Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name | **1,3-Butadiene (1 ppm), Methyl Ethyl Ketone (1 ppm), Benzyl Chloride (1ppm), Carbon Disulfide (1 ppm), Methyl Chloride (1 ppm), Ethanol (1 ppm), n-Hexane (1 ppm), Toluene (1 ppm), Vinyl Acetate (1 ppm), Vinyl Chloride (1 ppm), Nitrogen (Balance)**

Product Code | M-BA00063/E-1

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

Relevant identified use(s) | Test Gas/Calibration Gas

1.3 Details of the supplier of the safety data sheet

Manufacturer | Air Liquide

2700 Post Oak Blvd.
Houston, TX 77056
United States
www.us.airliquide.com
sds@airliquide.com

Telephone (Technical) | 713-896-2896

Telephone (Technical) | 800-819-1704

1.4 Emergency telephone number

Manufacturer | 800-424-9300 - CHEMTREC

Manufacturer | +1 703-527-3887 - Outside United States

Section 2: Hazards Identification

EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP | Compressed Gas - H280

DSD/DPD | Not Classified - Classification criteria not met

2.2 Label Elements

CLP

WARNING

Hazard statements | H280 - Contains gas under pressure; may explode if heated

Precautionary statements

Storage/Disposal | Protect from sunlight when ambient temperature exceeds 125°F (52°C)
P403 - Store in a well-ventilated place.

DSD/DPD

Risk phrases | No label element(s) required

2.3 Other Hazards

CLP | This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.
According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD | This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.
According to European Directive 1999/45/EC this preparation is not considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 | Compressed Gas - H280
Simple Asphyxiant

2.2 Label elements

OSHA HCS 2012

WARNING

Hazard statements | Contains gas under pressure; may explode if heated - H280
May displace oxygen and cause rapid suffocation.

Precautionary statements

Storage/Disposal | Protect from sunlight when ambient temperature exceeds 125°F (52°C)
Store in a well-ventilated place. - P403

2.3 Other hazards

OSHA HCS 2012 | Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS | Compressed Gas - A

2.2 Label elements

WHMIS

| Compressed Gas - A

2.3 Other hazards

WHMIS

This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.
In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information

NFPA

Section 3 - Composition/Information on Ingredients

3.1 Substances

Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition				
Chemical Name	**Identifiers**	**%**	**LD50/LC50**	**Classifications According to Regulation/Directive**
Vinyl Chloride	**CAS:**75-01-4 **EC Number:**200-831-0 **EU Index:**602-023-00-7	1ppm	Ingestion/Oral-Rat LD50 • 500 mg/kg Inhalation-Rat LC50 • 18 pph 15 Minute(s)	**EU DSD/DPD:** Annex I: F+; R12; Carc. 1; R45 **EU CLP:** Annex VI: Press. Gas - Comp., H280; Flam. Gas 1, H220; Carc. 1A, H350 **OSHA HCS 2012:** Flam. Gas 1; Press. Gas - Comp.; Carc. 1A; Repr. 1B; Skin Irrit. 2; Acute Tox. 4 (Oral)
Vinyl Acetate	**CAS:**108-05-4 **EC Number:**203-545-4 **EU Index:**607-023-00-0	1ppm	Ingestion/Oral-Rat LD50 • 2900 mg/kg Inhalation-Rat LC50 • 11400 mg/m³ 4 Hour(s) Skin-Rabbit LD50 • 2335 mg/kg	**EU DSD/DPD:** Annex I: F; R11 **EU CLP:** Annex VI: Flam. Liq. 2; H225 **OSHA HCS 2012:** Flam. Liq. 2; Carc. 2; Eye Irrit. 2; Repr. 2
Toluene	**CAS:**108-88-3 **EC Number:**203-625-9 **EU Index:**601-021-00-3	1ppm	Ingestion/Oral-Rat LD50 • 636 mg/kg Inhalation-Rat LC50 • 49 g/m³ 4 Hour(s) Skin-Rabbit LD50 • 14100 µL/kg	**EU DSD/DPD:** Annex I: F; R11; Repr. 3; R63; Xn; R48/20-65; Xi; R38; R67 **EU CLP:** Annex VI: Flam. Liq. 2, H225; Repr. 2, H361d; Asp. Tox. 1, H304; STOT RE 2 *, H373; Skin Irrit. 2, H315; STOT SE 3, H336 **OSHA HCS 2012:** Flam. Liq. 2; Repr. 2; Acute Tox 4 (Oral); STOT SE 3: Narc.; Asp. Tox 1;
n-Hexane	**CAS:**110-54-3 **EC Number:**203-777-6 **EU Index:**601-037-00-0	1ppm	Ingestion/Oral-Rat LD50 • 25 g/kg Inhalation-Rat LC50 • 48000 ppm 4 Hour(s)	**EU DSD/DPD:** Annex I: F; R11; Repr. 3; R62; Xn; R65-48/20; Xi; R38; R67; N; R51-53 **EU CLP:** Annex VI: Flam. Liq. 2, H225; Repr. 2, H361f; Asp. Tox. 1, H304; STOT RE 2*, H373; Skin Irrit. 2, H315; STOT SE 3: Narc., H336; Aquatic Chronic 2, H411 **OSHA HCS 2012:** Flam. Liq. 2; Repr. 2; STOT RE 2 (CNS & Nervous System) Skin Irrit. 2; Eye Irrit. 2B; STOT SE 3: Narc. & Resp. Irrit.; Asp. Tox. 1

Methyl Ethyl Ketone	**CAS:**78-93-3 **EC Number:**201-159-0 **EU Index:**606-002-00-3	1ppm	Ingestion/Oral-Rat LD50 • 2737 mg/kg Inhalation-Rat LC50 • 23500 mg/m³ Skin-Rabbit LD50 • 6480 mg/kg	**EU DSD/DPD:** Annex I: F, R11; Xi; R36 R66 R67 **EU CLP:** Annex VI: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H335; EUH066 **OSHA HCS 2012:** Flam. Liq. 2; Eye Irrit. 2A; STOT SE 3: Resp. Irrit.; STOT SE 3: Narc.; Repr. 2
Methyl Chloride	**CAS:**74-87-3 **EC Number:**200-817-4 **EU Index:**602-001-00-7	1ppm	Ingestion/Oral-Rat LD50 • 1800 mg/kg Inhalation-Rat LC50 • 4900 mg/m³	**EU DSD/DPD:** Annex I: F+, R12; Carc. 3, R40; Xn, R48/20 **EU CLP:** Annex VI: Flam. Gas 1, H220; Press. Gas - Comp., H280; Carc. 2, H351; STOT RE 2, H373 **OSHA HCS 2012:** Press. Gas - Comp.; Flam. Gas 1; Acute Tox. 4 (Inhalation); STOT SE 3: Narc.
Ethanol	**CAS:**64-17-5 **EC Number:**200-578-6 **EU Index:**603-002-00-5	1ppm	Ingestion/Oral-Rat LD50 • 7060 mg/kg Inhalation-Rat LC50 • 20000 ppm 10 Hour(s)	**EU DSD/DPD:** Annex I: F; R11 **EU CLP:** Annex VI: Flam. Liq. 2, H225 **OSHA HCS 2012:** Flam. Liq. 2; Eye Irrit. 2; Muta. 1B (Oral); Repr. 1A (Oral)
Carbon disulfide	**CAS:**75-15-0 **EC Number:**200-843-6 **EU Index:**006-003-00-3	1ppm	Ingestion/Oral-Rat LD50 • 1200 mg/kg Inhalation-Rat LC50 • 1000 mg/m³	**EU DSD/DPD:** Annex I: F, R11; Xi, R36/38; T, R48/23; Repr. 3, R62-63 **EU CLP:** Annex VI: Flam. Liq. 2, H225; Repr. 2, H361fd; STOT RE 1, H372; Eye Irrit. 2, H319; Skin Irrit. 2, H315 **OSHA HCS 2012:** Flam. Liq. 2; Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1; Acute Tox. 4 (Oral); Repr. 2; STOT RE 1 (Nervous System, Blood/Cardiovascular System, Eye)
Benzyl Chloride	**CAS:**100-44-7 **EC Number:**202-853-6 **EU Index:**602-037-00-3	1ppm	Ingestion/Oral-Rat LD50 • 1231 mg/kg Inhalation-Rat LC50 • 0.74 g/m³	**EU DSD/DPD:** Annex I: Xn, R22-48/22; T, R23; Xi, R37/38-41; Carc. 2, R45 **EU CLP:** Annex VI: Carc. 1B, H350; Acute Tox. 3, H331; Acute Tox. 4, H332; STOT RE 2, H373; STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318 **OSHA HCS 2012:** Flam. Liq. 4; Eye Dam. 1; Carc. 1B; Acute Tox. 4 (Oral); STOT SE 1 (Lungs); STOT SE 3: Resp. Irrit.; STOT SE 3: Narc.; Repr. 2
1,3-Butadiene	**CAS:**106-99-0 **EC Number:**203-450-8 **EU Index:**601-013-00-X	1ppm	Inhalation-Rat LC50 • 285 g/m³ 4 Hour(s) Ingestion/Oral-Rat LD50 • 5480 mg/kg	**EU DSD/DPD:** Annex I: F+, R12; Carc. 1, R45; Muta. 2, R46 **EU CLP:** Annex VI: Flam. Gas 1, H220; Press. Gas - Liq., H280; Carc. 1A, H350; Muta. 1B, H340 **OSHA HCS 2012:** Flam. Gas 1; Press. Gas - Liq.; Carc. 1A; Muta. 1B; HNOC - Health Hazard - Frostbite
Nitrogen	**CAS:**7727-37-9 **EINECS:**231-783-9	Balance	NDA	**EU DSD/DPD:** Not Classified **EU CLP:** Self Classified: Press. Gas - Comp., H280 **OSHA HCS 2012:** Press. Gas - Comp.; Simp. Asphyx.

