SAFETY DATA SHEET

Creation Date 22-September-2009 **Revision Date** 24-December-2021 **Revision Number** 6

1. Identification

Product Name **Allyl chloride, stabilized**

Cat No. : **AC102910000; AC102910010; AC102910025; AC102910050; AC102911000**

CAS-No 107-05-1
Synonyms 3-Chloropropene

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Importer/Distributor
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Manufacturer
Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Flammable liquids	Category 2
Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Central nervous system (CNS), Liver, Kidney.	
Physical Hazards Not Otherwise Classified	Category 1

Hazardous polymerization may occur

Label Elements

Signal Word
Danger

Hazard Statements
Highly flammable liquid and vapor
Harmful if swallowed, in contact with skin or if inhaled
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
Suspected of causing genetic defects
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure
Harmful if inhaled
Hazardous polymerization may occur

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Keep cool. Protect from sunlight
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Use only non-sparking tools
Take precautionary measures against static discharges
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Call a POISON CENTER/ doctor if you feel unwell
Rinse mouth
Wash contaminated clothing before reuse
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Very toxic to aquatic organisms

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
1-Propene, 3-chloro-	107-05-1	>95
Propylene oxide	75-56-9	0.05-0.09

4. First-aid measures

Eye Contact Immediate medical attention is required. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.

Ingestion Do NOT induce vomiting. Get medical attention.

Most important symptoms/effects Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Carbon dioxide (CO_2). Dry chemical. Water mist may be used to cool closed containers. Chemical foam. Water mist may be used to cool closed containers.

Unsuitable Extinguishing Media No information available

Flash Point -29 °C / -20.2 °F

Method - No information available

Autoignition Temperature 390 °C / 734 °F

Explosion Limits

Upper 11.2%

Lower 3.3%

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO_2). Phosgene. Hydrogen chloride gas.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
3	3	2	N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Wear protective gloves/clothing and eye/face protection. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing.

Environmental Precautions Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment and Clean Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Provide adequate ventilation.

7. Handling and storage

Handling Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Remove all sources of ignition. Take precautionary measures against static discharges. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage. Flammables area. Keep away from heat, sparks and flame. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Acids. Bases. Amines. Metals. Finely powdered metals.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
1-Propene, 3-chloro-	TWA: 1 ppm TWA: 3.1 mg/m³ STEL: 2 ppm STEL: 6.2 mg/m³	TWA: 1 ppm STEL: 2 ppm Skin	TWA: 1 ppm STEL: 2 ppm Skin	TWA: 1 ppm TWA: 3 mg/m³ STEL: 2 ppm STEL: 6 mg/m³	TWA: 1 ppm STEL: 2 ppm Skin	(Vacated) TWA: 1 ppm (Vacated) TWA: 3 mg/m³ (Vacated) STEL: 2 ppm (Vacated) STEL: 6 mg/m³ TWA: 1 ppm TWA: 3 mg/m³	IDLH: 250 ppm TWA: 1 ppm TWA: 3 mg/m³ STEL: 2 ppm STEL: 6 mg/m³
Propylene oxide	TWA: 2 ppm TWA: 4.7 mg/m³	TWA: 2 ppm	TWA: 2 ppm	TWA: 2 ppm	TWA: 2 ppm	(Vacated) TWA: 20 ppm (Vacated) TWA: 50 mg/m³ TWA: 100 ppm TWA: 240 mg/m³	IDLH: 400 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to

control hazardous materials at source

Personal protective equipment

Eye Protection	Goggles
Hand Protection	Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Viton (R)	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
Recommended Filter type: low boiling organic solvent Type AX Brown conforming to EN371

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls
Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	pungent
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-136 °C / -212.8 °F
Boiling Point/Range	44 - 46 °C / 111.2 - 114.8 °F @ 760 mmHg
Flash Point	-29 °C / -20.2 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	11.2%
Lower	3.3%
Vapor Pressure	395 mbar @ 20 °C
Vapor Density	No information available
Specific Gravity	0.939
Solubility	3.6 g/L (20°C)
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	390 °C / 734 °F
Decomposition Temperature	No information available
Viscosity	0.34 mPa.s at 20 °C
Molecular Formula	C3 H5 Cl
Molecular Weight	76.53

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability May form explosive peroxides.

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition. Excess heat. Exposure to light. Incompatible products. Exposure to moist air or water.

