

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : HVOC Stock Standard  
 Product code : AL0-130347

#### 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](mailto:info@phenova.com) - [www.phenova.com](http://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
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Germ cell mutagenicity Category 2	H341	Suspected of causing genetic defects
Carcinogenicity Category 1A	H350	May cause cancer
Specific target organ toxicity (single exposure) Category 1	H370	Causes damage to organs
Hazardous to the ozone layer Category 1	H420	Harms public health and the environment by destroying ozone in the upper atmosphere

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  
 H302 - Harmful if swallowed  
 H341 - Suspected of causing genetic defects  
 H350 - May cause cancer  
 H370 - Causes damage to organs  
 H420 - Harms public health and the environment by destroying ozone in the upper atmosphere

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P233 - Keep container tightly closed.  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264 - Wash hands, forearms and face thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell  
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

# HVOC Stock Standard

## Safety Data Sheet

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

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.
2,2,4-trimethylpentane (Component)	(CAS-No.) 540-84-1	74.5
methanol (Component)	(CAS-No.) 67-56-1	10
Methylene Chloride (Component)	(CAS-No.) 75-09-2	2.5
1,2-dichlorobenzene (Component)	(CAS-No.) 95-50-1	1
1,3-dichlorobenzene (Component)	(CAS-No.) 541-73-1	1
1,4-dichlorobenzene (Component)	(CAS-No.) 106-46-7	1
1,2,4-trichlorobenzene (Component)	(CAS-No.) 120-82-1	1
1,2,3-trichlorobenzene (Component)	(CAS-No.) 87-61-6	1
1,1,1-trichloroethane (Component)	(CAS-No.) 71-55-6	1
1,1,2-trichloroethane (Component)	(CAS-No.) 79-00-5	1
tetrachloroethylene (Component)	(CAS-No.) 127-18-4	1
trichloroethylene (Component)	(CAS-No.) 79-01-6	1
1,3,5-trichlorobenzene (Component)	(CAS-No.) 108-70-3	1
1,1,2-trichloro-1,2,2-trifluoroethane (Component)	(CAS-No.) 76-13-1	1
carbon tetrachloride (Component)	(CAS-No.) 56-23-5	0.5

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.

# HVOC Stock Standard

## Safety Data Sheet

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

### 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

HVOC Stock Standard		
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/m <sup>3</sup> )	260 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA

# HVOC Stock Standard

## Safety Data Sheet

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

<b>carbon tetrachloride (56-23-5)</b>		
ACGIH	Local name	Carbon tetrachloride
ACGIH	ACGIH TWA (ppm)	5 ppm
ACGIH	ACGIH STEL (ppm)	10 ppm
ACGIH	Remark (ACGIH)	Liver dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	200 ppm 5 min. in any 4 hrs.
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>1,2-dichlorobenzene (95-50-1)</b>		
ACGIH	Local name	o-Dichlorobenzene
ACGIH	ACGIH TWA (ppm)	25 ppm
ACGIH	ACGIH STEL (ppm)	50 ppm
ACGIH	Remark (ACGIH)	URT & eye irr; liver dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup>
OSHA	OSHA PEL (Ceiling) (ppm)	50 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>1,3-dichlorobenzene (541-73-1)</b>		
Not applicable		
<b>1,4-dichlorobenzene (106-46-7)</b>		
ACGIH	Local name	p-Dichlorobenzene
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	Remark (ACGIH)	Eye irr; kidney dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	450 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	75 ppm
OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	675 mg/m <sup>3</sup>
OSHA	OSHA PEL (STEL) (ppm)	110 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>Methylene Chloride (75-09-2)</b>		
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
<b>tetrachloroethylene (127-18-4)</b>		
ACGIH	Local name	Tetrachloroethylene
ACGIH	ACGIH TWA (ppm)	25 ppm (Tetrachloroethylene (Perchloroethylene); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	100 ppm (Tetrachloroethylene (Perchloroethylene); USA; Short time value; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	CNS impair