See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin | First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.

Eye | First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.

Ingestion | Ingestion is not considered a potential route of exposure.

4.2 Most important symptoms and effects, both acute and delayed

| Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

| All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. A potential health hazard associated with this gas is anoxia.

4.4 Other information

| Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO GASES WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus must be worn. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media

| Use extinguishing agent suitable for type of surrounding fire.

Unsuitable Extinguishing Media

| No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

| Containers may explode when heated.
Ruptured cylinders may rocket.

Hazardous Combustion Products

| None known.

5.3 Advice for firefighters

| Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear positive pressure self-contained breathing apparatus (SCBA).
Move containers from fire area if you can do it without risk.
FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.
FIRE INVOLVING TANKS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
FIRE INVOLVING TANKS: Cool containers with flooding quantities of water until well after fire is out.
FIRE INVOLVING TANKS: Do not direct water at source of leak or safety devices; icing may occur.
FIRE INVOLVING TANKS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
FIRE INVOLVING TANKS: ALWAYS stay away from tanks engulfed in fire.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

| Ventilate the area before entry. Do not walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures

| Keep unauthorized personnel away. Keep out of low areas. Stay upwind. Do not direct water at spill or source of leak. LARGE SPILL: Consider initial downwind evacuation for at least 500 meters (1/3 mile)

6.2 Environmental precautions

Prevent spreading of vapors through sewers, ventilation systems and confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

Stop leak if you can do it without risk.
Ventilate the area.
Isolate area until gas has dispersed.
Use water spray to reduce vapors; do not put water directly on leak, spill area or inside container.
If possible, turn leaking containers so that gas escapes rather than liquid.

6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

Use only with adequate ventilation. Ventilate closed spaces before entering. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately. Empty containers retain product residue and can be hazardous. Do not cut, weld, puncture or incinerate container.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Store in a cool, dry, well-ventilated place. Protect cylinders against physical damage. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not allow area where cylinders are stored to exceed 52C (125F).

7.3 Specific end use(s)

Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	**ACGIH**	**Canada Ontario**	**Canada Quebec**	**China**	**China Highly Toxic Goods**
Toluene (108-88-3)	STELs	Not established	Not established	Not established	100 mg/m3 STEL	Not established
	TWAs	20 ppm TWA	20 ppm TWA	50 ppm TWAEV; 188 mg/m3 TWAEV	50 mg/m3 TWA	Not established
n-Hexane (110-54-3)	STELs	Not established	Not established	Not established	180 mg/m3 STEL	Not established
	TWAs	50 ppm TWA	50 ppm TWA	50 ppm TWAEV; 176 mg/m3 TWAEV	100 mg/m3 TWA	Not established
Benzyl Chloride (100-44-7)	Ceilings	Not established	Not established	Not established	5 mg/m3 Ceiling [MAC]	Not established
	TWAs	1 ppm TWA	1 ppm TWA	1 ppm TWAEV; 5.2 mg/m3 TWAEV	Not established	Not established
1,3-Butadiene (106-99-0)	STELs	Not established	Not established	Not established	12.5 mg/m3 STEL	Not established
	TWAs	2 ppm TWA	2 ppm TWA	2 ppm TWAEV; 4.4 mg/m3 TWAEV	5 mg/m3 TWA	Not established
Carbon disulfide	STELs	Not established	Not established	12 ppm STEV; 36 mg/m3 STEV	10 mg/m3 STEL	10 mg/m3 STEL

(75-15-0)	TWAs	1 ppm TWA	1 ppm TWA	4 ppm TWAEV; 12 mg/m3 TWAEV	5 mg/m3 TWA	5 mg/m3 TWA
Methyl Chloride (74-87-3)	STELs	100 ppm STEL	100 ppm STEL	100 ppm STEV; 207 mg/m3 STEV	120 mg/m3 STEL	Not established
	TWAs	50 ppm TWA	50 ppm TWA	50 ppm TWAEV; 103 mg/m3 TWAEV	60 mg/m3 TWA	Not established
Vinyl Chloride (75-01-4)	STELs	Not established	Not established	Not established	20 mg/m3 STEL	25 mg/m3 STEL
	TWAs	1 ppm TWA	1 ppm TWA (designated substances regulation); 1 ppm TWA (applies to workplaces to which the designated substances regulation does not apply)	1 ppm TWAEV; 2.6 mg/m3 TWAEV	10 mg/m3 TWA	10 mg/m3 TWA
Vinyl Acetate (108-05-4)	STELs	15 ppm STEL	15 ppm STEL	15 ppm STEV; 53 mg/m3 STEV	15 mg/m3 STEL	Not established
	TWAs	10 ppm TWA	10 ppm TWA	10 ppm TWAEV; 35 mg/m3 TWAEV	10 mg/m3 TWA	Not established
Methyl Ethyl Ketone (78-93-3)	STELs	300 ppm STEL	300 ppm STEL	100 ppm STEV; 300 mg/m3 STEV	600 mg/m3 STEL	Not established
	TWAs	200 ppm TWA	200 ppm TWA	50 ppm TWAEV; 150 mg/m3 TWAEV	300 mg/m3 TWA	Not established
Ethanol (64-17-5)	STELs	1000 ppm STEL	1000 ppm STEL	Not established	Not established	Not established
	TWAs	Not established	Not established	1000 ppm TWAEV; 1880 mg/m3 TWAEV	Not established	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Europe	France	Germany DFG	Germany TRGS	Ireland
Toluene (108-88-3)	STELs	100 ppm STEL; 384 mg/m3 STEL	100 ppm STEL [VLCT] (restrictive limit); 384 mg/m3 STEL [VLCT] (restrictive limit)	Not established	Not established	100 ppm STEL; 384 mg/m3 STEL
	TWAs	50 ppm TWA; 192 mg/m3 TWA	20 ppm TWA [VME] (restrictive limit); 76.8 mg/m3 TWA [VME] (restrictive limit)	Not established	50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4); 190 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4)	50 ppm TWA; 192 mg/m3 TWA
	Ceilings	Not established	Not established	200 ppm Peak; 760 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	50 ppm TWA MAK; 190 mg/m3 TWA	Not established	Not established

