

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Product name : 612 Chlorinated Hydrocarbons
 Product code : AL0-101659
 Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Laboratory Use
 Industrial/Professional use spec : Industrial
 For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Phenova
 6390 Joyce Dr. Suite 100
 80403 Golden, CO - 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: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Carc. 1B	H350
STOT SE 1	H370
Aquatic Chronic 2	H411

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.2; R45
 F; R11
 T; R23/24/25
 T; R39/23/24/25
 N; R51/53

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) : Danger

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazard statements (CLP)	: H225 - Highly flammable liquid and vapor H301+H311 - Toxic if swallowed or in contact with skin H350 - May cause cancer H370 - Causes damage to organs H411 - Toxic to aquatic life with long lasting effects
Precautionary statements (CLP)	: 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 P270 - Do not eat, drink or smoke when using this product P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water P308+P313 - IF exposed or concerned: Get medical advice/attention P361+P364 - Take off immediately all contaminated clothing and wash it before reuse P370+P378 - In case of fire: Use media other than water to extinguish P391 - Collect spillage 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

No labeling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
methanol (Component)	(CAS No) 67-56-1 (EC-No.) 200-659-6 (EC index no) 603-001-00-X	98.2	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
1,2-dichlorobenzene (Component)	(CAS No) 95-50-1 (EC-No.) 202-425-9 (EC index no) 602-034-00-7	0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,3-dichlorobenzene (Component)	(CAS No) 541-73-1 (EC-No.) 208-792-1 (EC index no) 602-067-00-7	0.2	Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
1,4-dichlorobenzene (Component)	(CAS No) 106-46-7 (EC-No.) 203-400-5 (EC index no) 602-035-00-2	0.2	Eye Irrit. 2, H319 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
hexachlorobenzene (Component)	(CAS No) 118-74-1 (EC-No.) 204-273-9 (EC index no) 602-065-00-6	0.2	Carc. 1B, H350 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
hexachlorobuta-1,3-diene (Component)	(CAS No) 87-68-3 (EC-No.) 201-765-5	0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Hexachlorocyclopentadiene (Component)	(CAS No) 77-47-4 (EC-No.) 201-029-3 (EC index no) 602-078-00-7	0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
hexachloroethane (Component)	(CAS No) 67-72-1 (EC-No.) 200-666-4	0.2	Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,2,4-trichlorobenzene (Component)	(CAS No) 120-82-1 (EC-No.) 204-428-0 (EC index no) 602-087-00-6	0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Name	Product identifier	Specific concentration limits
methanol (Component)	(CAS No) 67-56-1 (EC-No.) 200-659-6 (EC index no) 603-001-00-X	(3 =<C < 10) STOT SE 2, H371 (C >= 10) STOT SE 1, H370

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. Call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
- Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

- 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. Avoid breathing dust/fume/gas/mist/vapors/spray.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. 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

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- 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. No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Do not eat, drink or smoke when using this product. Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	: Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
Incompatible materials	: Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

1,2-dichlorobenzene (95-50-1)		
EU	IOELV TWA (mg/m ³)	122 mg/m ³ (1,2-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	20 ppm (1,2-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	306 mg/m ³ (1,2-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	50 ppm (1,2-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	122 mg/m ³ (1,2-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	20 ppm (1,2-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	306 mg/m ³ (1,2-Dichlorobenzène; Belgium; Short time value)
Belgium	Short time value (ppm)	50 ppm (1,2-Dichlorobenzène; Belgium; Short time value)
France	VLE (mg/m ³)	306 mg/m ³ (1,2-Dichlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	50 ppm (1,2-Dichlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m ³)	122 mg/m ³ (1,2-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	20 ppm (1,2-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	25 ppm (o-Dichlorobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	50 ppm (o-Dichlorobenzene; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	122 mg/m ³ (1,2-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	20 ppm (1,2-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	300 mg/m ³ (1,2-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	49 ppm (1,2-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	153 mg/m ³ 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	25 ppm 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	306 mg/m ³ 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	50 ppm 1,2-dichlorobenzene (ortho-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

