Custom SVOA Standard

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/30/2019 Revision date: 12/30/2019 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : Custom SVOA Standard

Product code : AL0-130973

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Phenova
6390 Joyce Dr. Suite 100
Golden, CO 80403 - United States
T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - www.phenova.com

1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924
ChemTel Assistance (International) +1 813-248-0585

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapour
Carcinogenicity Category 1B	H350	May cause cancer

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H225 - Highly flammable liquid and vapour
H350 - May cause cancer

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P308+P313 - If exposed or concerned: Get medical advice/attention.
P370+P378 - In case of fire: Use media other than water to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.
Methylene Chloride (Component)	(CAS-No.) 75-09-2	99
1,4-dioxane (Component)	(CAS-No.) 123-91-1	0.1
N-nitrosodibutylamine (Component)	(CAS-No.) 924-16-3	0.1
N-Nitrosodiethylamine (Component)	(CAS-No.) 55-18-5	0.1
N-Nitrosopyrrolidine (Component)	(CAS-No.) 930-55-2	0.1

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Custom SVOA Standard		
ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA

1,4-dioxane (123-91-1)		
ACGIH	Local name	1,4-Dioxane
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	Liver dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m³)	360 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA

N-nitrosodibutylamine (924-16-3)
Not applicable

N-Nitrosodiethylamine (55-18-5)
Not applicable

N-Nitrosopyrrolidine (930-55-2)
Not applicable

Methylene Chloride (75-09-2)		
ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
	:	Colorless
	:	characteristic
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	No data available
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

1,4-dioxane (123-91-1)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	7600 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	51 mg/l (4 h, Rat, Inhalation)
LC50 inhalation rat (ppm)	14250 ppm (4 h, Rat, Inhalation)
ATE US (dermal)	7600 mg/kg body weight
ATE US (vapors)	51 mg/l/4h
ATE US (dust, mist)	51 mg/l/4h

N-nitrosodibutylamine (924-16-3)	
LD50 oral rat	1200 mg/kg (Rat)
ATE US (oral)	1200 mg/kg body weight

N-Nitrosodiethylamine (55-18-5)	
LD50 oral rat	220 mg/kg (Rat, Oral)
ATE US (oral)	220 mg/kg body weight

N-Nitrosopyrrolidine (930-55-2)	
LD50 oral rat	900 mg/kg (Rat, Oral)
ATE US (oral)	900 mg/kg body weight

Methylene Chloride (75-09-2)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

1,4-dioxane (123-91-1)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

N-nitrosodibutylamine (924-16-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

N-Nitrosodiethylamine (55-18-5)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

N-Nitrosopyrrolidine (930-55-2)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Methylene Chloride (75-09-2)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.
Symptoms/effects	:	Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

1,4-dioxane (123-91-1)	
LC50 fish 1	13000 mg/l (96 h, Pimephales promelas, GLP)
EC50 Daphnia 1	8450 mg/l (24 h, Daphnia magna)

N-Nitrosodiethylamine (55-18-5)	
LC50 fish 1	775 mg/l (96 h, Pimephales promelas)

Methylene Chloride (75-09-2)	
LC50 fish 1	193 mg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	168.2 mg/l (48 h, Daphnia magna)

12.2. Persistence and degradability

Custom SVOA Standard	
Persistence and degradability	Not established.

1,4-dioxane (123-91-1)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O_2/g substance
ThOD	1.8 g O_2/g substance
BOD (% of ThOD)	0

N-nitrosodibutylamine (924-16-3)	
Persistence and degradability	Biodegradability in water: no data available.

N-Nitrosodiethylamine (55-18-5)	
Persistence and degradability	Not readily biodegradable in water.

N-Nitrosopyrrolidine (930-55-2)	
Persistence and degradability	Biodegradability in water: no data available.

Methylene Chloride (75-09-2)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.

12.3. Bioaccumulative potential

Custom SVOA Standard	
Bioaccumulative potential	Not established.

1,4-dioxane (123-91-1)	
BCF fish 1	0.2 - 0.7 (Cyprinus carpio, Test duration: 6 weeks)
Log Pow	-0.27 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

N-nitrosodibutylamine (924-16-3)	
Bioaccumulative potential	No bioaccumulation data available.