				MAK		
n-Hexane (110-54-3)	TWAs	20 ppm TWA; 72 mg/m3 TWA	20 ppm TWA [VME] (restrictive limit); 72 mg/m3 TWA [VME] (restrictive limit)	Not established	50 ppm TWA AGW (exposure factor 8); 180 mg/m3 TWA AGW (exposure factor 8)	20 ppm TWA; 72 mg/m3 TWA
	Ceilings	Not established	Not established	400 ppm Peak; 1440 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	50 ppm TWA MAK; 180 mg/m3 TWA MAK	Not established	Not established
Benzyl Chloride (100-44-7)	STELs	Not established	2 ppm STEL [VLCT]; 11 mg/m3 STEL [VLCT]	Not established	Not established	1.5 ppm STEL; 7.9 mg/m3 STEL
	TWAs	Not established	1 ppm TWA [VME]; 5 mg/m3 TWA [VME]	Not established	Not established	0.5 ppm TWA; 2.6 mg/m3 TWA
1,3-Butadiene (106-99-0)	TWAs	Not established	Not established	Not established	Not established	1 ppm TWA; 2.2 mg/m3 TWA
Carbon disulfide (75-15-0)	STELs	Not established	25 ppm STEL [VLCT]; 75 mg/m3 STEL [VLCT]	Not established	Not established	Not established
	TWAs	Not established	5 ppm TWA [VME]; 15 mg/m3 TWA [VME]	Not established	30 mg/m3 TWA AGW (exposure factor 2); 10 ppm TWA AGW (exposure factor 2)	10 ppm TWA; 30 mg/m3 TWA
	Ceilings	Not established	Not established	10 ppm Peak; 32 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	5 ppm TWA MAK; 16 mg/m3 TWA MAK	Not established	Not established
Methyl Chloride (74-87-3)	STELs	Not established	100 ppm STEL [VLCT]; 210 mg/m3 STEL [VLCT]	Not established	Not established	100 ppm STEL; 210 mg/m3 STEL
	TWAs	Not established	50 ppm TWA [VME]; 105 mg/m3 TWA [VME]	Not established	50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 100 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)	50 ppm TWA; 105 mg/m3 TWA
	Ceilings	Not established	Not established	100 ppm Peak; 200 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	50 ppm TWA MAK; 100 mg/m3 TWA MAK	Not established	Not established
Vinyl Chloride (75-01-4)	TWAs	Not established	1 ppm TWA [VME] (restrictive limit); 2.59 mg/m3 TWA [VME]	Not established	Not established	3 ppm TWA; 7.77 mg/m3 TWA

			(restrictive limit)			
Vinyl Acetate (108-05-4)	STELs	Not established	35.2 mg/m3 STEL [VLCT]; 10 ppm STEL [VLCT]	Not established	Not established	20 ppm STEL; 60 mg/m3 STEL
	TWAs	Not established	5 ppm TWA [VME]; 17.6 mg/m3 TWA [VME]	Not established	5 ppm TWA AGW (exposure factor 2); 18 mg/m3 TWA AGW (exposure factor 2)	10 ppm TWA; 30 mg/m3 TWA
Methyl Ethyl Ketone (78-93-3)	STELs	Not established	300 ppm STEL [VLCT] (restrictive limit); 900 mg/m3 STEL [VLCT] (restrictive limit)	Not established	Not established	300 ppm STEL; 900 mg/m3 STEL
	TWAs	Not established	200 ppm TWA [VME] (restrictive limit); 600 mg/m3 TWA [VME] (restrictive limit)	Not established	200 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1); 600 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1)	200 ppm TWA; 600 mg/m3 TWA
	Ceilings	Not established	Not established	200 ppm Peak; 600 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	200 ppm TWA MAK; 600 mg/m3 TWA MAK	Not established	Not established
Ethanol (64-17-5)	STELs	Not established	5000 ppm STEL [VLCT]; 9500 mg/m3 STEL [VLCT]	Not established	Not established	1000 ppm STEL
	TWAs	Not established	1000 ppm TWA [VME]; 1900 mg/m3 TWA [VME]	Not established	500 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 960 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)	Not established
	Ceilings	Not established	Not established	1000 ppm Peak; 1920 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	500 ppm TWA MAK; 960 mg/m3 TWA MAK	Not established	Not established

Exposure Limits/Guidelines (Con't.)						
	Result	**Israel**	**Italy**	**NIOSH**	**OSHA**	**OSHA Vacated**
Toluene (108-88-3)	TWAs	50 ppm TWA	50 ppm TWA; 192 mg/m3 TWA	100 ppm TWA; 375 mg/m3 TWA	200 ppm TWA	100 ppm TWA; 375 mg/m3 TWA
	Ceilings	Not established	Not established	Not established	300 ppm Ceiling	Not established
	STELs	Not established	Not established	150 ppm STEL; 560 mg/m3 STEL	Not established	150 ppm STEL; 560 mg/m3 STEL
n-Hexane (110-54-3)	TWAs	50 ppm TWA	20 ppm TWA; 72 mg/m3 TWA	50 ppm TWA; 180 mg/m3 TWA	500 ppm TWA; 1800 mg/m3 TWA	50 ppm TWA; 180 mg/m3 TWA
Benzyl Chloride (100-44-7)	TWAs	1 ppm TWA	Not established	Not established	1 ppm TWA; 5 mg/m3 TWA	1 ppm TWA; 5 mg/m3 TWA
	Ceilings	Not established	Not established	1 ppm Ceiling (15 min); 5 mg/m3 Ceiling (15 min)	Not established	Not established
1,3-Butadiene (106-99-0)	TWAs	2 ppm TWA	Not established	Not established	1 ppm TWA (listed under Butadiene)	1000 ppm TWA (listed under Butadiene); 2200 mg/m3 TWA (listed under Butadiene)
	STELs	Not established	Not established	Not established	5 ppm STEL (see 29 CFR 1910.1051)	Not established
Carbon disulfide (75-15-0)	TWAs	1 ppm TWA	Not established	1 ppm TWA; 3 mg/m3 TWA	20 ppm TWA	4 ppm TWA; 12 mg/m3 TWA
	Ceilings	Not established	Not established	Not established	30 ppm Ceiling	Not established
	STELs	Not established	Not established	10 ppm STEL; 30 mg/m3 STEL	Not established	12 ppm STEL; 36 mg/m3 STEL
Methyl Chloride (74-87-3)	STELs	100 ppm STEL	Not established	Not established	Not established	100 ppm STEL; 210 mg/m3 STEL
	TWAs	50 ppm TWA	Not established	Not established	100 ppm TWA	50 ppm TWA; 105 mg/m3 TWA
	Ceilings	Not established	Not established	Not established	200 ppm Ceiling	Not established
Vinyl Chloride (75-01-4)	TWAs	1 ppm TWA; 1 ppm TWA (for pregnant and breastfeeding women)	3 ppm TWA; 7.77 mg/m3 TWA	Not established	1 ppm TWA	Not established
	STELs	5 ppm STEL	Not established	Not established	5 ppm STEL (see 29 CFR 1910.1017)	Not established
Vinyl Acetate (108-05-4)	STELs	15 ppm STEL	Not established	Not established	Not established	20 ppm STEL; 60 mg/m3 STEL
	TWAs	10 ppm TWA	Not established	Not established	Not established	10 ppm TWA; 30 mg/m3 TWA
	Ceilings	Not established	Not established	4 ppm Ceiling (15 min); 15 mg/m3 Ceiling (15 min)	Not established	Not established
Methyl Ethyl Ketone (78-93-3)	STELs	300 ppm STEL	300 ppm STEL; 900 mg/m3 STEL	300 ppm STEL; 885 mg/m3 STEL	Not established	300 ppm STEL; 885 mg/m3 STEL
	TWAs	200 ppm TWA	200 ppm TWA; 600 mg/m3 TWA	200 ppm TWA; 590 mg/m3 TWA	200 ppm TWA; 590 mg/m3 TWA	200 ppm TWA; 590 mg/m3 TWA
Ethanol (64-17-5)	STELs	1000 ppm STEL	Not established	Not established	Not established	Not established
	TWAs	Not established	Not established	1000 ppm TWA; 1900 mg/m3 TWA	1000 ppm TWA; 1900 mg/m3 TWA	1000 ppm TWA; 1900 mg/m3 TWA