1,4-dichlorobenzene (106-46-7)		
EU	IOELV TWA (mg/m ³)	122 mg/m ³ (1,4-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	20 ppm (1,4-Dichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	306 mg/m ³ (1,4-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	50 ppm (1,4-Dichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	61 mg/m ³ (1,4-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (1,4-Dichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	306 mg/m ³ (1,4-Dichlorobenzène; Belgium; Short time value)
Belgium	Short time value (ppm)	50 ppm (1,4-Dichlorobenzène; Belgium; Short time value)
France	VLE (mg/m ³)	306 mg/m ³ (1,4-Dichlorobenzène; France; Short time value; VRI: Valeur réglementaire indicative)
France	VLE (ppm)	50 ppm (1,4-Dichlorobenzène; France; Short time value; VRI: Valeur réglementaire indicative)
France	VME (mg/m ³)	4.5 mg/m ³ (1,4-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
France	VME (ppm)	0.75 ppm (1,4-Dichlorobenzène; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (p-Dichlorobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	450 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	75 ppm
USA OSHA	OSHA PEL (STEL) (mg/m ³)	675 mg/m ³
USA OSHA	OSHA PEL (STEL) (ppm)	110 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	150 mg/m ³ (1,4-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	25 ppm (1,4-Dichloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	300 mg/m ³ (1,4-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	49 ppm (1,4-Dichloorbenzeen; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	153 mg/m ³ 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	25 ppm 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	306 mg/m ³ 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	50 ppm 1,4-Dichlorobenzene (para-dichlorobenzene); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
hexachlorobenzene (118-74-1)		
Belgium	Limit value (mg/m ³)	0.002 mg/m ³ (Hexachlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.002 mg/m ³ (Hexachlorobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	0.03 mg/m ³ (Hexachloorbenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

hexachlorobuta-1,3-diene (87-68-3)		
Belgium	Limit value (mg/m ³)	0.21 mg/m ³ (Hexachlorobutadiène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	0.02 ppm (Hexachlorobutadiène; Belgium; Time-weighted average exposure limit 8 h)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.02 ppm (Hexachlorobutadiene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Hexachlorocyclopentadiene (77-47-4)		
Belgium	Limit value (mg/m ³)	0.11 mg/m ³ (Hexachlorocyclopentadiène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	0.01 ppm (Hexachlorocyclopentadiène; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	0.1 mg/m ³ (Hexachlorocyclopentadiène; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	0.01 ppm (Hexachlorocyclopentadiène; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.01 ppm (Hexachlorocyclopentadiene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
hexachloroethane (67-72-1)		
Belgium	Limit value (mg/m ³)	9.8 mg/m ³ (Hexachloroéthane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1 ppm (Hexachloroéthane; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (ppm)	10 ppm (Hexachloroéthane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (ppm)	1 ppm (Hexachloroéthane; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm (Hexachloroethane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
1,2,4-trichlorobenzene (120-82-1)		
EU	IOELV TWA (mg/m ³)	15.1 mg/m ³ (1,2,4-Trichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	2 ppm (1,2,4-Trichlorobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	37.8 mg/m ³ (1,2,4-Trichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	5 ppm (1,2,4-Trichlorobenzene; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	15.1 mg/m ³ (1,2,4-Trichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	2 ppm (1,2,4-Trichlorobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	37.8 mg/m ³ (1,2,4-Trichlorobenzène; Belgium; Short time value)
Belgium	Short time value (ppm)	5 ppm (1,2,4-Trichlorobenzène; Belgium; Short time value)
France	VLE (mg/m ³)	37.8 mg/m ³ (1,2,4-Trichlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	5 ppm (1,2,4-Trichlorobenzène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m ³)	15.1 mg/m ³ (1,2,4-Trichlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	2 ppm (1,2,4-Trichlorobenzène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH Ceiling (ppm)	5 ppm (1,2,4-Trichlorobenzene; USA; Momentary value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	7.55 mg/m ³ (1,2,4-Trichlorobenzene; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

1,2,4-trichlorobenzene (120-82-1)		
Netherlands	Grenswaarde TGG 8H (ppm)	1 ppm (1,2,4-Trichlorobenzene; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	37.8 mg/m ³ (1,2,4-Trichlorobenzene; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	5 ppm (1,2,4-Trichlorobenzene; Netherlands; Short time value; Public occupational exposure limit value)
United Kingdom	WEL TWA (ppm)	1 ppm 1,2,4-Trichlorobenzene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	5 ppm 1,2,4-Trichlorobenzene; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
methanol (67-56-1)		
EU	IOELV TWA (mg/m ³)	260 mg/m ³ (Methanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	200 ppm (Methanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	266 mg/m ³ (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	200 ppm (Alcool méthylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	333 mg/m ³ (Alcool méthylique; Belgium; Short time value)
Belgium	Short time value (ppm)	250 ppm (Alcool méthylique; Belgium; Short time value)
France	VLE (mg/m ³)	1300 mg/m ³ (Methanol; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	1000 ppm (Methanol; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m ³)	260 mg/m ³ (Methanol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	200 ppm (Methanol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	133 mg/m ³ (Methanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	100 ppm (Methanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m ³)	266 mg/m ³ Methanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	200 ppm Methanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m ³)	333 mg/m ³ Methanol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	250 ppm Methanol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

