

# Safety Data Sheet

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

Date of issue: 02/20/2020 Revision date: 02/20/2020 Version: 1.0

# **SECTION 1: Identification**

1.1. Identification

Product form : Mixture

Product name : WI PVOC/GRO Mix Product code AL0-101753

#### 1.2. Recommended use and restrictions on use

No additional information available

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

#### **GHS US classification**

Flammable liquids H225 Highly flammable liquid and vapour

Category 2

Acute toxicity (oral) H301 Toxic if swallowed

Category 3

Acute toxicity (dermal) H311 Toxic in contact with skin

Category 3

Germ cell mutagenicity H340 May cause genetic defects Category 1B

Carcinogenicity Category

H350

Specific target organ

toxicity (single exposure)

Category 1

Full text of H statements : see section 16

Causes damage to organs

May cause cancer

# GHS Label elements, including precautionary statements

H370

## **GHS US labeling**

Hazard pictograms (GHS US)







Signal word (GHS US) : Danger

: H225 - Highly flammable liquid and vapour Hazard statements (GHS US)

H301+H311 - Toxic if swallowed or in contact with skin

H340 - May cause genetic defects H350 - May cause cancer H370 - Causes damage to organs

Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smokina.

P233 - Keep container tightly closed.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray. P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 - If swallowed: Immediately call a poison center or doctor

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.

P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.

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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.
methanol (Component)	(CAS-No.) 67-56-1	98
benzene (Component)	(CAS-No.) 71-43-2	0.2
ethylbenzene (Component)	(CAS-No.) 100-41-4	0.2
naphthalene (Component)	(CAS-No.) 91-20-3	0.2
toluene (Component)	(CAS-No.) 108-88-3	0.2

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 exposed or concerned: Get

medical advice/attention.

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

: Based on available data, the classification criteria are not met.

symptoms
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 : Use extinguishing media appropriate for surrounding fire.

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.

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#### **SECTION 6: Accidental release measures**

#### Personal precautions, protective equipment and emergency procedure

#### 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.

: Ventilate area. **Emergency procedures** 

## 6.2. Environmental precautions

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

#### Methods and material for containment and cleaning up

Methods for cleaning up : Take up in absorbent material. Collect spillage.

# 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.

: Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated Hygiene measures

clothing. Wash contaminated clothing before reuse.

## Conditions for safe storage, including any incompatibilities

Keep container closed when not in use. Keep container tightly closed and in a well-ventilated Storage conditions

place. Keep away from any flames or sparking source.

Incompatible materials Direct sunlight.

# SECTION 8: Exposure controls/personal protection

WI PVOC/GRO Mix		
ACGIH	Local name	Methanol
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
benzene (71-43-2)		
400111		

benzene (71-43-2)		
ACGIH	Local name	Benzene
ACGIH	ACGIH TWA (ppm)	0.5 ppm
ACGIH	ACGIH STEL (ppm)	2.5 ppm
ACGIH	Remark (ACGIH)	Leukemia
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm
OSHA	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	50 ppm 10 mins.
OSHA	Regulatory reference (US-OSHA)	OSHA
NIOSH	NIOSH REL (TWA) (ppm)	0.1 ppm

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benzene (71-43-2)		
NIOSH	NIOSH REL (STEL) (ppm)	1 ppm
ethylbenzene (100-41-	4)	
ACGIH	Local name	Ethyl benzene
ACGIH	ACGIH TWA (ppm)	20 ppm (Ethyl benzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	URT irr; kidney dam (nephropathy)
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m³)	435 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
naphthalene (91-20-3)		
ACGIH	Local name	Naphthalene
ACGIH	ACGIH TWA (ppm)	10 ppm (Naphthalene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Hematologic eff; URT & eye irr; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m³)	50 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
toluene (108-88-3)		
ACGIH	Local name	Toluene
ACGIH	ACGIH TWA (ppm)	20 ppm (Toluene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Visual impair; female repro;
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm 10 mins.
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA
methanol (67-56-1)		
ACGIH	Local name	Methanol
ACGIH	ACGIH TWA (ppm)	200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA

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#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.

## 8.3. Individual protection measures/Personal protective equipment

## Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.