# HVOC Stock Standard

## Safety Data Sheet

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

<b>tetrachloroethylene (127-18-4)</b>		
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>1,2,3-trichlorobenzene (87-61-6)</b>		
Not applicable		
<b>1,2,4-trichlorobenzene (120-82-1)</b>		
ACGIH	Local name	1,2,4-Trichlorobenzene
ACGIH	ACGIH Ceiling (ppm)	5 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
ACGIH	Regulatory reference	ACGIH 2018
<b>1,3,5-trichlorobenzene (108-70-3)</b>		
Not applicable		
<b>1,1,1-trichloroethane (71-55-6)</b>		
ACGIH	Local name	Methyl chloroform
ACGIH	ACGIH TWA (ppm)	350 ppm
ACGIH	ACGIH STEL (ppm)	450 ppm
ACGIH	Remark (ACGIH)	CNS impair; liver dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	350 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>1,1,2-trichloroethane (79-00-5)</b>		
ACGIH	Local name	1,1,2-Trichloroethane
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	Remark (ACGIH)	CNS impair; liver dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	45 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>trichloroethylene (79-01-6)</b>		
ACGIH	Local name	Trichloroethylene
ACGIH	ACGIH TWA (ppm)	10 ppm (Trichloroethylene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	25 ppm (Trichloroethylene; USA; Short time value; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	CNS impair; cognitive decrements
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	300 ppm 5 mins. in any 2 hrs.
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>		
ACGIH	Local name	1,1,2-Trichloro-1,2,2-trifluoroethane
ACGIH	ACGIH TWA (ppm)	1000 ppm
ACGIH	ACGIH STEL (ppm)	1250 ppm

# HVOC Stock Standard

## Safety Data Sheet

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

<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>		
ACGIH	Remark (ACGIH)	CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	7600 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>methanol (67-56-1)</b>		
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/m <sup>3</sup> )	260 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
<b>2,2,4-trimethylpentane (540-84-1)</b>		
ACGIH	ACGIH TWA (ppm)	300 ppm (Octane, all isomers; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

### 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

# HVOC Stock Standard

## Safety Data Sheet

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

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

HVOC Stock Standard	
ATE US (oral)	907.026 mg/kg body weight
carbon tetrachloride (56-23-5)	
LD50 oral rat	2500 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, ≥ 14 day(s))
LD50 dermal rabbit	> 14900 mg/kg body weight (24 h, Rabbit, Male / female, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	46.26 mg/l (Equivalent or similar to OECD 403, 6 h, Rat, Male, Experimental value, Inhalation (vapours))
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
1,2-dichlorobenzene (95-50-1)	
LD50 oral rat	500 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	9.5 mg/l (4 h, Rat, Inhalation)
ATE US (oral)	500 mg/kg body weight
ATE US (vapors)	9.5 mg/l/4h
ATE US (dust, mist)	9.5 mg/l/4h

# HVOC Stock Standard

## Safety Data Sheet

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

<b>1,3-dichlorobenzene (541-73-1)</b>	
LD50 oral rat	580 mg/kg (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral)
LC50 inhalation rat (mg/l)	> 17.6 mg/l (4 h, Rat, Literature study, Inhalation)
ATE US (oral)	580 mg/kg body weight
<b>1,4-dichlorobenzene (106-46-7)</b>	
LD50 dermal rat	> 6000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 5 mg/l (4 h, Rat, Inhalation)
ATE US (oral)	500 mg/kg body weight
<b>Methylene Chloride (75-09-2)</b>	
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)
<b>tetrachloroethylene (127-18-4)</b>	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 3835 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Experimental value; 3005 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	3786 ppm/4h (Rat; Experimental value)
ATE US (gases)	3786 ppmV/4h
ATE US (vapors)	27.58 mg/l/4h
ATE US (dust, mist)	27.58 mg/l/4h
<b>1,2,3-trichlorobenzene (87-61-6)</b>	
LD50 oral rat	1800 mg/kg (Rat, Oral)
ATE US (oral)	1800 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
<b>1,2,4-trichlorobenzene (120-82-1)</b>	
LD50 oral rat	756 mg/kg (Rat, Oral)
LD50 dermal rat	6139 mg/kg (Rat, Dermal)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 4.1 mg/l (4 h, Rat, Inhalation)
ATE US (oral)	756 mg/kg body weight
ATE US (dermal)	6139 mg/kg body weight
<b>1,3,5-trichlorobenzene (108-70-3)</b>	
LD50 oral rat	800 mg/kg (Rat, Oral)
ATE US (oral)	800 mg/kg body weight
<b>1,1,1-trichloroethane (71-55-6)</b>	
LD50 oral rat	10300 - 12300 mg/kg body weight (Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, Rat, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	99.64 mg/l (3 h, Rat, Male / female, Experimental value, Converted value, Inhalation (vapours))
ATE US (oral)	10300 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
<b>1,1,2-trichloroethane (79-00-5)</b>	
LD50 oral rat	837 mg/kg body weight (Rat, Male, Experimental value, Oral)