8.2. Exposure controls

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

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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 : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

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
Color	: Colorless.
Odor	: characteristic.
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor
Relative density	: No data available
Solubility	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: 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

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin.

612 Chlorinated Hydrocarbons	
ATE CLP (oral)	101.6030706706 mg/kg body weight
ATE CLP (dermal)	304.5685279188 mg/kg body weight

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

1,2-dichlorobenzene (95-50-1)	
LD50 oral rat	500 mg/kg (Rat)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	9.5 mg/l/4h (Rat)
ATE CLP (oral)	500 mg/kg body weight
ATE CLP (vapors)	9.5 mg/l/4h
ATE CLP (dust, mist)	9.5 mg/l/4h
1,3-dichlorobenzene (541-73-1)	
LD50 oral rat	580 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LC50 inhalation rat (mg/l)	> 17.6 mg/l/4h (Rat; Literature study)
ATE CLP (oral)	580 mg/kg body weight
1,4-dichlorobenzene (106-46-7)	
LD50 dermal rat	> 6000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)
hexachlorobenzene (118-74-1)	
LD50 oral rat	10000 mg/kg (Rat)
ATE CLP (oral)	10000 mg/kg body weight
hexachlorobuta-1,3-diene (87-68-3)	
LD50 oral rat	90 mg/kg (Rat)
LD50 dermal rabbit	1211 mg/kg (Rabbit)
ATE CLP (oral)	90 mg/kg body weight
ATE CLP (dermal)	1211 mg/kg body weight
Hexachlorocyclopentadiene (77-47-4)	
LD50 oral rat	315 mg/kg (Rat; Experimental value; 200 mg/kg bodyweight; Rat; Experimental value; 505 mg/kg bodyweight; Rat; Experimental value; 690 mg/kg bodyweight; Rat; Experimental value; 640 mg/kg bodyweight; Rat)
LD50 dermal rat	2000-3200,Rat; Experimental value
LD50 dermal rabbit	200 - 340 mg/kg (Rabbit; Experimental value; 430 mg/kg bodyweight; Rabbit)
LC50 inhalation rat (mg/l)	0.018 mg/l/4h (Rat; Experimental value; 0,04 mg/l/4h; Rat; Experimental value)
ATE CLP (oral)	315 mg/kg body weight
ATE CLP (dermal)	200 mg/kg body weight
ATE CLP (gases)	100 ppmV/4h
ATE CLP (vapors)	0.018 mg/l/4h
ATE CLP (dust, mist)	0.018 mg/l/4h
hexachloroethane (67-72-1)	
LD50 oral rat	4460 mg/kg (Rat)
LD50 dermal rabbit	32000 mg/kg (Rabbit)
ATE CLP (oral)	4460 mg/kg body weight
ATE CLP (dermal)	32000 mg/kg body weight
1,2,4-trichlorobenzene (120-82-1)	
LD50 oral rat	756 mg/kg (Rat)
LD50 dermal rat	6139 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 4.1 mg/l/4h (Rat)
ATE CLP (oral)	756 mg/kg body weight
ATE CLP (dermal)	6139 mg/kg body weight
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 CLP (oral)	100 mg/kg body weight
ATE CLP (dermal)	300 mg/kg body weight
ATE CLP (gases)	700 ppmV/4h
ATE CLP (vapors)	3 mg/l/4h
ATE CLP (dust, mist)	0.5 mg/l/4h

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: May cause cancer. May cause cancer
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity – single exposure	: Causes damage to organs.
Specific target organ toxicity – repeated exposure	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

1,2-dichlorobenzene (95-50-1)	
LC50 fish 1	1.58 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.74 mg/l (EC50; 48 h)
1,3-dichlorobenzene (541-73-1)	
LC50 fish 1	1.61 mg/l (LC50; 96 h)
EC50 Daphnia 1	1.2 mg/l (EC50; Equivalent or similar to OECD 202; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
1,4-dichlorobenzene (106-46-7)	
LC50 fish 2	1.12 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	0.7 mg/l (EC50; 48 h)
hexachlorobenzene (118-74-1)	
LC50 fish 2	2.3 mg/l (LC50; 96 h)
EC50 Daphnia 2	> 0.03 mg/l (EC50; 24 h)
hexachlorobuta-1,3-diene (87-68-3)	
LC50 fish 2	0.25 mg/l (LC50; 96 h)
EC50 other aquatic organisms 2	0.21 mg/l (96 h; Lymnaea sp.)
Threshold limit algae 2	> 25 mg/l (EC0)
Hexachlorocyclopentadiene (77-47-4)	
LC50 fish 1	0.007 mg/l (LC50; 96 h; Pimephales promelas; Flow-through system; Fresh water)
EC50 other aquatic organisms 1	0.19 mg/l (96 h; Selenastrum capricornutum; Growth rate)
hexachloroethane (67-72-1)	
EC50 Daphnia 1	1.4 mg/l (EC50)
LC50 fish 2	0.84 mg/l (LC50; 96 h)
Threshold limit algae 1	7.75 mg/l (EC50; 96 h)
1,2,4-trichlorobenzene (120-82-1)	
LC50 fish 1	1.32 mg/l (LC50; 96 h)
EC50 Daphnia 1	0.86 mg/l (EC50; 48 h)
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)

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.2. Persistence and degradability

612 Chlorinated Hydrocarbons	
Persistence and degradability	May cause long-term adverse effects in the environment.
1,2-dichlorobenzene (95-50-1)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
BOD (% of ThOD)	0
1,3-dichlorobenzene (541-73-1)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Low potential for adsorption in soil.
1,4-dichlorobenzene (106-46-7)	
Persistence and degradability	Readily biodegradable in water. Non degradable in the soil. Adsorbs into the soil.
ThOD	1.52 g O ₂ /g substance
BOD (% of ThOD)	0.65 (Calculated value)
hexachlorobenzene (118-74-1)	
Persistence and degradability	Not readily biodegradable in water. Not easily biodegradable in water in anaerobic conditions. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
hexachlorobuta-1,3-diene (87-68-3)	
Persistence and degradability	Readily biodegradable in water. Biodegradability in soil: no data available.
Hexachlorocyclopentadiene (77-47-4)	
Persistence and degradability	Not readily biodegradable in water. Photolysis in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air.
hexachloroethane (67-72-1)	
Persistence and degradability	Not readily biodegradable in water.
1,2,4-trichlorobenzene (120-82-1)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance
BOD (% of ThOD)	0
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 ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
BOD (% of ThOD)	0.8 (Literature study)

12.3. Bioaccumulative potential

612 Chlorinated Hydrocarbons	
Bioaccumulative potential	Not established.
1,2-dichlorobenzene (95-50-1)	
BCF fish 1	90 - 260 (BCF)
BCF fish 2	270 - 560 (BCF)
BCF other aquatic organisms 1	14791 (BCF)
BCF other aquatic organisms 2	28840 (BCF)
Log Pow	3.43 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
1,3-dichlorobenzene (541-73-1)	
BCF fish 1	420 - 740 (BCF)
BCF fish 2	57 - 370 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 8 weeks; Cyprinus carpio; Flow-through system; Fresh water; Experimental value)
Log Pow	3.4 - 4.6
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1,4-dichlorobenzene (106-46-7)	
BCF fish 1	100 (BCF)
BCF fish 2	214 - 720 (BCF)
BCF other aquatic organisms 1	20 (BCF)
Log Pow	3.39 - 3.62 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

hexachlorobenzene (118-74-1)	
BCF fish 1	20000 (BCF)
BCF fish 2	30000 (BCF)
BCF other aquatic organisms 1	25000 (BCF)
BCF other aquatic organisms 2	1130 (BCF; 720 h)
Log Pow	5.73 - 6.39 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

hexachlorobuta-1,3-diene (87-68-3)	
BCF fish 1	17000 (BCF)
BCF fish 2	7000 (BCF)
BCF other aquatic organisms 1	45.36 (BCF)
BCF other aquatic organisms 2	3000 (BCF)
Log Pow	3.74 - 4.90
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