Exposure Limits/Guidelines (Con't.)				
	Result	**Portugal**	**Spain**	**Sweden**
Toluene (108-88-3)	TWAs	50 ppm TWA [VLE-MP]	50 ppm TWA [VLA-ED] (indicative limit value; manufacturing, commercialization, and use restrictions under REACH); 192 mg/m3 TWA [VLA-ED] (indicative limit value; manufacturing, commercialization, and use restrictions under REACH)	50 ppm LLV; 192 mg/m3 LLV
	STELs	Not established	100 ppm STEL [VLA-EC]; 384 mg/m3 STEL [VLA-EC]	100 ppm STV; 384 mg/m3 STV
	Biological Limit Values (BLV)	Not established	0.5 mg/L urine end of shift o-Cresol (2,F); 1.6 g/g Creatinine urine end of shift Hippuric acid (2,F,I); 0.05 mg/L blood start of last shift of workweek Toluene (5)	Not established
n-Hexane (110-54-3)	TWAs	50 ppm TWA [VLE-MP]	20 ppm TWA [VLA-ED] (indicative limit value); 72 mg/m3 TWA [VLA-ED] (indicative limit value)	25 ppm LLV; 90 mg/m3 LLV
	Under Review	Not established	0.2 mg/L Medium: urine Time: end of workweek Parameter: 2,5-Hexanedione (without hydrolysis; means free 2,5-hexanedione, unconjugated. This substance is a metabolite of n-hexane and methyl-n-butyl ketone it means after four or five consecutive days of work with exposure, as soon as possible after the end of the last working day, as biological indicators are eliminated with half-lives greater than five hours; these indicators accumulate in the body during the work week, therefore the sampling time is critical in relation to previous exposures.)	Not established

	Biological Limit Values (BLV)	Not established	0.4 mg/L urine end of workweek 2,5-Hexanedione (without hydrolysis) (1,8)	Not established
	STELs	Not established	Not established	50 ppm STV; 180 mg/m3 STV
Benzyl Chloride (100-44-7)	TWAs	1 ppm TWA [VLE-MP]	1 ppm TWA [VLA-ED] (manufacturing, commercialization, and use restrictions under REACH); 5.3 mg/m3 TWA [VLA-ED] (manufacturing, commercialization, and use restrictions under REACH)	1 ppm LLV; 5 mg/m3 LLV
	STELs	Not established	Not established	2 ppm STV; 11 mg/m3 STV
1,3-Butadiene (106-99-0)	TWAs	2 ppm TWA [VLE-MP]	2 ppm TWA [VLA-ED] (manufacturing, commercialization, and use restrictions under REACH); 4.5 mg/m3 TWA [VLA-ED] (manufacturing, commercialization, and use restrictions under REACH)	0.5 ppm LLV; 1 mg/m3 LLV
	Biological Limit Values (BLV)	Not established	2.5 mg/L urine end of shift 1,2-Dihydroxy-4-(N-acetylcysteinyl)-butane (2,S,F); 2.5 pmol/g hemoglobin blood not critical Mixture of N-1 and N-2-(hydroxybutenyl)valine	Not established
	STELs	Not established	Not established	5 ppm STV; 10 mg/m3 STV
Carbon disulfide (75-15-0)	TWAs	1 ppm TWA [VLE-MP]	5 ppm TWA [VLA-ED] (indicative limit value; endocrine disruptor); 15 mg/m3 TWA [VLA-ED] (indicative limit value; endocrine disruptor)	5 ppm LLV; 16 mg/m3 LLV
	Biological Limit Values (BLV)	Not established	1.5 mg/g Creatinine urine end of shift 2-Thiothiazolidine-4-carboxylic acid (2)	Not established
	STELs	Not established	Not established	8 ppm STV; 25 mg/m3 STV
Methyl Chloride	STELs	100 ppm STEL [VLE-CD	100 ppm STEL [VLA-EC]; 210 mg/m3 STEL [VLA-EC]	20 ppm STV; 40 mg/m3 STV

(74-87-3)	TWAs	50 ppm TWA [VLE-MP]	50 ppm TWA [VLA-ED]; 105 mg/m3 TWA [VLA-ED]	10 ppm LLV; 20 mg/m3 LLV
Vinyl Chloride (75-01-4)	TWAs	1 ppm TWA [VLE-MP]	3 ppm TWA [VLA-ED] (manufacturing, commercialization, and use restrictions under REACH; worker protection to exposure to carcinogens and mutagens in the workplace); 7.8 mg/m3 TWA [VLA-ED] (manufacturing, commercialization, and use restrictions under REACH; worker protection to exposure to carcinogens and mutagens in the workplace)	1 ppm LLV; 2.5 mg/m3 LLV
	STELs	Not established	Not established	5 ppm STV; 13 mg/m3 STV
Vinyl Acetate (108-05-4)	STELs	15 ppm STEL [VLE-CD	10 ppm STEL [VLA-EC]; 35.2 mg/m3 STEL [VLA-EC]	10 ppm STV; 35 mg/m3 STV
	TWAs	10 ppm TWA [VLE-MP]	5 ppm TWA [VLA-ED] (indicative limit value); 17.6 mg/m3 TWA [VLA-ED] (indicative limit value)	5 ppm LLV; 18 mg/m3 LLV
Methyl Ethyl Ketone (78-93-3)	STELs	300 ppm STEL [VLE-CD	300 ppm STEL [VLA-EC]; 900 mg/m3 STEL [VLA-EC]	100 ppm STV; 300 mg/m3 STV
	TWAs	200 ppm TWA [VLE-MP]	200 ppm TWA [VLA-ED] (indicative limit value); 600 mg/m3 TWA [VLA-ED] (indicative limit value)	50 ppm LLV; 150 mg/m3 LLV
	Biological Limit Values (BLV)	Not established	2 mg/L urine end of shift Methyl ethyl ketone (2)	Not established
Ethanol (64-17-5)	TWAs	1000 ppm TWA [VLE-MP]	1000 ppm TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound); 1910 mg/m3 TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound)	500 ppm LLV; 1000 mg/m3 LLV

	STELs	Not established	1000 ppm STEL [VLA-EC]; 1910 mg/m3 STEL [VLA-EC]	1000 ppm STV; 1900 mg/m3 STV

Exposure Control Notations

Portugal

- 1,3-Butadiene (106-99-0): **Carcinogens:** (A2 - Suspected Human Carcinogen)
- Benzyl Chloride (100-44-7): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- Carbon disulfide (75-15-0): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen) | **Skin:** (skin - potential for cutaneous exposure)
- Methyl Chloride (74-87-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen) | **Skin:** (skin - potential for cutaneous exposure)
- Ethanol (64-17-5): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- n-Hexane (110-54-3): **Skin:** (skin - potential for cutaneous exposure)
- Toluene (108-88-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen) | **Skin:** (skin - potential for cutaneous exposure)
- Vinyl Acetate (108-05-4): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- Vinyl Chloride (75-01-4): **Carcinogens:** (A1 - Confirmed Human Carcinogen)
- Nitrogen (7727-37-9): **Simple Asphyxiants:** (Simple Asphyxiant)