# HVOC Stock Standard

## Safety Data Sheet

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

<b>1,1,2-trichloroethane (79-00-5)</b>	
LD50 dermal rabbit	5380 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	9000 mg/m <sup>3</sup> air (OECD 403: Acute Inhalation Toxicity, 6 h, Rat, Male, Experimental value, Inhalation (vapours))
ATE US (oral)	837 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

<b>trichloroethylene (79-01-6)</b>	
LD50 oral rat	4920 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	66 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	12000 ppm/4h (Rat)
ATE US (oral)	4920 mg/kg body weight
ATE US (gases)	12000 ppmV/4h
ATE US (vapors)	66 mg/l/4h
ATE US (dust, mist)	66 mg/l/4h

<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
LD50 oral rat	43000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 11000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	300 mg/l (4 h, Rat, Inhalation)
LC50 inhalation rat (ppm)	38500 ppm (4 h, Rat, Inhalation)
ATE US (oral)	43000 mg/kg body weight
ATE US (vapors)	300 mg/l/4h
ATE US (dust, mist)	300 mg/l/4h

<b>methanol (67-56-1)</b>	
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

<b>2,2,4-trimethylpentane (540-84-1)</b>	
LD50 oral rat	> 5000 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	> 33.52 mg/l/4h (Rat; Experimental value)

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: May cause cancer.

<b>carbon tetrachloride (56-23-5)</b>	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

<b>1,4-dichlorobenzene (106-46-7)</b>	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

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

# HVOC Stock Standard

## Safety Data Sheet

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

<b>tetrachloroethylene (127-18-4)</b>	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

<b>trichloroethylene (79-01-6)</b>	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : Not classified  
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

<b>carbon tetrachloride (56-23-5)</b>	
LC50 fish 1	24.3 mg/l (OECD 203: Fish, Acute Toxicity Test, 4 day(s), Danio rerio, Flow-through system, Fresh water, Experimental value)
EC50 other aquatic organisms 1	180 mg/l (Plankton, Literature)
ErC50 (algae)	20 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

<b>1,2-dichlorobenzene (95-50-1)</b>	
LC50 fish 1	1.58 mg/l (96 h, Salmo gairdneri, Measured concentration)
EC50 Daphnia 1	0.74 mg/l (48 h, Daphnia magna)

<b>1,3-dichlorobenzene (541-73-1)</b>	
LC50 fish 1	1.61 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	1.2 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)

<b>1,4-dichlorobenzene (106-46-7)</b>	
LC50 fish 1	1.12 mg/l (96 h, Salmo gairdneri, Flow-through system)
EC50 Daphnia 1	0.7 mg/l (48 h, Daphnia magna, Measured concentration)

<b>Methylene Chloride (75-09-2)</b>	
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)

<b>tetrachloroethylene (127-18-4)</b>	
EC50 Daphnia 1	8.5 mg/l (EC50; ASTM; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 2	3.64 mg/l (EC50; Other; 72 h; Chlamydomonas angulosa; Fresh water)

<b>1,2,3-trichlorobenzene (87-61-6)</b>	
LC50 fish 1	7.05 mg/l (96 h, Leuciscus idus)
EC50 Daphnia 1	2.72 mg/l (48 h, Daphnia magna)

<b>1,2,4-trichlorobenzene (120-82-1)</b>	
LC50 fish 1	1.32 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	0.86 mg/l (48 h, Daphnia magna, Static system)