#### Hand protection:

Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration

#### Eye protection:

Chemical goggles or safety glasses. Safety glasses

### Skin and body protection:

Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact

#### Respiratory protection:

Wear appropriate mask

## Personal protective equipment symbol(s):



рΗ





#### Other information:

Do not eat, drink or smoke during use.

# **SECTION 9: Physical and chemical properties**

9.1.	Information on	la a a i a ua la coni a c	أمسمما ملماء	

Physical state : Liquid

> : Colorless : characteristic

: No data available

Odor threshold No data available No data available

No data available Melting point Freezing point No data available

: No data available Boiling point Flash point No data available Relative evaporation rate (butyl acetate=1) No data available Flammability (solid, gas) : Non flammable.

: No data available Vapor pressure : No data available Relative vapor density at 20 °C Relative density No data available : No data available Solubility

: No data available Log Pow : No data available Auto-ignition temperature Decomposition temperature : No data available Viscosity, kinematic No data available Viscosity, dynamic : No data available : No data available **Explosion limits** 

Explosive properties Oxidizing properties : No data available

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# 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

No additional information available

# 10.6. Hazardous decomposition products

No additional information available

# SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

WI PVOC/GRO Mix	
ATE US (oral)	102.041 mg/kg body weight
ATE US (dermal)	306.122 mg/kg body weight
benzene (71-43-2)	
LD50 oral rat	> 2000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral)
LC50 inhalation rat (mg/l)	43.767 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Female, Experimental value, Inhalation (vapours))
LC50 inhalation rat (ppm)	13700 ppm (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Female, Experimental value, Inhalation (vapours))
ATE US (vapors)	43.767 mg/l/4h
ATE US (dust, mist)	43.767 mg/l/4h
ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg (Rat; Other; Experimental value)
LD50 dermal rabbit	15415 mg/kg (Rabbit; Literature study; Other; 15432 mg/kg; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	17.8 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	4000 ppm/4h (Rat; Literature study)
ATE US (oral)	3500 mg/kg body weight
ATE US (dermal)	15415 mg/kg body weight
ATE US (gases)	4000 ppmV/4h
ATE US (vapors)	17.8 mg/l/4h
ATE US (dust, mist)	17.8 mg/l/4h
naphthalene (91-20-3)	
LD50 oral rat	> 1100 mg/kg (Rat)
LD50 dermal rat	> 2500 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
ATE US (oral)	500 mg/kg body weight
toluene (108-88-3)	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 5580 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	12223 mg/kg (Rabbit; Literature study; Other; >5000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	> 20 mg/l/4h (Rat; Literature study)
ATE US (dermal)	12223 mg/kg body weight

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methanol (67-56-1)		
LD50 oral rat	> 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)	
LD50 dermal rabbit	15800 mg/kg (Rabbit; Literature study)	
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat; Literature study)	
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat; Literature study)	
ATE US (oral)	100 mg/kg body weight	
ATE US (dermal)	300 mg/kg body weight	
ATE US (gases)	700 ppmV/4h	
ATE US (vapors)	3 mg/l/4h	
ATE US (dust, mist)	0.5 mg/l/4h	

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : May cause genetic defects.

Based on available data, the classification criteria are not met

Carcinogenicity : May cause cancer.

benzene (71-43-2)		
National Toxicology Program (NTP) Status	Known Human Carcinogens	
ethylbenzene (100-41-4)		
IARC group	2B - Possibly carcinogenic to humans	
naphthalene (91-20-3)		
IARC group	2B - Possibly carcinogenic to humans	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen	
toluene (108-88-3)		
IARC group	3 - Not classifiable	

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

STOT-single exposure : Causes damage to organs.

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

benzene (71-43-2)	
LC50 fish 1	5.3 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	10 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
ethylbenzene (100-41-4)	
LC50 fish 1	4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
LC50 fish 2	4.2 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri; Semi-static system; Fresh water; Experimental value)

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WI PVOC/GRO Mix

Bioaccumulative potential

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naphthalene (91-20-3)	
EC50 Daphnia 1	2.16 mg/l (EC50; 48 h; Daphnia magna)
LC50 fish 2	0.11 mg/l (LC50; 96 h; Oncorhynchus mykiss)
Threshold limit algae 1	0.4 mg/l (EC50; 72 h; Skeletonema costatum)
methanol (67-56-1)	
LC50 fish 1	15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; Salmo gairdneri)
2.2. Persistence and degradability	
WI PVOC/GRO Mix	
Persistence and degradability	Not established.
benzene (71-43-2)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	2.18 g O₂/g substance
Chemical oxygen demand (COD)	2.15 g O₂/g substance
ThOD	3.1 g O₂/g substance
BOD (% of ThOD)	0.7
ethylbenzene (100-41-4)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	1.44 g O₂/g substance (20d.)
Chemical oxygen demand (COD)	2.1 g O₂/g substance
ThOD	3.17 g O₂/g substance
BOD (% of ThOD)	45.4 (20 days)
naphthalene (91-20-3)	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	0 g O₂/g substance
Chemical oxygen demand (COD)	0.22 g O₂/g substance
ThOD	2.99 g O₂/g substance
toluene (108-88-3)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	2.15 g O₂/g substance
Chemical oxygen demand (COD)	2.52 g O₂/g substance
ThOD	3.13 g O₂/g substance
BOD (% of ThOD)	0.69
methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O₂/g substance
ThOD	1.5 g O₂/g substance
BOD (% of ThOD)	0.8 (Literature study)
2.3. Bioaccumulative potential	

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Not established.

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benzene (71-43-2)		
BCF fish 1	< 10 (OECD 305: Bioconcentration: Flow-Through Fish Test, 3 day(s), Leuciscus idus, Flow-through system, Fresh water, Experimental value)	
Log Pow	2.13 (Experimental value, 25 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
ethylbenzene (100-41-4)		
BCF fish 1	1 (BCF; Other; 6 weeks; Oncorhynchus kisutch; Flow-through system; Salt water; Literature study)	
BCF fish 2	15 - 79 (BCF)	
BCF other aquatic organisms 1	4.68 (BCF)	
Log Pow	3.15 (Experimental value; 3.6; Experimental value; EU Method A.8: Partition Coefficient; 20 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
naphthalene (91-20-3)		
BCF fish 1	23 - 168 (BCF; 8 weeks; Cyprinus carpio)	
Log Pow	3.3 (Experimental value)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
toluene (108-88-3)		
BCF fish 2	90 (BCF; 72 h; Leuciscus idus; Static system; Fresh water)	
Log Pow	2.73 (Experimental value; Other; 20 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
methanol (67-56-1)		
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)	
Log Pow	-0.77 (Experimental value; Other)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	

## 12.4. Mobility in soil

benzene (71-43-2)	
Surface tension	0.029 N/m (20 °C)
Log Koc	2.13 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.
ethylbenzene (100-41-4)	
Surface tension	0.029 N/m
Log Koc	log Koc,PCKOCWIN v1.66; 2.71; Calculated value; Koc; PCKOCWIN v1.66; 517.8; Calculated value
Ecology - soil	Low potential for adsorption in soil. Toxic to soil organisms.
naphthalene (91-20-3)	
Surface tension	0.03 N/m (100 °C)
toluene (108-88-3)	
Surface tension	0.03 N/m (20 °C)
methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value

# 12.5. Other adverse effects

WI PVOC/GRO Mix	
benzene (71-43-2)	
ethylbenzene (100-41-4)	
naphthalene (91-20-3)	

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toluene (108-88-3)		
methanol (67-56-1)		

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 : UN1992 Flammable liquids, toxic, n.o.s. (methanol; benzene; toluene), 3 (6.1), II

UN-No.(DOT) : UN1992

Proper Shipping Name (DOT) : Flammable liquids, toxic, n.o.s.

methanol; benzene; toluene

Class (DOT) 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) II - Medium Danger

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

Hazard labels (DOT) 3 - Flammable liquid 6.1 - Poison





DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 243

**DOT Symbols** 

: G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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.

T7 - 4 178.274(d)(2) Normal...... 178.275(d)(3)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C

(59 F) and 50 C (122 F), respectively.

TP13 - Self-contained breathing apparatus must be provided when this hazardous material is

transported by sea.