N-Nitrosodiethylamine (55-18-5)	
BCF other aquatic organisms 1	1 (Estimated value)
Log Pow	0.48
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

N-Nitrosopyrrolidine (930-55-2)	
Bioaccumulative potential	No bioaccumulation data available.

Methylene Chloride (75-09-2)	
BCF fish 1	2 - 40 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Semi-static system, Fresh water, Experimental value, GLP)
Log Pow	1.25 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

1,4-dioxane (123-91-1)	
Surface tension	0.037 N/m (20 °C)

Methylene Chloride (75-09-2)	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Custom SVOA Standard	

1,4-dioxane (123-91-1)	

N-nitrosodibutylamine (924-16-3)	

N-Nitrosodiethylamine (55-18-5)	

N-Nitrosopyrrolidine (930-55-2)	

Methylene Chloride (75-09-2)	

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2810 Toxic, liquids, organic, n.o.s. (dichloromethane ; diethylnitrosoamine ; N-nitrosodibutylamine ; 1,4-dioxane ; 1-nitrosopyrrolidine), 6.1, III

UN-No.(DOT) : UN2810

Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s.

dichloromethane ; diethylnitrosoamine ; N-nitrosodibutylamine ; 1,4-dioxane ; 1-nitrosopyrrolidine

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 6.1 - Poison

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Symbols	:	G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102)	:	IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	153
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	220 L
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	40 - Stow ‘‘clear of living quarters’’
Emergency Response Guide (ERG) Number	:	153
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG)	:	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (dichloromethane ; diethylnitrosoamine ; N-nitrosodibutylamine ; 1,4-dioxane ; 1-nitrosopyrrolidine), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
UN-No. (IMDG)	:	2810
Proper Shipping Name (IMDG)	:	TOXIC LIQUID, ORGANIC, N.O.S.
Class (IMDG)	:	6.1 - Toxic substances
Packing group (IMDG)	:	III - substances presenting low danger

Air transport

Transport document description (IATA)	:	UN 2810 Toxic liquid, organic, n.o.s. (dichloromethane ; diethylnitrosoamine ; N-nitrosodibutylamine ; 1,4-dioxane ; 1-nitrosopyrrolidine), 6.1, III, ENVIRONMENTALLY HAZARDOUS
UN-No. (IATA)	:	2810
Proper Shipping Name (IATA)	:	Toxic liquid, organic, n.o.s.
Class (IATA)	:	6.1 - Toxic Substances
Packing group (IATA)	:	III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

1,4-dioxane (123-91-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb

N-nitrosodibutylamine (924-16-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb

N-Nitrosodiethylamine (55-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1 lb

N-Nitrosopyrrolidine (930-55-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a final Significant New Use Rule.
CERCLA RQ	1 lb

Methylene Chloride (75-09-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

1,4-dioxane (123-91-1)
Listed on the Canadian DSL (Domestic Substances List)

N-nitrosodibutylamine (924-16-3)
Listed on the Canadian NDSL (Non-Domestic Substances List)

N-Nitrosodiethylamine (55-18-5)
Listed on the Canadian DSL (Domestic Substances List)

N-Nitrosopyrrolidine (930-55-2)
Listed on the Canadian NDSL (Non-Domestic Substances List)

Methylene Chloride (75-09-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

National regulations

1,4-dioxane (123-91-1)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)

N-nitrosodibutylamine (924-16-3)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)

N-Nitrosodiethylamine (55-18-5)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)

N-Nitrosopyrrolidine (930-55-2)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)

Methylene Chloride (75-09-2)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA Hazardous Air Pollutant (HAPS)

15.3. US State regulations

1,4-dioxane (123-91-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	30 µg/day	

N-nitrosodibutylamine (924-16-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.06 µg/day	

N-Nitrosodiethylamine (55-18-5)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.02 µg/day	

N-Nitrosopyrrolidine (930-55-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.3 µg/day	

Methylene Chloride (75-09-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	50 µg/day	

SECTION 16: Other information

Revision date : 12/30/2019

Other information : None.

Full text of H-phrases:

H225	Highly flammable liquid and vapour
H350	May cause cancer

Phenova US SDS REV