Italy

- 1,3-Butadiene (106-99-0): **Carcinogens:** (Category 1 Carcinogen) | **Mutagens:** (Category 2 Mutagen)
- Benzyl Chloride (100-44-7): **Carcinogens:** (Category 2 Carcinogen)
- Methyl Chloride (74-87-3): **Carcinogens:** (Category 3 Carcinogen)
- Toluene (108-88-3): **Skin:** (skin - potential for cutaneous absorption)
- Vinyl Chloride (75-01-4): **Carcinogens:** (Category 1 Carcinogen)

France

- Benzyl Chloride (100-44-7): **Carcinogens:** (Carcinogen category 2)
- Carbon disulfide (75-15-0): **Reproductive Toxins:** (Reproductive Toxin category 3)
- Methyl Chloride (74-87-3): **Carcinogens:** (Carcinogen category 3)
- n-Hexane (110-54-3): **Reproductive Toxins:** (Reproductive Toxin category 3)
- Toluene (108-88-3): **Reproductive Toxins:** (Reproductive Toxin category 3)
- Vinyl Chloride (75-01-4): **Carcinogens:** (Carcinogen category 1)

Ireland

- 1,3-Butadiene (106-99-0): **Carcinogens:** (Carc1A) | **Mutagens:** (Muta1B)
- Methyl Ethyl Ketone (78-93-3): **Skin:** (Potential for cutaneous absorption)
- Benzyl Chloride (100-44-7): **Carcinogens:** (Carc1B)
- Carbon disulfide (75-15-0): **Skin:** (Potential for cutaneous absorption)
- Toluene (108-88-3): **Skin:** (Potential for cutaneous absorption)
- Vinyl Chloride (75-01-4): **Carcinogens:** (Carc1A)
- Nitrogen (7727-37-9): **Simple Asphyxiants:** (Asphyxiant)

Spain

- 1,3-Butadiene (106-99-0): **Carcinogens:** (Known human carcinogen) | **Mutagens:** (Suspected human mutagen)
- Benzyl Chloride (100-44-7): **Carcinogens:** (Suspected human carcinogen)
- Carbon disulfide (75-15-0): **Skin:** (skin - potential for cutaneous exposure)
- Methyl Chloride (74-87-3): **Skin:** (skin - potential for cutaneous exposure)
- Toluene (108-88-3): **Skin:** (skin - potential for cutaneous exposure)
- Vinyl Chloride (75-01-4): **Carcinogens:** (Known human carcinogen)
- Nitrogen (7727-37-9): **Simple Asphyxiants:** (simple asphyxiant)

Sweden

- 1,3-Butadiene (106-99-0): **Carcinogens:** (Carcinogen)
- Benzyl Chloride (100-44-7): **Carcinogens:** (Carcinogen)
- Carbon disulfide (75-15-0): **Reproductive Toxins:** (Causes reproductive disturbances) | **Skin:** (Skin notation)
- Toluene (108-88-3): **Skin:** (Skin notation)
- Vinyl Chloride (75-01-4): **Carcinogens:** (Carcinogen) | **Skin:** (Skin notation)

Germany TRGS

- Methyl Ethyl Ketone (78-93-3): **Skin:** (skin notation)
- Benzyl Chloride (100-44-7): **Carcinogens:** (Category 2) | **Developmental Toxins:** (Category 3) | **Reproductive Toxins:** (Based on current

data, this substance cannot be classified in categories 1-3) | **Germ Cell Mutagens:** (Category 3)

- Carbon disulfide (75-15-0): **Skin:** (skin notation)
- Methyl Chloride (74-87-3): **Skin:** (skin notation)
- Toluene (108-88-3): **Skin:** (skin notation)
- Vinyl Acetate (108-05-4): **Carcinogens:** (Category 3)

Germany DFG

- 1,3-Butadiene (106-99-0): **Carcinogens:** (Category 1 (causes cancer in man))
- Methyl Ethyl Ketone (78-93-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)
- Benzyl Chloride (100-44-7): **Carcinogens:** (Category 2 (considered to be carcinogenic for man, see also .alpha.-chlorinated toluenes)) | **Skin:** (skin notation)
- Carbon disulfide (75-15-0): **Pregnancy:** (risk to embryo/fetus probable) | **Skin:** (skin notation)
- Methyl Chloride (74-87-3): **Carcinogens:** (Category 3B (could be carcinogenic for man)) | **Pregnancy:** (risk to embryo/fetus probable) | **Skin:** (skin notation)
- Ethanol (64-17-5): **Carcinogens:** (Category 5 (low carcinogenic potency)) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)
- n-Hexane (110-54-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)
- Toluene (108-88-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)
- Vinyl Acetate (108-05-4): **Carcinogens:** (Category 3A (could be carcinogenic for man))
- Vinyl Chloride (75-01-4): **Carcinogens:** (Category 1 (causes cancer in man))

Exposure Limits Supplemental

Spain

- Ethanol (64-17-5): **Under Review:** (1000 ppm VLA-EC; 1910 mg/m3 VLA-EC; it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary o biocide compound)

Sweden

- Toluene (108-88-3): **Substances with Handling Restrictions:** (Permission required for handling in concentrations >=1% by weight)

8.2 Exposure controls

Engineering Measures/Controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Personal Protective Equipment	
Respiratory	In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.
Eye/Face	Wear safety glasses.
Skin/Body	Wear leather gloves when handling cylinders.
Environmental Exposure Controls	Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

LLV = Limit Level Value is the exposure limit for 8-hour work day

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Gas	Appearance/Description	Colorless compressed gas with no odor.
Color	Colorless	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	-196 C(-320.8 F) Nitrogen	Melting Point	-210 C(-346 F) Nitrogen
Decomposition Temperature	Data lacking	pH	Not relevant
Specific Gravity/Relative Density	0.967 Water=1 Nitrogen	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizing gas.		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	0.97 Air=1 Nitrogen
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Excess heat.

10.5 Incompatible materials

- Nitrogen reacts with Li, Nd, and Ti at high temperatures.