# HVOC Stock Standard

## Safety Data Sheet

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

<b>1,3,5-trichlorobenzene (108-70-3)</b>	
LC50 fish 1	5.5 mg/l (96 h, Salmo gairdneri)
<b>1,1,1-trichloroethane (71-55-6)</b>	
LC50 fish 1	52.8 mg/l (EPA 660/3 - 75/009, 96 h, Pimephales promelas, Fresh water, Experimental value)
EC50 Daphnia 1	2384 mg/l (48 h, Daphnia magna, Literature study)
ErC50 (algae)	41 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
<b>1,1,2-trichloroethane (79-00-5)</b>	
LC50 fish 1	40 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	200 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)
<b>trichloroethylene (79-01-6)</b>	
LC50 fish 1	40.7 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 2	20.8 mg/l (EC50; 48 h)
<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
LC50 fish 1	7.4 mg/l (96 h, Salmo gairdneri, Fresh water, Literature study)
EC50 Daphnia 1	71 mg/l (48 h, Daphnia magna, Literature study)
<b>methanol (67-56-1)</b>	
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)
<b>2,2,4-trimethylpentane (540-84-1)</b>	
LC50 fish 1	18.4 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Read-across, GLP)
EC50 Daphnia 1	0.4 mg/l (EC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Read-across)
Threshold limit algae 1	2.943 mg/l (EC50; Other; 72 h; Pseudokirchneriella subcapitata; Fresh water)
<b>12.2. Persistence and degradability</b>	
<b>HVOC Stock Standard</b>	
Persistence and degradability	Not established.
<b>carbon tetrachloride (56-23-5)</b>	
Persistence and degradability	Readily biodegradable in water. Readily biodegradable in water in anaerobic conditions.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.001 g O <sub>2</sub> /g substance
ThOD	0.21 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0
<b>1,2-dichlorobenzene (95-50-1)</b>	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
BOD (% of ThOD)	0
<b>1,3-dichlorobenzene (541-73-1)</b>	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
<b>1,4-dichlorobenzene (106-46-7)</b>	
Persistence and degradability	Non degradable in the soil. Readily biodegradable in water.
ThOD	1.52 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.65 (Calculated value)
<b>Methylene Chloride (75-09-2)</b>	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.
<b>tetrachloroethylene (127-18-4)</b>	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.

# HVOC Stock Standard

## Safety Data Sheet

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

<b>tetrachloroethylene (127-18-4)</b>	
Biochemical oxygen demand (BOD)	0.06 g O <sub>2</sub> /g substance
ThOD	0.39 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.15
<b>1,2,3-trichlorobenzene (87-61-6)</b>	
Persistence and degradability	Not readily biodegradable in water.
<b>1,2,4-trichlorobenzene (120-82-1)</b>	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0
<b>1,3,5-trichlorobenzene (108-70-3)</b>	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0
<b>1,1,1-trichloroethane (71-55-6)</b>	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
<b>1,1,2-trichloroethane (79-00-5)</b>	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
<b>trichloroethylene (79-01-6)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Biodegradable in the soil under anaerobic conditions.
<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
Persistence and degradability	Biodegradable in the soil under anaerobic conditions. Not readily biodegradable in water.
<b>methanol (67-56-1)</b>	
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 O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.8 (Literature study)
<b>2,2,4-trimethylpentane (540-84-1)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.
ThOD	3.5 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>HVOC Stock Standard</b>	
Bioaccumulative potential	Not established.
<b>carbon tetrachloride (56-23-5)</b>	
BCF fish 1	30 (Equivalent or similar to OECD 305, 21 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Log Pow	2.75 - 2.83 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,2-dichlorobenzene (95-50-1)</b>	
BCF fish 1	90 - 260 (Cyprinus carpio, Test duration: 8 weeks)
BCF fish 2	270 - 560 (Salmo gairdneri)
BCF other aquatic organisms 1	14791 (Algae)
BCF other aquatic organisms 2	28840 (Callinectes sapidus)
Log Pow	3.43 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
<b>1,3-dichlorobenzene (541-73-1)</b>	
BCF fish 1	420 - 740 (Salmo gairdneri, Chronic)