Incompatible Materials Acids, Bases, Amines, Metals, Finely powdered metals

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2), Phosgene, Hydrogen chloride gas

Hazardous Polymerization Hazardous polymerization may occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information
Oral LD50 Category 4. ATE = 300 - 2000 mg/kg.
Dermal LD50 Category 4. ATE = 1000 - 2000 mg/kg.
Vapor LC50 Category 3. ATE = 2 - 10 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1-Propene, 3-chloro-	LD50 = 450 mg/kg (Rat)	LD50 = 2026 mg/kg (Rabbit)	LC50 = 11 mg/L (Rat) 4 h
Propylene oxide	LD50 = 520 mg/kg (Rat)	LD50 = 1244 mg/kg (Rabbit)	9.48 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes, respiratory system and skin

Sensitization No information available

Carcinogenicity Possible cancer hazard. May cause cancer based on animal data. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
1-Propene, 3-chloro-	107-05-1	Not listed	Not listed	A3	Not listed	A3
Propylene oxide	75-56-9	Group 2B	Reasonably Anticipated	A3	X	A3

IARC (International Agency for Research on Cancer)

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
ACGIH: (American Conference of Governmental Industrial Hygienists)

Mexico - Occupational Exposure Limits - Carcinogens

Mexico - Occupational Exposure Limits - Carcinogens
A1 - Confirmed Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Confirmed Animal Carcinogen
A4 - Not Classifiable as a Human Carcinogen

A5 - Not Suspected as a Human Carcinogen

Mutagenic Effects Substances which cause concern for man owing to possible mutagenic effects but for which the available information is not adequate for making a satisfactory assessment

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system
STOT - repeated exposure Central nervous system (CNS) Liver Kidney

Aspiration hazard No information available

Symptoms / effects,both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1-Propene, 3-chloro-	Not listed	LC50: 41.03 - 67.02 mg/L, 96h static (Poecilia reticulata) LC50: 14.97 - 24.78 mg/L, 96h static (Pimephales promelas) LC50: 33.52 - 53.47 mg/L, 96h static (Lepomis macrochirus)	Not listed	Not listed
Propylene oxide	EC50: = 240 mg/L, 96h (Pseudokirchneriella subcapitata)	LC50: = 215 mg/L, 96h static (Lepomis macrochirus)	EC50 = 3300 mg/L 160 min	EC50: = 350 mg/L, 48h (Daphnia magna)

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
1-Propene, 3-chloro-	2.1
Propylene oxide	0.08

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN1100
Proper Shipping Name ALLYL CHLORIDE

Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	I

TDG

UN-No	UN1100
Proper Shipping Name	ALLYL CHLORIDE
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	I

IATA

UN-No	UN1100
Proper Shipping Name	ALLYL CHLORIDE
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	I

IMDG/IMO

UN-No	UN1100
Proper Shipping Name	ALLYL CHLORIDE
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	I

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
1-Propene, 3-chloro-	107-05-1	X	-	X	ACTIVE	203-457-6	-	-
Propylene oxide	75-56-9	X	-	X	ACTIVE	200-879-2	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
1-Propene, 3-chloro-	107-05-1	X	KE-05882	X	X	X	X	X	X
Propylene oxide	75-56-9	X	KE-24565	X	X	X	X	X	X

Legend:
X - Listed '-' - Not Listed
KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
1-Propene, 3-chloro-	Part 4 Substance		Subject to Monitoring and Surveillance Activities
Propylene oxide	Part 1, Group A Substance Part 4 Substance	Schedule I	Subject to Monitoring and Surveillance Activities

Legend NPRI - National Pollutant Release Inventory

Other International Regulations

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
1-Propene, 3-chloro-	-	Use restricted. See item 75. (see link for restriction details)	-
Propylene oxide	-	Use restricted. See item 28. (see link for restriction details) Use restricted. See item 29. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	SVHC Candidate list - Carcinogenic (Article 57a) SVHC Candidate list - Mutagenic (Article 57b)

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

https://echa.europa.eu/authorisation-list
https://echa.europa.eu/substances-restricted-under-reach
https://echa.europa.eu/candidate-list-table

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

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
1-Propene, 3-chloro-	107-05-1	Listed	Not applicable	Not applicable	Not applicable
Propylene oxide	75-56-9	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
1-Propene, 3-chloro-	107-05-1	Not applicable	Not applicable	Not applicable	Annex I - Y45
Propylene oxide	75-56-9	5 tonne	50 tonne	Not applicable	Not applicable

16. Other information

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Creation Date 22-September-2009
Revision Date 24-December-2021
Print Date 24-December-2021
Revision Summary This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS