Material Safety Data Sheet
Diphosgene, 99%

ACC# 06559

Section 1 - Chemical Product and Company Identification

MSDS Name: Diphosgene, 99%
Catalog Numbers: AC243310000, AC243310100, AC243311000
Synonyms: Trichloromethyl Chloroformate; Carbonochloridic Acid, Trichloromethyl Ester.
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
503-38-8	Diphosgene	99	207-965-9

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid.
Danger! Corrosive. Causes eye and skin burns. Reacts violently and/or explosively with water, steam or moisture. Lachrymator (substance which increases the flow of tears). May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. May cause sensitization by inhalation and by skin contact.
Target Organs: None.

Potential Health Effects
Eye: Causes eye burns. Lachrymator (substance which increases the flow of tears).
Skin: Causes skin burns. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. Direct aspiration into the lungs may cause chemical pneumonitis, pulmonary edema, and hemorrhaging.
Inhalation: Causes chemical burns to the respiratory tract. 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: Repeated or prolonged exposure may cause allergic reactions in sensitive individuals.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.
Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: Containers can build up pressure if exposed to heat and/or fire. 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. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May ignite or explode on contact with steam or moist air. Substance may react with water, and may release corrosive and/or toxic gases.
Extinguishing Media: Use dry sand or earth to smother fire. Do NOT get water inside containers. For large fires, use water spray, fog or regular foam. Contact professional fire-fighters immediately. Cool containers with flooding quantities of water until well after fire is out. For small fires, use dry chemical or carbon dioxide.
Flash Point: Not available.
Autoignition Temperature: Not available.
Explosion Limits, Lower:N/A
Upper: N/A
NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 1; Special Hazard: -W-

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Isolate area and deny entry. Provide ventilation. Do not expose spill to water. Do not get water inside containers. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Do not allow water to get into the container because of violent reaction. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation. Do not allow contact with water. Discard contaminated shoes. Keep from contact with moist air and steam.
Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from water. Corrosives area. Keep refrigerated. (Store below 4°C/39°F.) Vent periodically.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Diphosgene	none listed	none listed	none listed

OSHA Vacated PELs: Diphosgene: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to minimize contact with skin.
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: Liquid
Appearance: clear, colorless
Odor: phosgene odor (resembling that of newly mown hay)
pH: Not available.
Vapor Pressure: 13.7 mbar @ 20
Vapor Density: 6.8
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 128 deg C @ 760.00mmHg
Freezing/Melting Point:-57 deg C
Decomposition Temperature: Not available.
Solubility: may decompose
Specific Gravity/Density:1.6400g/cm3
Molecular Formula:C2Cl4O2
Molecular Weight:197.83

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Combines vigorously or explosively with water.
Conditions to Avoid: Incompatible materials, excess heat, exposure to moist air or water, oxidizers.
Incompatibilities with Other Materials: Metals, strong oxidizing agents, ammonia, isopropyl alcohol.
Hazardous Decomposition Products: Hydrogen chloride, phosgene, irritating and toxic fumes and gases, hydrogen gas, hydrogen gas.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 503-38-8: LQ7350000
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 503-38-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.

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Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: Based on its low melting and boiling points, this chemical is expected to rapidly volatilize into the atmosphere.
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:	TOXIC LIQUIDS, CORROSIVE, ORGANIC, N.O.S.	TOXIC LIQUID CORROSIVE ORGANIC NO (DIPHOSGENE)
Hazard Class:	6.1	6.1(8)
UN Number:	UN2927	UN2927
Packing Group:	I	I

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 503-38-8 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
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
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# 503-38-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

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+ C
Risk Phrases:
R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.
R 34 Causes burns.

Safety Phrases:
S 36/39 Wear suitable protective clothing and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)
CAS# 503-38-8: No information available.
Canada - DSL/NDSL
CAS# 503-38-8 is listed on Canada's NDSL List.
Canada - WHMIS
not available.
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

Section 16 - Additional Information

MSDS Creation Date: 10/20/1998
Revision #3 Date: 10/03/2005