# HVOC Stock Standard

## Safety Data Sheet

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

<b>1,3-dichlorobenzene (541-73-1)</b>	
BCF fish 2	57 - 370 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)
Log Pow	3.4 - 4.6
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,4-dichlorobenzene (106-46-7)</b>	
BCF fish 1	214 - 720 (Salmo gairdneri, Chronic)
Log Pow	3.39 - 3.62 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
<b>Methylene Chloride (75-09-2)</b>	
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).
<b>tetrachloroethylene (127-18-4)</b>	
BCF fish 2	25.8 - 77.1 (BCF; 8 weeks)
Log Pow	3.4 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,2,3-trichlorobenzene (87-61-6)</b>	
BCF fish 1	2600 (Salmo gairdneri, Chronic)
BCF fish 2	130 - 1200 (Cyprinus carpio, Chronic)
Log Pow	4.05 - 4.26
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
<b>1,2,4-trichlorobenzene (120-82-1)</b>	
BCF fish 1	1200 - 3700 (Salmo gairdneri, Chronic)
BCF fish 2	1140 - 4420 (Cyprinus carpio, Test duration: 6 weeks)
BCF other aquatic organisms 1	250 (24 h, Chlorella sp., Fresh weight)
BCF other aquatic organisms 2	142 (Daphnia magna)
Log Pow	4.02 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
<b>1,3,5-trichlorobenzene (108-70-3)</b>	
BCF fish 1	150 - 1700 (6 week(s), Cyprinus carpio)
Log Pow	4.2
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
<b>1,1,1-trichloroethane (71-55-6)</b>	
BCF fish 1	9 (28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Log Pow	2.49 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,1,2-trichloroethane (79-00-5)</b>	
BCF fish 1	0.7 - 6.7 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Flow-through system, Experimental value, Fresh weight)
Log Pow	1.89 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>trichloroethylene (79-01-6)</b>	
BCF fish 1	17 (BCF; 336 h)
BCF fish 2	90 (BCF; 72 h; Leuciscus idus)
BCF other aquatic organisms 1	3440 (BCF; 120 h)
BCF other aquatic organisms 2	4270 (BCF; 120 h)
Log Pow	2.29 - 2.42 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
BCF fish 1	11 - 86 (6 week(s), Cyprinus carpio, Literature study)

# HVOC Stock Standard

## Safety Data Sheet

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

<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
Log Pow	3.16 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>methanol (67-56-1)</b>	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>2,2,4-trimethylpentane (540-84-1)</b>	
BCF fish 1	231 (BCFBAF v3.00, Pisces, Calculated value)
BCF fish 2	231 (BCF)
Log Pow	4.08 - 5.18 (Calculated; KOWWIN)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

### 12.4. Mobility in soil

<b>carbon tetrachloride (56-23-5)</b>	
Surface tension	0.027 N/m (20 °C)
Log Koc	1.69 (log Koc, EPA OTS 796.2750: Sediment and Soil Adsorption Isotherm, Experimental value)
Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation. Soil contaminant.

<b>1,2-dichlorobenzene (95-50-1)</b>	
Surface tension	0.037 N/m (20 °C)
Ecology - soil	Adsorbs into the soil.

<b>1,3-dichlorobenzene (541-73-1)</b>	
Surface tension	0.036 N/m (20 °C)
Log Koc	2.56 (log Koc, Other, Experimental value)
Ecology - soil	Low potential for adsorption in soil.

<b>1,4-dichlorobenzene (106-46-7)</b>	
Surface tension	0.03 N/m (55 °C)
Ecology - soil	Adsorbs into the soil.

<b>Methylene Chloride (75-09-2)</b>	
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.

<b>tetrachloroethylene (127-18-4)</b>	
Surface tension	0.0313 N/m (20 °C)
Log Koc	Koc,141; Experimental value; log Koc; 2.15; Experimental value

<b>1,2,4-trichlorobenzene (120-82-1)</b>	
Surface tension	0.039 N/m (20 °C)
Ecology - soil	Adsorbs into the soil.

<b>1,1,1-trichloroethane (71-55-6)</b>	
Surface tension	25.4 mN/m (20 °C, 1 g/l)
Ecology - soil	Soil contaminant.

<b>1,1,2-trichloroethane (79-00-5)</b>	
Log Koc	1.64 - 1.783 (log Koc, SRC PCKOCWIN v2.0, Estimated value)
Ecology - soil	Highly mobile in soil.

