Conforms to HCS 2012 - United States

Compliant SDS for GHS - Canada WHMIS 2015

SAFETY DATA SHEET

Arterial L.E 28

Section 1. Identification

GHS product identifier : Arterial L.E 28

Product code : Not available.

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Embalming fluid.

Supplier's details : Genelyn Canada/North America/Asia Inc.
711 Ontario Street Unit 3
Cobourg Ontario K9A3C6
Phone: 1-905-376-3108
Toll Free number: 1-833-GENELYN (436-3596)

Emergency telephone number (with hours of operation) : For Hazardous Materials [or Dangerous Goods] Incident
Spill, Leak, Fire, Exposure, or Accident
Call CANUTEC (888) 226-8832 : Customer Service
Genelyn North America/Asia (833)436-3596 (24hrs/7days)

Section 2. Hazard(s) identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 3
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Section 2. Hazard(s) identification

Hazard pictograms :

Signal word : Danger

Hazard statements : H302 + H312 - Harmful if swallowed or in contact with skin.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H331 - Toxic if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H341 - Suspected of causing genetic defects.
H350 - May cause cancer.
H370 - Causes damage to organs.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P271 - Use only outdoors or in a well-ventilated area.
P260 - Do not breathe vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.

Response : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
P304 + P340, P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.
P301 + P312, P330 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage : P405 - Store locked up.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified (US) : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Section 3. Composition/information on ingredients

Ingredient name	% (w/w)	CAS number
1-Methoxy-2-propanol	10 - 30	107-98-2
Formaldehyde	7 - 13	50-00-0
Glycerol	1 - 5	56-81-5
Methanol	1 - 5	67-56-1
Disodium tetraborate decahydrate	0.1 - 1	1303-96-4

United States: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.
Canada: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Toxic if inhaled. Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Section 4. First aid measures

Skin contact : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limits

Ingredient name	Exposure limits
1-Methoxy-2-propanol	**ACGIH TLV (United States, 3/2019).** TWA: 50 ppm 8 hours. TWA: 184 mg/m³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 369 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 360 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 540 mg/m³ 15 minutes.
Formaldehyde	**ACGIH TLV (United States, 3/2019). Skin sensitizer. Inhalation sensitizer.** STEL: 0.3 ppm 15 minutes. TWA: 0.1 ppm 8 hours. **OSHA PEL Z2 (United States, 2/2013).** TWA: 0.75 ppm 8 hours. STEL: 2 ppm 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 0.016 ppm 10 hours. CEIL: 0.1 ppm 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 0.75 ppm 8 hours. STEL: 2 ppm 15 minutes.
Glycerol	**OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Methanol	**ACGIH TLV (United States, 3/2019). Absorbed through skin.** TWA: 200 ppm 8 hours. TWA: 262 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 328 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2016). Absorbed through skin.** TWA: 200 ppm 10 hours. TWA: 260 mg/m³ 10 hours. STEL: 250 ppm 15 minutes. STEL: 325 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).**

Section 8. Exposure controls/personal protection

	TWA: 200 ppm 8 hours. TWA: 260 mg/m³ 8 hours.
Disodium tetraborate decahydrate	**NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2019).** TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction. STEL: 6 mg/m³ 15 minutes. Form: Inhalable fraction.

Canada

Occupational exposure limits

Ingredient name	Exposure limits
1-Methoxy-2-propanol	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 100 ppm 8 hours. 15 min OEL: 553 mg/m³ 15 minutes. 8 hrs OEL: 369 mg/m³ 8 hours. 15 min OEL: 150 ppm 15 minutes. **CA British Columbia Provincial (Canada, 5/2019).** STEL: 100 ppm 15 minutes. TWA: 50 ppm 8 hours. **CA Ontario Provincial (Canada, 1/2018).** TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes. **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 100 ppm 8 hours. TWAEV: 369 mg/m³ 8 hours. STEV: 150 ppm 15 minutes. STEV: 553 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
Formaldehyde	**CA Alberta Provincial (Canada, 6/2018).** C: 1.3 mg/m³ 8 hrs OEL: 0.75 ppm 8 hours. 8 hrs OEL: 0.9 mg/m³ 8 hours. C: 1 ppm **CA British Columbia Provincial (Canada, 5/2019). Skin sensitizer. Inhalation sensitizer.** TWA: 0.3 ppm 8 hours. C: 1 ppm **CA Ontario Provincial (Canada, 1/2018).** C: 1.5 ppm STEL: 1 ppm 15 minutes. **CA Quebec Provincial (Canada, 1/2014).** STEV: 2 ppm 15 minutes. STEV: 3 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013). Skin sensitizer.**