10.6 Hazardous decomposition products

- None

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
1,3-Butadiene (1ppm)	106-99-0	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 5480 mg/kg; Inhalation-Rat LC50 • 128000 ppm 4 Hour(s); **Mutagen:** Inhalation-Mouse • 130 ppm 5 Day(s) 6 Hour(s)-Continuous; Heritable Translocation Test • Inhalation-Mouse • 500 ppm 6 Hour(s) 5 Day(s)-Continuous; Specific locus test • Inhalation-Mouse • 1250 ppm 2 Week(s)-Intermittent; Specific locus test • Inhalation-Mouse • 20 ppm 6 Hour(s) 4 Week(s)
Methyl Ethyl Ketone (1ppm)	78-93-3	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 2737 mg/kg; Inhalation-Rat LC50 • 23500 mg/m³; Skin-Rabbit LD50 • 6480 mg/kg; **Irritation:** Eye-Rabbit • 80 mg; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; **Reproductive:** Inhalation-Rat TCLo • 1000 ppm 7 Hour(s)(6-15D preg); *Reproductive Effects:Effects on Embryo or Fetus*:**Fetotoxicity (except death, e.g., stunted fetus)**; *Reproductive Effects:Specific Developmental Abnormalities*:**Musculoskeletal system**
Benzyl Chloride (1ppm)	100-44-7	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1231 mg/kg; Inhalation-Rat LC50 • 150 ppm 2 Hour(s); *Lungs, Thorax, or Respiration*:**Respiratory depression**; Inhalation-Rat LC50 • 740 mg/m³ 2 Hour(s); Inhalation-Cat LCLo • 400 ppm 8 Hour(s); *Sense Organs and Special Senses:Eye*:**Corneal damage**; *Lungs, Thorax, or Respiration*:**Acute pulmonary edema**; *Lungs, Thorax, or Respiration*:**Cough**; **Reproductive:** Ingestion/Oral-Rat TDLo • 11 µg/kg (1-19D preg); *Reproductive Effects:Effects on Embryo or Fetus*:**Fetal death**; Ingestion/Oral-Rat TDLo • 1000 mg/kg (6-15D preg); *Reproductive Effects:Effects on Embryo or Fetus*:**Fetotoxicity (except death, e.g., stunted fetus)**; *Reproductive Effects:Specific Developmental Abnormalities*:**Other developmental abnormalities**
Carbon disulfide (1ppm)	75-15-0	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1200 mg/kg; Inhalation-Rat LC50 • 25 g/m³ 2 Hour(s); **Reproductive:** Inhalation-Rat TCLo • 100 mg/m³ 8 Hour(s)(1-21D preg); *Reproductive Effects:Effects on Embryo or Fetus*:**Fetal death**; *Reproductive Effects:Specific Developmental Abnormalities*:**Craniofacial (including nose and tongue)**; *Reproductive Effects*:*Specific Developmental Abnormalities*:**Homeostasis**
Methyl Chloride (1ppm)	74-87-3	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1800 mg/kg; Inhalation-Rat LC50 • 5300 mg/m³ 4 Hour(s); **Mutagen:** Dominant lethal test • Inhalation-Rat • 3000 ppm 6 Hour(s) 5 Day(s)-Continuous; **Reproductive:** Inhalation-Rat TCLo • 1500 ppm 6 Hour(s)(7-20D preg); *Reproductive Effects:Maternal Effects*:**Other effects**; *Reproductive Effects:Effects on Embryo or Fetus*:**Fetotoxicity (except death, e.g., stunted fetus)**; **Tumorigen / Carcinogen:** Inhalation-Mouse TCLo • 997 ppm 6 Hour(s) 2 Year(s)-Intermittent; *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Kidney, Ureter, and Bladder*:**Kidney tumors**
Ethanol (1ppm)	64-17-5	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 7060 mg/kg; *Lungs, Thorax, or Respiration*:**Other changes**; Inhalation-Rat LC50 • 124700 mg/m³ 4 Hour(s); **Irritation:** Eye-Rabbit • 500 mg • Severe irritation; Skin-Rabbit • 400 mg-Open • Mild irritation; **Reproductive:** Ingestion/Oral-Rat TDLo • 322 g/kg (35D male); *Reproductive Effects:Paternal Effects*:**Spermatogenesis**; *Reproductive Effects:Paternal Effects*:**Testes, epididymis, sperm duct**; Ingestion/Oral-Rat TDLo • 900 mL/kg (19D pre-21D post); *Reproductive Effects:Specific Developmental Abnormalities*:**Central nervous system**; *Reproductive Effects:Effects on Newborn*:**Growth statistics (e.g., reduced weight gain)**; *Reproductive Effects:Effects on Newborn*:**Biochemical and metabolic**
n-Hexane (1ppm)	110-54-3	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 25 g/kg; Inhalation-Rat LC50 • 48000 ppm 4 Hour(s); **Irritation:** Eye-Rabbit • 10 mg • Mild irritation; **Reproductive:** Inhalation-Rat TCLo • 5000 ppm (6-19D preg); *Reproductive Effects:Specific Developmental Abnormalities*:**Musculoskeletal system**; *Reproductive Effects*:*Specific Developmental Abnormalities*:**Urogenital system**
Toluene (1ppm)	108-88-3	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 636 mg/kg; Inhalation-Rat LC50 • 49 g/m³ 4 Hour(s); Skin-Rabbit LD50 • 14100 µL/kg; **Irritation:** Eye-Rabbit • 100 mg 30 Second(s)-Rinse • Mild irritation; Skin-Rabbit • 435 mg • Mild irritation; **Reproductive:** Inhalation-Rat TCLo • 1500 ppm (7-20D preg); *Reproductive Effects:Specific Developmental Abnormalities*:**Central nervous system**; *Reproductive Effects:Effects on Newborn*:**Growth statistics (e.g., reduced weight gain)**; *Reproductive Effects:Effects on Newborn*:**Biochemical and metabolic**
Vinyl Acetate (1ppm)	108-05-4	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 2900 mg/kg; Inhalation-Rabbit LC50 • 2500 ppm 4 Hour(s); Skin-Rabbit LD50 • 2335 mg/kg; **Irritation:** Eye-Human • 22 ppm; **Reproductive:** Inhalation-Rat TCLo • 1000 ppm 6 Hour(s)(6-15D preg); *Reproductive Effects:Maternal Effects*:**Other effects**; *Reproductive Effects:Effects on Embryo or Fetus*:**Fetotoxicity (except death, e.g., stunted fetus)**; *Reproductive Effects:Specific Developmental Abnormalities*:**Musculoskeletal system**
		Acute Toxicity: Ingestion/Oral-Rat LD50 • 500 mg/kg;

Vinyl Chloride (1ppm)	75-01-4	**Reproductive:** Inhalation-Rat TCLo • 500 ppm 7 Hour(s)(6-15D preg); *Reproductive Effects:Effects on Embryo or Fetus*:**Fetotoxicity (except death, e.g., stunted fetus)**; *Reproductive Effects:Specific Developmental Abnormalities*:**Musculoskeletal system**; **Tumorigen / Carcinogen:** Inhalation-Rat TCLo • 10000 ppm 4 Hour(s); *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Reproductive Effects:Tumorigenic Effects*:**Transplacental tumorigenesis**; *Endocrine*:**Tumors**

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Aspiration Hazard	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Germ Cell Mutagenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-RE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-SE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Toxicity for Reproduction	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Respiratory sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Serious eye damage/Irritation	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met

Potential Health Effects

Inhalation

Acute (Immediate) | This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces. If this material is released in a small, poorly ventilated area (i.e. an enclosed or confined space), an oxygen-deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Under some circumstances of over-exposure, death may occur. The following effects associated with decreased levels of oxygen: increase in breathing and pulse rate, emotional upset, abnormal fatigue, nausea, vomiting, collapse, loss of consciousness, convulsive movements, respiratory collapse and death.

Chronic (Delayed) | No data available

Skin

Acute (Immediate) | Under normal conditions of use, no health effects are expected.

Chronic (Delayed) | Under normal conditions of use, no health effects are expected.

Eye

Acute (Immediate) | Under normal conditions of use, no health effects are expected.

Chronic (Delayed) | Under normal conditions of use, no health effects are expected.

Ingestion

Acute (Immediate) | Ingestion is not anticipated to be a likely route of exposure to this product.

Chronic (Delayed) | Ingestion is not anticipated to be a likely route of exposure to this product.

Key to abbreviations

LC = Lethal Concentration
LD = Lethal Dose
TC = Toxic Concentration
TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

| Material data lacking.

12.2 Persistence and degradability

| Material data lacking.

12.3 Bioaccumulative potential

| Material data lacking.

12.4 Mobility in Soil

| Material data lacking.

12.5 Results of PBT and vPvB assessment

| PBT and vPvB assessment has not been conducted for this material.