<b>trichloroethylene (79-01-6)</b>	
Surface tension	0.03 N/m

<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
Surface tension	0.023 N/m
Log Koc	2.294 - 2.742 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

# HVOC Stock Standard

## Safety Data Sheet

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

<b>methanol (67-56-1)</b>	
Surface tension	0.023 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value
<b>2,2,4-trimethylpentane (540-84-1)</b>	
Log Koc	log Koc,SRC PCKOCWIN v2.0; 2.58; Calculated value; Koc; SRC PCKOCWIN v2.0; 240.3; Calculated value

### 12.5. Other adverse effects

<b>HVOC Stock Standard</b>	
<b>carbon tetrachloride (56-23-5)</b>	
<b>1,2-dichlorobenzene (95-50-1)</b>	
<b>1,3-dichlorobenzene (541-73-1)</b>	
<b>1,4-dichlorobenzene (106-46-7)</b>	
<b>Methylene Chloride (75-09-2)</b>	
<b>tetrachloroethylene (127-18-4)</b>	
<b>1,2,3-trichlorobenzene (87-61-6)</b>	
<b>1,2,4-trichlorobenzene (120-82-1)</b>	
<b>1,3,5-trichlorobenzene (108-70-3)</b>	
<b>1,1,1-trichloroethane (71-55-6)</b>	
<b>1,1,2-trichloroethane (79-00-5)</b>	
<b>trichloroethylene (79-01-6)</b>	
<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
<b>methanol (67-56-1)</b>	
<b>2,2,4-trimethylpentane (540-84-1)</b>	

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.

# HVOC Stock Standard

## Safety Data Sheet

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

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN1230 Methanol (methanol ; 1,2-dichlorobenzene ; 1,3-dichlorobenzene ; 1,4-dichlorobenzene ; 1,2,4-trichlorobenzene ; 1,2,3-trichlorobenzene ; 1,1,2-trichloroethane ; trichloroethylene ; 1,3,5-trichlorobenzene), 3 (6.1), II
UN-No.(DOT)	: UN1230
Proper Shipping Name (DOT)	: Methanol methanol ; 1,2-dichlorobenzene ; 1,3-dichlorobenzene ; 1,4-dichlorobenzene ; 1,2,4-trichlorobenzene ; 1,2,3-trichlorobenzene ; 1,1,2-trichloroethane ; trichloroethylene ; 1,3,5-trichlorobenzene
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)	: 242
DOT Symbols	: + - Fixes (cannot be altered) proper shipping name, hazard class, and packing group, I - Proper shipping name appropriate for international and domestic transportation
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.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a 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
Other information	: No supplementary information available.

#### Transportation of Dangerous Goods

Not applicable

#### Transport by sea

Transport document description (IMDG)	: UN 1230 METHANOL (methanol ; 1,2-dichlorobenzene ; 1,3-dichlorobenzene ; 1,4-dichlorobenzene ; 1,2,4-trichlorobenzene ; 1,2,3-trichlorobenzene ; 1,1,2-trichloroethane ; trichloroethylene ; 1,3,5-trichlorobenzene), 3 (6.1), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS (12°C c.c.)
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# HVOC Stock Standard

## Safety Data Sheet

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

UN-No. (IMDG)	: 1230
Proper Shipping Name (IMDG)	: METHANOL
Class (IMDG)	: 3 - Flammable liquids
Packing group (IMDG)	: II - substances presenting medium danger
Subsidiary risks (IMDG)	: 6.1 - Toxic substances
Limited quantities (IMDG)	: 1 L

### Air transport

Transport document description (IATA) : UN 1230 Methanol (methanol ; 1,2-dichlorobenzene ; 1,3-dichlorobenzene ; 1,4-dichlorobenzene ; 1,2,4-trichlorobenzene ; 1,2,3-trichlorobenzene ; 1,1,2-trichloroethane ; trichloroethylene ; 1,3,5-trichlorobenzene), 3 (6.1), II, ENVIRONMENTALLY HAZARDOUS

UN-No. (IATA)	: 1230
Proper Shipping Name (IATA)	: Methanol
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

#### carbon tetrachloride (56-23-5)

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

#### 1,2-dichlorobenzene (95-50-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ 100 lb

#### 1,3-dichlorobenzene (541-73-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ 100 lb

#### 1,4-dichlorobenzene (106-46-7)

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

SARA Section 311/312 Hazard Classes  
Immediate (acute) health hazard  
Delayed (chronic) health hazard