Hexachlorocyclopentadiene (77-47-4)	
BCF fish 1	1230 (BCF; 72 h; Leuciscus idus)
BCF other aquatic organisms 1	1090 (BCF; 24 h; Chlorella sp.)
Log Pow	3.99-5.51
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

hexachloroethane (67-72-1)	
BCF fish 1	1200 (BCF)
BCF fish 2	756 mg/l (BCF; 768 h)
Log Pow	3.34 - 4.62
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

1,2,4-trichlorobenzene (120-82-1)	
BCF fish 1	1200 - 3700 (BCF)
BCF fish 2	1140 - 4420 (BCF)
BCF other aquatic organisms 1	250 (BCF; 24 h; Chlorella sp.)
BCF other aquatic organisms 2	142 (BCF)
Log Pow	4.02 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

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

1,2-dichlorobenzene (95-50-1)	
Surface tension	0.037 N/m (20 °C)

1,3-dichlorobenzene (541-73-1)	
Surface tension	0.036 N/m (20 °C)
Log Koc	log Koc, Other; 2.56; Experimental value

1,4-dichlorobenzene (106-46-7)	
Surface tension	0.03 N/m (55 °C)

hexachlorobenzene (118-74-1)	
Ecology - soil	Not toxic to bees.

hexachlorobuta-1,3-diene (87-68-3)	
Ecology - soil	Soil contaminant.

Hexachlorocyclopentadiene (77-47-4)	
Surface tension	0.0375 N/m (20 °C)
Log Koc	Koc, 4265; Experimental value

1,2,4-trichlorobenzene (120-82-1)	
Surface tension	0.039 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. Results of PBT and vPvB assessment

No additional information available

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1992
UN-No. (IATA) : 1992
UN-No. (IMDG) : 1992
UN-No. (ADN) : 1992

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (IATA) : Flammable liquid, toxic, n.o.s.
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (ADN) : FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport document description (ADR) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II, (D/E), ENVIRONMENTALLY HAZARDOUS

14.3. Packing group

Class (ADR) : 3
Classification code (ADR) : FT1
Class (IATA) : 3
Class (IMDG) : 3
Class (ADN) : 3
Classification code (ADN) : FT1
Subsidiary risks (ADR) : 6.1
Subsidiary risks (IMDG) : 6.1
Hazard labels (ADR) : 3, 6.1



Hazard labels (IATA) : 3, 6.1



Hazard labels (IMDG) : 3, 6.1



Hazard labels (ADN) : 3, 6.1



14.4. Packing group

Packing group (ADR) : II
Packing group (IATA) : II

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Packing group (IMDG) : II
Packing group (ADN) : II

14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 336
Classification code (ADR) : FT1
Orange plates :



Special provision (ADR) : 274
Transport category (ADR) : 2
Tunnel restriction code (ADR) : D/E
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2

14.6.2. Transport by sea

Special provision (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP2, TP13
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : B
Properties and observations (IMDG) : Flammable toxic liquid which is not specified by name in this class or, on account of its characteristics, in some other class. Toxic if swallowed, by skin contact or by inhalation.

14.6.3. Air transport

CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
PCA packing instructions (IATA) : 352
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA max net quantity (IATA) : 1L
PCA Excepted quantities (IATA) : E2
Special provision (IATA) : A3
ERG code (IATA) : 3HP

14.6.4. Inland waterway transport

Special provision (ADN) : 274, 802
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP, EX, TOX, A
Ventilation (ADN) : VE01, VE02
Number of blue cones/lights (ADN) : 2
Carriage prohibited (ADN) : No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

612 Chlorinated Hydrocarbons

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

Water hazard class (WGK) : 3 - strongly hazardous to water

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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.

PHV SDS EU

Copyright 2015 Phenova, Inc. License granted to make paper copies for internal use. The information contained in this Safety Data Sheet is based on our current knowledge. The information contained in this document should be used only as a guide for appropriate safety precautions and should not be considered to be all inclusive. Users should make their own investigation to determine the suitability of the information for their particular purposes. The document does not represent any guarantee of the properties of the product. Phenova, Inc. shall not be held liable for any damage resulting from the handling or use of this product. Visit the Terms and Conditions of Sale link at www.phenova.com for additional terms and conditions of sale.