

12.2 Persistence and degradability

Components:

2-Chloro-2-methylbutane:

Biodegradability : Remarks: No data available

12.3 Bioaccumulative potential

Components:

2-Chloro-2-methylbutane:

Bioaccumulation : Remarks: No data available

12.4 Mobility in soil

Components:

2-Chloro-2-methylbutane:

Stability in soil : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

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.

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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

Components:

2-Chloro-2-methylbutane:

Additional ecological information

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste material must be disposed of in accordance with the national and local regulations.

Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

14.1 UN number or ID number

ADR

: UN 1993

IMDG

: UN 1993

IATA

: UN 1993

14.2 UN proper shipping name

ADR

: FLAMMABLE LIQUID, N.O.S.

(2-Chloro-2-methylbutane)

IMDG

: FLAMMABLE LIQUID, N.O.S.

(2-Chloro-2-methylbutane)

IATA

: Flammable liquid, n.o.s.

(2-Chloro-2-methylbutane)

14.3 Transport hazard class(es)

Class Subsidiary risks

ADR

: 3

IMDG

: 3

IATA

: 3

14.4 Packing group

ADR

: II

Packing group

: F1

Classification Code

: 33

Hazard Identification

Number

Labels

: 3

Tunnel restriction code

: (D/E)

IMDG

Packing group

: II

Labels

: 3

EmS Code

: F-E, S-E

IATA (Cargo)

Packing instruction (cargo

: 364

aircraft)

Packing instruction (LQ)

: Y341

Packing group

: II

Labels

: Class 3 - Flammable liquids

IATA_P (Passenger)

Packing instruction

: 353

(passenger aircraft)

Packing instruction (LQ)

: Y341

Packing group

: II

Labels

: Class 3 - Flammable liquids

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14.5 Environmental hazards

ADR

Environmentally

: no

hazardous

IMDG

Marine pollutant

: no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Conditions of restriction for the following entries must be considered::

Number on list 3

Number on list 40

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)

Not applicable

REACH - List of substances subject to authorisation (Annex XIV)

Not applicable

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

P5c FLAMMABLE LIQUIDS

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.

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