#### 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

#### tetrachloroethylene (127-18-4)

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

#### 1,2,3-trichlorobenzene (87-61-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

# HVOC Stock Standard

## Safety Data Sheet

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

<b>1,2,4-trichlorobenzene (120-82-1)</b>	
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
<b>1,3,5-trichlorobenzene (108-70-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>1,1,1-trichloroethane (71-55-6)</b>	
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	1000 lb
<b>1,1,2-trichloroethane (79-00-5)</b>	
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
<b>trichloroethylene (79-01-6)</b>	
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	100 lb
<b>1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
<b>methanol (67-56-1)</b>	
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	5000 lb
<b>2,2,4-trimethylpentane (540-84-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

### 15.2. International regulations

#### CANADA

<b>carbon tetrachloride (56-23-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>1,2-dichlorobenzene (95-50-1)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>1,3-dichlorobenzene (541-73-1)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>1,4-dichlorobenzene (106-46-7)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Methylene Chloride (75-09-2)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>tetrachloroethylene (127-18-4)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>1,2,3-trichlorobenzene (87-61-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	

# HVOC Stock Standard

## Safety Data Sheet

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

### **1,2,4-trichlorobenzene (120-82-1)**

Listed on the Canadian DSL (Domestic Substances List)

### **1,3,5-trichlorobenzene (108-70-3)**

Listed on the Canadian DSL (Domestic Substances List)

### **1,1,1-trichloroethane (71-55-6)**

Listed on the Canadian DSL (Domestic Substances List)

### **1,1,2-trichloroethane (79-00-5)**

Listed on the Canadian DSL (Domestic Substances List)

### **trichloroethylene (79-01-6)**

Listed on the Canadian DSL (Domestic Substances List)

### **1,1,2-trichloro-1,2,2-trifluoroethane (76-13-1)**

Listed on the Canadian DSL (Domestic Substances List)

### **methanol (67-56-1)**

Listed on the Canadian DSL (Domestic Substances List)

### **2,2,4-trimethylpentane (540-84-1)**

Listed on the Canadian DSL (Domestic Substances List)

### **EU-Regulations**

No additional information available

### **National regulations**

#### **carbon tetrachloride (56-23-5)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on EPA Hazardous Air Pollutant (HAPS)

#### **1,4-dichlorobenzene (106-46-7)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on EPA Hazardous Air Pollutant (HAPS)

#### **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)

#### **tetrachloroethylene (127-18-4)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on EPA Hazardous Air Pollutant (HAPS)

#### **1,2,4-trichlorobenzene (120-82-1)**

Listed on EPA Hazardous Air Pollutant (HAPS)

#### **1,1,1-trichloroethane (71-55-6)**

Listed on EPA Hazardous Air Pollutant (HAPS)

#### **1,1,2-trichloroethane (79-00-5)**

Listed on EPA Hazardous Air Pollutant (HAPS)

#### **trichloroethylene (79-01-6)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on EPA Hazardous Air Pollutant (HAPS)

#### **methanol (67-56-1)**

Listed on EPA Hazardous Air Pollutant (HAPS)

#### **2,2,4-trimethylpentane (540-84-1)**

Listed on EPA Hazardous Air Pollutant (HAPS)

# HVOC Stock Standard

## Safety Data Sheet

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

### 15.3. US State regulations

<b>carbon tetrachloride (56-23-5)</b>					
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 µg/day	
<b>1,4-dichlorobenzene (106-46-7)</b>					
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	20 µg/day	
<b>Methylene Chloride (75-09-2)</b>					
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	
<b>tetrachloroethylene (127-18-4)</b>					
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	14 µg/day	
<b>1,1,2-trichloroethane (79-00-5)</b>					
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	10 µg/day	
<b>trichloroethylene (79-01-6)</b>					
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	14 µg/day	
<b>methanol (67-56-1)</b>					
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)

# HVOC Stock Standard

## Safety Data Sheet

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

### SECTION 16: Other information

Revision date : 11/01/2019

Other information : None.

Full text of H-phrases:

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H341	Suspected of causing genetic defects
H350	May cause cancer
H370	Causes damage to organs
H420	Harms public health and the environment by destroying ozone in the upper atmosphere

Phenova US SDS REV

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