

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 12/20/2007

Reviewed on 08/08/2006

1 Identification of substance:

Product details:

Product name: Chloroacetone

Stock number:

A11922

L05799

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Emergency Phone: (978) 521-6300

CHEMTREC: (800) 424-9300

Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department.

After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Chloroacetone (CAS# 78-95-5); 100%

Identification number(s):

EINECS Number: 201-161-1

Material is stabilized with:

Chloroacetone can be stabilized with up to 0.1% H₂O or 1.0% CaCO₃

3 Hazards identification

Hazard description:



T Toxic

Information pertaining to particular dangers for man and environment

R 10 Flammable.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 34 Causes burns.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	3
FIRE	2
REACTIVITY	1

Health (acute effects) = 3

Flammability = 2

Reactivity = 1

4 First aid measures

General information

Immediately remove any clothing soiled by the product.

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Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing

Do not induce vomiting; immediately call for medical help.

Seek immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Phosgene gas

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Keep away from ignition sources.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and storage**Handling****Information for safe handling:**

Keep container tightly sealed.
 Store in cool, dry place in tightly closed containers.
 Ensure good ventilation at the workplace.
 Open and handle container with care.

Information about protection against explosions and fires:

Keep ignition sources away.
 Protect against electrostatic charges.
 Fumes can combine with air to form an explosive mixture.
 During heating or in case of fire poisonous gases are produced.

Storage**Requirements to be met by storerooms and receptacles:**

No special requirements.

Information about storage in one common storage facility:

Do not store together with strongly basic or oxidizing materials.
 Keep away from heat and direct sunlight.

Further information about storage conditions:

Keep container tightly sealed.
 Store in cool, dry conditions in well sealed containers.
 Protect from exposure to light.
 Refrigerate

8 Exposure controls and personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Chloroacetone (CAS# 78-95-5)

	ppm
ACGIH TLV	1-CEILING (skin)
Denmark TWA	1 (skin)
Ireland TWA	1; 1-STEL (skin)
Netherlands TWA	1 (skin)

Components with limit values that require monitoring at the workplace:

Additional information: No data

Personal protective equipment**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.
 Remove all soiled and contaminated clothing immediately.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Avoid contact with the eyes and skin.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves**Eye protection:**

Tightly sealed goggles

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Full face protection

Body protection: Protective work clothing.**9 Physical and chemical properties:****General Information**

Form:	Liquid
Color:	Colorless Yellow
Odor:	Pungent, makes eyes water

Change in condition

Melting point/Melting range:	-44.5°C (-48°F)
Boiling point/Boiling range:	119.7°C (247°F)
Sublimation temperature / start:	Not determined

Flash point:	28 - 40°C (82 - 104°F) (stab. range)
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Ignition temperature:	610°C (1130°F)
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Decomposition temperature:	Not determined
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Danger of explosion:	Risk of explosive polymerization upon loss of stabilizer from long periods of time at ambient temperature.
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Explosion limits:

Lower:	Not determined
Upper:	Not determined

Vapor pressure at 20°C (68°F):	16 hPa (12 mm Hg)
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Density at 20°C (68°F):	1.123 g/cm ³
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Solubility in / Miscibility with

Water:	Fully miscible
Alcohols:	Fully miscible
Organic solvents:	Soluble in ether. Soluble in chloroform.

Additional information

Turns dark and resin-like upon long exposure to light.

10 Stability and reactivity**Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Light
Heat
Oxidizing agents
Bases

Dangerous reactions

Spontaneous polymerization can be caused in unstabilized product e.g. by ambient heat

Dangerous products of decomposition:

Phosgene

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Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

Additional information:

Chloroacetone is used in tear gas, insecticides, color photography, enzyme inactivation, perfumes, and polymerization of vinyl monomers.

11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	127 mg/kg (mus)
		100 mg/kg (rat)
Dermal	LD50	100 µL/kg (gpg)
		141 mg/kg (rbt)
Inhalative	LC50/1H	262 ppm/1H (rat)
	LCLo/10M	605 ppm/10M (hmn)

Primary irritant effect:**on the skin:**

Corrosive effect on skin and mucous membranes.

Irritant to skin and mucous membranes.

on the eye:

Lachrymatory effect.

Strong corrosive effect.

Sensitization: No sensitizing effects known.**Other information (about experimental toxicology):**

Mutagenic effects have been observed on tests with bacteria.

Mutagenic effects have been observed on tests with insects.

Subacute to chronic toxicity:

Chloroacetone is used in tear gas as a strong irritant to the eyes, skin, and lungs. It is also toxic by ingestion, inhalation, or skin contact, causing somnolence, hair, and ataxia. Chronic exposure may cause weight loss, gastritis, and changes to the salivary glands. Injection causes altered sleep time, tremors, and convulsions.

Corrosive materials are acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause damage to the mouth, throat and esophagus. May cause skin burns or irritation depending on the severity of the exposure.

Additional toxicological information:

Danger through skin absorption.

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**Ecotoxicical effects:****Remark:** Harmful to fish

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General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground. Do not allow material to be released to the environment without proper governmental permits.

Harmful to aquatic organisms

13 Disposal considerations**Product:****Recommendation**

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information**DOT regulations:**

Hazard class: 6.1
Identification number: UN1695
Packing group: I
Poison inhalation hazard: Yes
Proper shipping name (technical name): CHLOROACETONE, STABILIZED
Label: 6.1+3+8

Land transport ADR/RID (cross-border)

ADR/RID class: 6.1 (TF1) Toxic substances
Danger code (Kemler): 663
UN-Number: 1695
Packaging group: I
Description of goods: 1695 CHLOROACETONE, STABILIZED

Maritime transport IMDG:

IMDG Class: 6.1
UN Number: 1695
Label: 6.1+3+8
Packaging group: I

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Proper shipping name: CHLOROACETONE, STABILIZED**Air transport ICAO-TI and IATA-DGR:**

ICAO/IATA Class:	6.1
UN/ID Number:	1695
Label	6.1+3+8
Packaging group:	I
Proper shipping name:	CHLOROACETONE, STABILIZED

15 Regulations**Product related hazard informations:****Hazard symbols:**

T Toxic

Risk phrases:

10 Flammable.
 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
 34 Causes burns.
 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Safety phrases:

4 Keep away from living quarters.
 9 Keep container in a well-ventilated place.
 20 When using do not eat or drink.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 27 Take off immediately all contaminated clothing.
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 45 In case of accident or if you feel unwell, seek medical advice immediately.
 61 Avoid release to the environment. Refer to special instructions/ Safety data sheets

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

Information about limitation of use:

For use only by technically qualified individuals.

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16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact: Paul V. Connolly

USA