12.6 Other adverse effects

| No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste | Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste | Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1956	Compressed gas, n.o.s (Nitrogen)	2.2	NDA	NDA
TDG	UN1956	COMPRESSED GAS, N.O.S. (Nitrogen)	2.2	NDA	NDA
IMO/IMDG	UN1956	COMPRESSED GAS, N.O.S. (Nitrogen)	2.2	NDA	NDA
IATA/ICAO	UN1956	Compressed gases, n.o.s. (Nitrogen)	2.2	NDA	NDA

14.6 Special precautions for user | Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not relevant.

Section 15 - Regulatory Information

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

SARA Hazard Classifications | Pressure(Sudden Release of), Acute

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
1,3-Butadiene	106-99-0	Yes	Yes	Yes
Methyl Ethyl Ketone	78-93-3	Yes	Yes	Yes
Vinyl Acetate	108-05-4	Yes	Yes	Yes
Carbon disulfide	75-15-0	Yes	Yes	Yes
Ethanol	64-17-5	Yes	Yes	Yes
n-Hexane	110-54-3	Yes	Yes	Yes
Methyl Chloride	74-87-3	Yes	Yes	Yes
Nitrogen	7727-37-9	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes
Benzyl Chloride	100-44-7	Yes	Yes	Yes
Vinyl Chloride	75-01-4	Yes	Yes	Yes

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**China**	**EU EINECS**	**EU ELNICS**
1,3-Butadiene	106-99-0	Yes	No	Yes	Yes	No
Methyl Ethyl Ketone	78-93-3	Yes	No	Yes	Yes	No
Vinyl Acetate	108-05-4	Yes	No	Yes	Yes	No
Carbon disulfide	75-15-0	Yes	No	Yes	Yes	No
Ethanol	64-17-5	Yes	No	Yes	Yes	No
n-Hexane	110-54-3	Yes	No	Yes	Yes	No
Methyl Chloride	74-87-3	Yes	No	Yes	Yes	No
Nitrogen	7727-37-9	Yes	No	Yes	Yes	No
Toluene	108-88-3	Yes	No	Yes	Yes	No
Benzyl Chloride	100-44-7	Yes	No	Yes	Yes	No
Vinyl Chloride	75-01-4	Yes	No	Yes	Yes	No

Inventory (Con't.)		
Component	**CAS**	**TSCA**
1,3-Butadiene	106-99-0	Yes

Methyl Ethyl Ketone	78-93-3	Yes
Vinyl Acetate	108-05-4	Yes
Carbon disulfide	75-15-0	Yes
Ethanol	64-17-5	Yes
n-Hexane	110-54-3	Yes
Methyl Chloride	74-87-3	Yes
Nitrogen	7727-37-9	Yes
Toluene	108-88-3	Yes
Benzyl Chloride	100-44-7	Yes
Vinyl Chloride	75-01-4	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• 1,3-Butadiene	106-99-0	A, B1, D2A, F
• Carbon disulfide	75-15-0	B2, D1B, D2A, D2B
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	A, B1, D2A, D2B, F
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	B2, D1B, D2A, F
• Toluene	108-88-3	B2, D2A, D2B
• Ethanol	64-17-5	B2, D2B
• n-Hexane	110-54-3	B2, D2A, D2B
• Methyl Ethyl Ketone	78-93-3	B2, D2B
• Nitrogen	7727-37-9	A

Canada - WHMIS - Ingredient Disclosure List

• 1,3-Butadiene	106-99-0	0.1 %
• Carbon disulfide	75-15-0	0.1 %
• Methyl Chloride	74-87-3	1 %
• Vinyl Chloride	75-01-4	0.1 %
• Benzyl Chloride	100-44-7	1 %
• Vinyl Acetate	108-05-4	1 %
• Toluene	108-88-3	1 %
• Ethanol	64-17-5	0.1 %
• n-Hexane	110-54-3	1 %
• Methyl Ethyl Ketone	78-93-3	1 %
• Nitrogen	7727-37-9	Not Listed

Environment

Canada - CEPA - Priority Substances List

• 1,3-Butadiene	106-99-0	Priority Substance List 2 (substance considered toxic)
• Carbon disulfide	75-15-0	Priority Substance List 2 (substance not considered toxic)
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
		Priority Substance List 1

• Toluene	108-88-3	(substance not considered toxic)
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

China

Environment

China - Ozone Depleting Substances - First Schedule

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

China - Ozone Depleting Substances - Second Schedule

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

China - Ozone Depleting Substances - Third Schedule

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

Other

China - Annex I & II - Controlled Chemicals Lists

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed

• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

China - Dangerous Goods List

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	
• Methyl Chloride	74-87-3	
• Vinyl Chloride	75-01-4	
• Benzyl Chloride	100-44-7	
• Vinyl Acetate	108-05-4	
• Toluene	108-88-3	
• Ethanol	64-17-5	
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	
• Nitrogen	7727-37-9	(compressed or refrigerated liquid)

China - Export Control List - Part I Chemicals

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• 1,3-Butadiene	106-99-0	F+; R12 Carc.Cat.1; R45 Muta.Cat.2; R46
• Carbon disulfide	75-15-0	F; R11 Xi; R36/38 T; R48/23 Repr.Cat.3; R62-63
• Methyl Chloride	74-87-3	F+; R12 Carc.Cat.3; R40 Xn; R48/20
• Vinyl Chloride	75-01-4	F+; R12 Carc.Cat.1; R45
• Benzyl Chloride	100-44-7	Xn; R22-48/22 T; R23 Xi; R37/38-41 Carc.Cat.2; R45
• Vinyl Acetate	108-05-4	F; R11
• Toluene	108-88-3	F; R11 Xi; R38 Xn; R48/20-65 Repr.Cat.3; R63 R67
• Ethanol	64-17-5	F; R11
• n-Hexane	110-54-3	F; R11 Xi; R38 N; R51-53 Repr.Cat.3; R62 Xn; R65-48/20

		R67
• Methyl Ethyl Ketone	78-93-3	F; R11 Xi; R36 R66 R67
• Nitrogen	7727-37-9	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	1%<=C: Repr.Cat.3; R:62-63 1%<=C: T; R:48/23 0.2% <=C<1%: Xn; R:48/20
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	5%<=C: Xn; R:48/20
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• 1,3-Butadiene	106-99-0	F+ T R:45-46-12 S:53-45
• Carbon disulfide	75-15-0	F T R:11-36/38-48/23-62-63 S: (1/2)-16-33-36/37-45
• Methyl Chloride	74-87-3	F+ Xn R:12-40-48/20 S:(2)-9-16-33
• Vinyl Chloride	75-01-4	F+ T R:45-12 S:53-45
• Benzyl Chloride	100-44-7	T R:45-22-23-37/38-41-48/22 S:53-45
• Vinyl Acetate	108-05-4	F R:11 S:(2)-16-23-29-33
• Toluene	108-88-3	F Xn R:11-38-48/20-63-65-67 S:(2)-36/37-46-62
• Ethanol	64-17-5	F R:11 S:(2)-7-16
• n-Hexane	110-54-3	F Xn N R:11-38-48/20-62-65-67-51/53 S:(2)-9-16-29-33-36/37-61-62
• Methyl Ethyl Ketone	78-93-3	F Xi R:11-36-66-67 S:(2)-9-16
• Nitrogen	7727-37-9	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• 1,3-Butadiene	106-99-0	D
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	D
• Benzyl Chloride	100-44-7	E
• Vinyl Acetate	108-05-4	D
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• 1,3-Butadiene	106-99-0	S:53-45
• Carbon disulfide	75-15-0	S:(1/2)-16-33-36/37-45
• Methyl Chloride	74-87-3	S:(2)-9-16-33

• Vinyl Chloride	75-01-4	S:53-45
• Benzyl Chloride	100-44-7	S:53-45
• Vinyl Acetate	108-05-4	S:(2)-16-23-29-33
• Toluene	108-88-3	S:(2)-36/37-46-62
• Ethanol	64-17-5	S:(2)-7-16
• n-Hexane	110-54-3	S:(2)-9-16-29-33-36/37-61-62
• Methyl Ethyl Ketone	78-93-3	S:(2)-9-16
• Nitrogen	7727-37-9	Not Listed

Germany

Environment

Germany - TA Luft - Types and Classes

• 1,3-Butadiene	106-99-0	carcinogenic Substance: 5.2.7.1.1, Class III
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	organic Substance: 5.2.5, Class I
• Vinyl Chloride	75-01-4	carcinogenic Substance: 5.2.7.1.1, Class III
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	organic Substance: 5.2.5, Class I
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	ID Number 1351, not considered hazardous to water

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• 1,3-Butadiene	106-99-0	ID Number 218, hazard class 2 - hazard to waters
• Carbon disulfide	75-15-0	ID Number 183, hazard class 2 - hazard to waters
• Methyl Chloride	74-87-3	ID Number 265, hazard class 2 - hazard to waters
• Vinyl Chloride	75-01-4	ID Number 462, hazard class 2 - hazard to waters
• Benzyl Chloride	100-44-7	ID Number 33, hazard class 3 - severe hazard to waters