DOT Packaging Exceptions (49 CFR 173.xxx)

DOT Quantity Limitations Passenger aircraft/rail : 1 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a **DOT Vessel Stowage Location** 

passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

section is exceeded.

**DOT Vessel Stowage Other** : 40 - Stow "clear of living quarters"

Emergency Response Guide (ERG) Number : 131

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Other information : No supplementary information available.

## **Transportation of Dangerous Goods**

Not applicable

## Transport by sea

Transport document description (IMDG) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (methanol; benzene; toluene), 3 (6.1), II

UN-No. (IMDG) : 1992

Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, TOXIC, N.O.S.

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : II - substances presenting medium danger

Subsidiary risks (IMDG) : 6.1 - Toxic substances

#### Air transport

Transport document description (IATA) : UN 1992 Flammable liquid, toxic, n.o.s. (methanol; benzene; toluene), 3 (6.1), II

UN-No. (IATA) : 1992

Proper Shipping Name (IATA) : Flammable liquid, toxic, n.o.s.

Class (IATA) : 3 - Flammable Liquids

Packing group (IATA) : II - Medium Danger

Subsidiary hazards (IATA) : 6.1 - Toxic substances

# SECTION 15: Regulatory information

15.1. US Federal regulations

henzene (71-43-2)

Denzene (71-43-2)			
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)			
CERCLA RQ	10 lb		
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard		
ethylbenzene (100-41-4)			
Listed on the United States TSCA (Toxic Substa Subject to reporting requirements of United State			
Listed on EPA Hazardous Air Pollutant (HAPS)			
ERCLA RQ 1000 lb			
naphthalene (91-20-3)			
Listed on the United States TSCA (Toxic Substa Subject to reporting requirements of United State			
Listed on EPA Hazardous Air Pollutant (HAPS)			
CERCLA RQ 100 lb			
toluene (108-88-3)			
Listed on the United States TSCA (Toxic Substa Subject to reporting requirements of United States	, ,		
Listed on EPA Hazardous Air Pollutant (HAPS)			
CERCLA RQ 1000 lb			
methanol (67-56-1)			
Listed on the United States TSCA (Toxic Substa Subject to reporting requirements of United State			
Listed on EPA Hazardous Air Pollutant (HAPS)			
CERCLA RQ 5000 lb			

## 15.2. International regulations

#### CANADA

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#### benzene (71-43-2

Listed on the Canadian DSL (Domestic Substances List)

#### ethylbenzene (100-41-4)

Listed on the Canadian DSL (Domestic Substances List)

#### naphthalene (91-20-3)

Listed on the Canadian DSL (Domestic Substances List)

#### toluene (108-88-3)

Listed on the Canadian DSL (Domestic Substances List)

## methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

#### **EU-Regulations**

No additional information available

## **National regulations**

## benzene (71-43-2)

Listed on IARC (International Agency for Research on Cancer)

Listed as carcinogen on NTP (National Toxicology Program)

Listed on EPA Hazardous Air Pollutant (HAPS)

## ethylbenzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer)

Listed on EPA Hazardous Air Pollutant (HAPS)

#### naphthalene (91-20-3)

Listed on IARC (International Agency for Research on Cancer)

Listed as carcinogen on NTP (National Toxicology Program)

Listed on EPA Hazardous Air Pollutant (HAPS)

### toluene (108-88-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

# methanol (67-56-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

## 15.3. US State regulations

benzene (71-43-	-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	Yes	No	Yes	6.4 μg/day	
ethylbenzene (1	00-41-4)				
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	54 μg/day	
naphthalene (91	1-20-3)				
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	5.8 μg/day	

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toluene (108-88-	-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)
No	Yes	No	No		7000 μg/day
methanol (67-56	5-1)				
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)
No	Yes	No	No		47000 μg/day (inhalation); 23,000 μg/day (oral)

# **SECTION 16: Other information**

Revision date : 02/20/2020

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE

COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending

Regulation (EC) No 1907/2006.

Other information : None.

#### Full text of H-phrases:

H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H340	May cause genetic defects
H350	May cause cancer
H370	Causes damage to organs

#### Phenova US SDS REV

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