Section 8. Exposure controls/personal protection

	CEIL: 0.3 ppm
Glycerol	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 10 mg/m³ 8 hours. Form: Mist **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 20 mg/m³ 15 minutes. Form: Mist TWA: 10 mg/m³ 8 hours. Form: Mist **CA Ontario Provincial (Canada, 1/2018).** TWA: 10 mg/m³ 8 hours. Form: Mist **CA British Columbia Provincial (Canada, 5/2019).** TWA: 3 mg/m³ 8 hours. Form: Respirable mist TWA: 10 mg/m³ 8 hours. Form: Total mist
Methanol	**CA Alberta Provincial (Canada, 6/2018). Absorbed through skin.** 8 hrs OEL: 262 mg/m³ 8 hours. 8 hrs OEL: 200 ppm 8 hours. 15 min OEL: 250 ppm 15 minutes. 15 min OEL: 328 mg/m³ 15 minutes. **CA British Columbia Provincial (Canada, 5/2019). Absorbed through skin.** TWA: 200 ppm 8 hours. STEL: 250 ppm 15 minutes. **CA Ontario Provincial (Canada, 1/2018). Absorbed through skin.** TWA: 200 ppm 8 hours. STEL: 250 ppm 15 minutes. **CA Quebec Provincial (Canada, 1/2014). Absorbed through skin.** TWAEV: 200 ppm 8 hours. TWAEV: 262 mg/m³ 8 hours. STEV: 250 ppm 15 minutes. STEV: 328 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.** STEL: 250 ppm 15 minutes. TWA: 200 ppm 8 hours.
Disodium tetraborate decahydrate	**CA British Columbia Provincial (Canada, 5/2019).** TWA: 2 mg/m³ 8 hours. Form: Inhalable STEL: 6 mg/m³ 15 minutes. Form: Inhalable **CA Ontario Provincial (Canada, 1/2018).** TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction. STEL: 6 mg/m³ 15 minutes. Form: Inhalable fraction.

Section 8. Exposure controls/personal protection

	CA Saskatchewan Provincial (Canada, 7/2013). STEL: 6 mg/m³ 15 minutes. Form: Inhalable fraction. TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction. **CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 1 mg/m³ 8 hours. 15 min OEL: 3 ppm 15 minutes. **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 5 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Fluorescent orange.

Odor : Not available.

Odor threshold : Not available.

pH : 7.1 to 7.4

Melting/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flash point : Non-flammable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility : Easily soluble in the following materials: cold water and hot water.

Solubility in water : Soluble.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1-Methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg 6600	-
	LD50 Oral	Rat	mg/kg 250	-
Formaldehyde	LC50 Inhalation Gas.	Rat	ppm 270 mg/	4 hours
	LD50 Dermal	Rabbit	kg 100 mg/kg	-
	LD50 Oral	Rat	12600 mg/kg	-
Glycerol	LD50 Oral	Rat	145000 ppm	-
Methanol	LC50 Inhalation Gas.	Rat	64000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	15800 mg/kg	4 hours
	LD50 Dermal	Rabbit	20 g/kg 2660	-
	LD50 Oral	Rat	mg/kg	-
	LD50 Oral	Rat		-
				-
Disodium tetraborate decahydrate				-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-Methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Formaldehyde	Eyes - Severe irritant	Rabbit	-	24 hours 750 µg	-
	Eyes - Severe irritant	Rabbit	-	750 µg	-
	Skin - Mild irritant	Rabbit	-	540 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 50 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
Formaldehyde	+	1	Known to be a human carcinogen.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
1-Methoxy-2-propanol	Category 3	-	Narcotic effects
Formaldehyde	Category 3	-	Respiratory tract irritation
Methanol	Category 1	-	-

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Toxic if inhaled. Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Harmful in contact with skin. Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Section 11. Toxicological information

