

Safety Data Sheet acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

1 Identification

- **Product identifier**
- **Trade name:** C-398
- **Other means of identification**
- **Application of the substance / the mixture** For Laboratory Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
NSI Lab Solutions
7212 ACC Blvd.,
Raleigh, NC 27617
USA
- **Information department:** Product safety department
- **Emergency telephone number:** During normal opening times: +1 (919) 789-3000

* 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable liquids 2

H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute toxicity - inhalation 3

H331 Toxic if inhaled.



GHS08 Health hazard

Specific target organ toxicity (single exposure) 1 H370 Causes damage to the central nervous system and the visual organs.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS06



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
methanol

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 1)

· Hazard statements*Highly flammable liquid and vapor.**Toxic if inhaled.**Causes damage to the central nervous system and the visual organs.***· Precautionary statements***Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**Ground / bond container and receiving equipment.**Use explosion-proof [electrical/ventilating/lighting] equipment.**Use non-sparking tools.**Take action to prevent static discharge.**Do not breathe dust/fume/gas/mist/vapors/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].**If inhaled: Remove person to fresh air and keep comfortable for breathing.**IF exposed or concerned: Call a poison center/doctor.**Specific treatment (see on this label).**In case of fire: Use CO₂, powder or water spray to extinguish.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Information pertaining to particular dangers for man and environment:****· Classification system:****· NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 3

Reactivity = 0

· HMIS-ratings (scale 0 - 4)

Health = *1

Fire = 3

Reactivity = 0

· Other hazards**· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.**· Classification according to (d)(1)(ii) of § 1910.1200***The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.***· Hazards not otherwise classified***There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.*

* 3 Composition/information on ingredients

· Chemical characterization: Mixtures**· Description:** Mixture of the substances listed below with nonhazardous additions.

(Contd. on page 3)

— US —

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 2)

· Dangerous components:		
67-56-1	methanol	80–100%
· Non-hazardous components		
96-12-8	1,2-dibromo-3-chloropropane	<0.1%
106-93-4	1,2-dibromoethane	<0.1%

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

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

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

- **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

- **Protective equipment:** Mouth respiratory protective device.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

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

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

- **Protective Action Criteria for Chemicals**

· PAC-1:		
67-56-1	methanol	530 ppm
96-12-8	1,2-dibromo-3-chloropropane	0.030 mg/m ³
106-93-4	1,2-dibromoethane	17 ppm

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 3)

· PAC-2:		
67-56-1	methanol	2100 ppm
96-12-8	1,2-dibromo-3-chloropropane	0.72 mg/m ³
106-93-4	1,2-dibromoethane	24 ppm
· PAC-3:		
67-56-1	methanol	7200 ppm
96-12-8	1,2-dibromo-3-chloropropane	4.3 mg/m ³
106-93-4	1,2-dibromoethane	46 ppm

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities**· Storage:****· Requirements to be met by storerooms and receptacles:** Store in a cool location.**· Information about storage in one common storage facility:** Not required.**· Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

* 8 Exposure controls/personal protection

· Control parameters**· Components with limit values that require monitoring at the workplace:****67-56-1 methanol**PEL Long-term value: 260 mg/m³, 200 ppmREL Short-term value: 325 mg/m³, 250 ppmLong-term value: 260 mg/m³, 200 ppm

Skin

TLV Short-term value: 328 mg/m³, 250 ppmLong-term value: 262 mg/m³, 200 ppm

Skin; BEI

(Contd. on page 5)

— US —

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 4)

· Ingredients with biological limit values:	
67-56-1 methanol	
BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

* 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Liquid
- **Color:** Colorless
- **Odor:** Alcohol-like
- **Odor threshold:** Not determined.
- **Melting point/Melting range:** -98 °C (-144.4 °F)
- **Boiling point/Boiling range:** 64.7 °C (148.5 °F)

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 5)

