

Material Safety Data Sheet

2-Chloroacetophenone

ACC# 05497

Section 1 - Chemical Product and Company Identification

MSDS Name: 2-Chloroacetophenone

Catalog Numbers: AC108530000, AC108530250, AC108531000, AC108535000, AC338040000, AC338045000 AC338045000

Synonyms: Phenacyl chloride; Chloromethyl phenyl ketone; Mace; 2-Chloro-1-phenylethanone; omega-Chloroacetophenone; Chemical mace; CN; alpha-Chloroacetophenone.

Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
532-27-4	2-Chloroacetophenone	>98	208-531-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white crystals.

Danger! May be fatal if inhaled. Lachrymator (substance which increases the flow of tears). Causes eye, skin, and respiratory tract irritation. Harmful if swallowed. May cause allergic skin reaction. May be harmful if absorbed through the skin. Moisture sensitive.

Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Lachrymator (substance which increases the flow of tears). Causes eye irritation and possible burns. May cause reversible inflammation and corneal injury with opacity.

Skin: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Causes skin irritation and possible severe skin irritation especially if the skin is wet or moist.

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation: Causes respiratory tract irritation. Can produce delayed pulmonary edema. Inhalation may produce coughing, nausea, and pulmonary edema. In rare instances, exposure may cause sensitization, resulting in inflammation of the mucous membranes and in eczematous eruptions.

Chronic: Prolonged and/or repeated skin exposure may cause allergic dermatitis. 2-Chloroacetophenone has been shown to be a cocarcinogen in mice dosed dermally.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use carbon dioxide or dry chemical.

Flash Point: 118 deg C (244.40 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower: N/A

Upper: N/A

NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash hands before eating. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse. Discard contaminated shoes. Do not breathe dust. Use only with adequate ventilation.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store in metal containers. Keep containers tightly closed. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
2-Chloroacetophenone	0.05 ppm TWA	0.05 ppm TWA; 0.3 mg/m ³ TWA 15 mg/m ³ IDLH	0.05 ppm TWA; 0.3 mg/m ³ TWA

OSHA Vacated PELs: 2-Chloroacetophenone: 0.05 ppm TWA; 0.3 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear a chemical apron. Wear butyl rubber gloves, apron, and/or clothing.

Clothing: Wear a chemical apron. Wear butyl rubber gloves, apron, and/or clothing.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

Section 9 - Physical and Chemical Properties

Physical State: Crystals

Appearance: white

Odor: floral-like - irritating odor - sharp odor

pH: Not applicable.

Vapor Pressure: 0.0054 mm Hg @ 20 deg C

Vapor Density: 5.3 (air=1)

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 244-245 deg C @ 760 mm Hg

Freezing/Melting Point: 52-56 deg C

Decomposition Temperature: Not available.

Solubility: insoluble

Specific Gravity/Density: 1.324 g/cm³

Molecular Formula: C₈H₇ClO

Molecular Weight: 154.60

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, moisture, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, water.

Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 532-27-4: AM6300000

LD50/LC50:

CAS# 532-27-4:

Dermal, guinea pig: LD50 = >1 gm/kg;

Draize test, rabbit, eye: 1 mg Mild;

Draize test, rabbit, eye: 3 mg Severe;

Draize test, rabbit, eye: 1%;

Draize test, rabbit, skin: 5 mg/24H Mild;

Inhalation, mouse: LC50 = 59 mg/m³;

Oral, mouse: LD50 = 139 mg/kg;

Oral, rabbit: LD50 = 118 mg/kg;

Oral, rat: LD50 = 50 mg/kg;

Carcinogenicity:

CAS# 532-27-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: See actual entry in RTECS for complete information.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: Terrestrial: Moderate to high mobility in soil. Aquatic: slowly volatilizes into atmosphere. Atmospheric: Half-life 9.2 days. No bioconcentration and little evidence of biodegradation.

Physical: No information available.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	CHLOROACETOPHENONE LIQUID	CHLOROACETOPHENONE
Hazard Class:	6.1	6.1
UN Number:	UN1697	UN1697
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 532-27-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 532-27-4: 1 lb statutory RQ; 0.454 kg statutory RQ; 100 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 532-27-4: immediate, delayed.

Section 313

This material contains 2-Chloroacetophenone (CAS# 532-27-4, >98%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

CAS# 532-27-4 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 532-27-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 23/25 Toxic by inhalation and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection)

CAS# 532-27-4: No information available.

Canada - DSL/NDSL

CAS# 532-27-4 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of D1B, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 532-27-4 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 7/01/1998**Revision #6 Date:** 11/20/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.