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : Suspected of causing genetic defects.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
NF Arterial Enhanced 1-	695	1906.9	2066.3	131.1	N/A
Methoxy-2-propanol	6600	13000	N/A	N/A	N/A
Formaldehyde	100	270	250	N/A	N/A
Glycerol	12600	N/A	N/A	N/A 3	N/A
Methanol	100	300	64000	N/A	N/A
Disodium tetraborate decahydrate	2660	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Formaldehyde	Acute LC50 1170 ul/L Marine water	Crustaceans - Artemia sp.	48 hours
	Chronic NOEC 953.9 ppm Fresh water	Fish - Oncorhynchus tshawytscha - Egg	43 days
Methanol	Acute LC50 2500000 µg/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/L Fresh water	Fish - Danio rerio - Egg	96 hours
		Fish - Pimephales promelas	48 hours
Disodium tetraborate decahydrate	Acute LC50 710000 µg/L Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 1645 mg/L Fresh water		96 hours
			48 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
1-Methoxy-2-propanol	<1	-	low
Glycerol	-1.76	-	low
Methanol	-0.77	<10	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Formaldehyde	50-00-0	Listed	U122
Methanol	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN2810	UN2810	UN2810	UN2810
UN proper shipping name	TOXIC LIQUID, ORGANIC, N. O.S. (Formaldehyde)	TOXIC LIQUID, ORGANIC, N. O.S. (Formaldehyde)	TOXIC LIQUID, ORGANIC, N. O.S. (Formaldehyde)	TOXIC LIQUID, ORGANIC, N. O.S. (Formaldehyde)
Transport hazard class(es)	6.1 	6.1 	6.1 	6.1 
Packing group	III	III	III	III
Environmental hazards	No.	No.	No.	No.

AERG : 153

Additional information

Section 14. Transport information

DOT Classification : **Reportable quantity** 826.51 lbs / 375.24 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.26-2.36 (Class 6).

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: Nonylphenol, branched, ethoxylated

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 311: Formaldehyde; Formic acid

Clean Air Act (CAA) 112 regulated toxic substances: Formaldehyde

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ (lbs)	SARA 302 TPQ (gallons)	SARA 304 RQ (lbs)	SARA 304 RQ (gallons)
Formaldehyde	≥10 - ≤23	Yes.	500	73.9	100	14.8
Ethylene oxide	≤0.001	Yes.	1000	-	10	-

SARA 304 RQ : 826.5 lbs / 375.2 kg

SARA 311/312

Classification : ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 3
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

Section 15. Regulatory information

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Composition/information on ingredients

Name	%	Classification
1-Methoxy-2-propanol	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 3 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Formaldehyde	≥10 - ≤23	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Methanol	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
Disodium tetraborate decahydrate	≥0.3 - ≤1	TOXIC TO REPRODUCTION - Category 1B

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Formaldehyde Methanol	50-00-0 67-56-1	≥10 - ≤23 ≥1 - ≤3
Supplier notification	Formaldehyde Methanol	50-00-0 67-56-1	≥10 - ≤23 ≥1 - ≤3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: Formaldehyde; Methanol; 1-Methoxy-2-propanol; Glycerol

New York : The following components are listed: Formaldehyde; Methanol

New Jersey : The following components are listed: Formaldehyde; Methanol; 1-Methoxy-2-propanol; Glycerol; Propane-1,2-diol

Pennsylvania : The following components are listed: Formaldehyde; Methanol; 1-Methoxy-2-propanol; Glycerol; Propane-1,2-diol

California Prop. 65

Section 15. Regulatory information

⚠ **WARNING**: This product can expose you to chemicals including Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Formaldehyde, which is known to the State of California to cause cancer, and Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Formaldehyde Methanol Ethylene oxide	Yes. - Yes.	- Yes. Yes.

Canadian lists

Canadian NPRI : The following components are listed: Formaldehyde; Methanol; 1-Methoxy-2-propanol

CEPA Toxic substances : The following components are listed: Formaldehyde

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Canada : All components are listed or exempted.

United States (TSCA 8b) : All components are active or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 3	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
GERM CELL MUTAGENICITY - Category 2	Calculation method
CARCINOGENICITY - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method

Section 16. Other information

History

Date of issue/Date of revision : 05/19/2022

Date of previous issue : **03/15/2021**

Version : 2

Prepared by : Genelyn North America/Aquabond

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.