· Flammability:	Highly flammable.
· Explosion limits:	
· Lower:	5.5 Vol %
· Upper:	44 Vol %
· Flash point:	11 °C (51.8 °F)
· Auto igniting:	455 °C (851 °F)
· Decomposition temperature:	Not determined.
· pH-value:	Not determined.
· Viscosity:	
· Kinematic:	Not determined.
· Dynamic:	Not determined.
· Solubility in / Miscibility with	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Vapor pressure:	
· Density at 20 °C (68 °F):	0.79054 g/cm ³ (6.59706 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Particle characteristics	Not applicable.
· Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Solvent content:	
· Organic solvents:	100.0 %
· VOC content:	99.98 %
	790.4 g/l / 6.60 lb/gal
· Solids content:	0.0 %
· Change in condition	
· Evaporation rate	Not determined.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

— US —
(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 6)

*11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Inhalative	LC50/4 h	3 mg/l
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67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
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Dermal	LD50	15,800 mg/kg (rabbit)
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- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

- **Interactive effects** No interactive effects between components are known.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

96-12-8	1,2-dibromo-3-chloropropane	2B
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106-93-4	1,2-dibromoethane	2A
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- **NTP (National Toxicology Program)**

96-12-8	1,2-dibromo-3-chloropropane	R
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106-93-4	1,2-dibromoethane	R
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- **OSHA-Ca (Occupational Safety & Health Administration)**

96-12-8	1,2-dibromo-3-chloropropane
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- **Alternative sources for toxicological information** No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects**

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

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.

— US —

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 7)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	UN1992
· DOT, IMDG, IATA	
· UN proper shipping name	Flammable liquids, toxic, n.o.s. (Methanol)
· DOT	FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
· IMDG	Flammable liquid, toxic, n.o.s. (METHANOL)
· IATA	
· Transport hazard class(es)	
· DOT	
	
· Class	3 Flammable liquids
· Label	3, 6.1
· IMDG	
	
· Class	3 Flammable liquids
· Label	3/6.1
· IATA	
	
· Class	3 Flammable liquids
· Label	3 (6.1)
· Packing group	
· DOT, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 8)

· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	336
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· UN "Model Regulation":	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL), 3 (6.1), II

*15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
No further relevant information available.	
· Sara	
· Section 355 (extremely hazardous substances):	
None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	
All ingredients are listed.	
· TSCA (Toxic Substances Control Act):	
All components have the value ACTIVE.	
· Hazardous Air Pollutants	
All ingredients are listed.	
· Proposition 65	
· Chemicals known to cause cancer:	
96-12-8	1,2-dibromo-3-chloropropane
106-93-4	1,2-dibromoethane
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
96-12-8	1,2-dibromo-3-chloropropane
106-93-4	1,2-dibromoethane
· Chemicals known to cause developmental toxicity:	
67-56-1	methanol
106-93-4	1,2-dibromoethane

(Contd. on page 10)

— US —

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 9)

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

106-93-4 | 1,2-dibromoethane

L

· **TLV (Threshold Limit Value)**

106-93-4 | 1,2-dibromoethane

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

96-12-8 | 1,2-dibromo-3-chloropropane

106-93-4 | 1,2-dibromoethane

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).· **Hazard pictograms**

GHS02



GHS06



GHS08

· **Signal word** Danger· **Hazard-determining components of labeling:**

methanol

· **Hazard statements**

Highly flammable liquid and vapor.

Toxic if inhaled.

Causes damage to the central nervous system and the visual organs.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground / bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take action to prevent static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If exposed or concerned: Call a poison center/doctor.

Specific treatment (see on this label).

In case of fire: Use CO₂, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

Trade name: C-398

(Contd. of page 10)

· **Contact:** - Department Technical Manager· **Date of previous version** 02/29/2024· **Date of preparation** 06/30/2026· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable liquids 2: Flammable liquids – Category 2

Acute toxicity - inhalation 3: Acute toxicity – Category 3

Specific target organ toxicity (single exposure) 1: Specific target organ toxicity (single exposure) – Category 1

· *** Data compared to the previous version altered.**

— US —