• Vinyl Acetate	108-05-4	ID Number 203, hazard class 2 - hazard to waters
• Toluene	108-88-3	ID Number 194, hazard class 2 - hazard to waters
• Ethanol	64-17-5	ID Number 96, hazard class 1 - low hazard to waters (footnote 10)
• n-Hexane	110-54-3	ID Number 124, hazard class 2 - hazard to waters
• Methyl Ethyl Ketone	78-93-3	ID Number 150, hazard class 1 - low hazard to waters
• Nitrogen	7727-37-9	Not Listed

Germany - Water Classification (VwVwS) - Annex 3

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

Other

Germany - Specifically Regulated Chemicals in TRGS

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

Portugal

Other

Portugal - Prohibited Substances

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

United Kingdom

Environment

United Kingdom - Pollution Inventory - Schedule 1 - Thresholds for Releases to Air

• 1,3-Butadiene	106-99-0	100 kg
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	1000 kg
• Vinyl Chloride	75-01-4	1000 kg
• Benzyl Chloride	100-44-7	10 kg
• Vinyl Acetate	108-05-4	10 kg
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

Other

United Kingdom - Workplace Exposure Limits (WELs) - Substances in Review

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

United Kingdom - List of Dangerous Substances in Water

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	15000 lb TQ
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed

• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• 1,3-Butadiene	106-99-0	5 ppm STEL (See 29 CFR 1910.1051, 15 min); 0.5 ppm Action Level; 1 ppm TWA
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	0.5 ppm Action Level (See 29 CFR 1910.1017); 1 ppm TWA (See 29 CFR 1910.1017); 5 ppm STEL (See 29 CFR 1910.1017, 15 min)
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• 1,3-Butadiene	106-99-0	
• Carbon disulfide	75-15-0	
• Methyl Chloride	74-87-3	
• Vinyl Chloride	75-01-4	
• Benzyl Chloride	100-44-7	
• Vinyl Acetate	108-05-4	
• Toluene	108-88-3	
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• 1,3-Butadiene	106-99-0	10 lb final RQ; 4.54 kg final RQ
• Carbon disulfide	75-15-0	100 lb final RQ; 45.4 kg final RQ
• Methyl Chloride	74-87-3	100 lb final RQ; 45.4 kg final RQ
• Vinyl Chloride	75-01-4	1 lb final RQ; 0.454 kg final RQ
• Benzyl Chloride	100-44-7	100 lb final RQ; 45.4 kg final RQ
• Vinyl Acetate	108-05-4	5000 lb final RQ; 2270 kg final RQ
• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	5000 lb final RQ; 2270 kg final RQ

• Methyl Ethyl Ketone	78-93-3	5000 lb final RQ; 2270 kg final RQ
• Nitrogen	7727-37-9	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	100 lb EPCRA RQ
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	100 lb EPCRA RQ
• Vinyl Acetate	108-05-4	5000 lb EPCRA RQ
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	10000 lb TPQ
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	500 lb TPQ
• Vinyl Acetate	108-05-4	1000 lb TPQ
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• 1,3-Butadiene	106-99-0	0.1 % de minimis concentration
• Carbon disulfide	75-15-0	1.0 % de minimis concentration
• Methyl Chloride	74-87-3	1.0 % de minimis concentration
• Vinyl Chloride	75-01-4	0.1 % de minimis concentration
• Benzyl Chloride	100-44-7	1.0 % de minimis concentration

• Vinyl Acetate	108-05-4	0.1 % de minimis concentration
• Toluene	108-88-3	1.0 % de minimis concentration
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	1.0 % de minimis concentration
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Included in waste streams: F005, F039
• Methyl Chloride	74-87-3	Included in waste streams: F024, F025, F039, K009, K010, K149, K150, K157
• Vinyl Chloride	75-01-4	Included in waste streams: F024, F025, F039, K019, K020, K028, K029
• Benzyl Chloride	100-44-7	Included in waste streams: K015, K085, K149
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Included in waste streams: F005, F039
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	
• Methyl Chloride	74-87-3	
• Vinyl Chloride	75-01-4	
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	
• Toluene	108-88-3	
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed

• Methyl Ethyl Ketone	78-93-3	
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	0.2 mg/L regulatory level
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	200.0 mg/L regulatory level
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	waste number P022
• Methyl Chloride	74-87-3	waste number U045
• Vinyl Chloride	75-01-4	waste number U043
• Benzyl Chloride	100-44-7	waste number P028
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	waste number U220
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	waste number U159
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	
• Methyl Chloride	74-87-3	
• Vinyl Chloride	75-01-4	
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	
• Toluene	108-88-3	
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - P Series Wastes - Acutely Toxic Wastes

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	waste number P022
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	waste number P028
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed

• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Part 268 Appendix III - Halogenated Organic Compounds (HOCs)

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Category I - Volatiles
• Vinyl Chloride	75-01-4	Category I - Volatiles
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	3.8 mg/L (wastewater); 4.8 mg/L TCLP (nonwastewater)
• Methyl Chloride	74-87-3	0.19 mg/L (wastewater); 30 mg/kg (nonwastewater)
• Vinyl Chloride	75-01-4	0.27 mg/L (wastewater); 6.0 mg/kg (nonwastewater)
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	0.080 mg/L (wastewater); 10 mg/kg (nonwastewater)
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	0.28 mg/L (wastewater); 36 mg/kg (nonwastewater)
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	
• Methyl Chloride	74-87-3	
• Vinyl Chloride	75-01-4	
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	
• Toluene	108-88-3	
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	
• Nitrogen	7727-37-9	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	waste number U045 (Ignitable waste, Toxic waste)
• Vinyl Chloride	75-01-4	waste number U043
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed

• Toluene	108-88-3	waste number U220
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	waste number U159 (Ignitable waste, Toxic waste)
• Nitrogen	7727-37-9	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• 1,3-Butadiene	106-99-0	carcinogen, initial date 4/1/88
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	carcinogen, initial date 2/27/87
• Benzyl Chloride	100-44-7	carcinogen, initial date 1/1/90
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	carcinogen, initial date 4/29/11 (in alcoholic beverages)
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• 1,3-Butadiene	106-99-0	developmental toxicity, initial date 4/16/04
• Carbon disulfide	75-15-0	developmental toxicity, initial date 7/1/89
• Methyl Chloride	74-87-3	developmental toxicity, initial date 3/10/00
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	developmental toxicity, initial date 1/1/91
• Ethanol	64-17-5	developmental toxicity, initial date 10/1/87 (in alcoholic beverages)
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	7000 µg/day MADL (level represents absorbed dose)
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed

• Nitrogen	7727-37-9	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• 1,3-Butadiene	106-99-0	0.4 µg/day NSRL
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	3 µg/day NSRL
• Benzyl Chloride	100-44-7	4 µg/day NSRL
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• 1,3-Butadiene	106-99-0	female reproductive toxicity, initial date 4/16/04
• Carbon disulfide	75-15-0	female reproductive toxicity, initial date 7/1/89
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	female reproductive toxicity, initial date 8/7/09
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• 1,3-Butadiene	106-99-0	Not Listed
• Carbon disulfide	75-15-0	male reproductive toxicity, initial date 7/1/89
• Methyl Chloride	74-87-3	male reproductive toxicity, initial date 8/7/09
• Vinyl Chloride	75-01-4	Not Listed
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• 1,3-Butadiene	106-99-0
• Carbon disulfide	75-15-0
• Methyl Chloride	74-87-3
• Vinyl Chloride	75-01-4
• Benzyl Chloride	100-44-7

• Vinyl Acetate	108-05-4	
• Toluene	108-88-3	
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	
• Nitrogen	7727-37-9	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• 1,3-Butadiene	106-99-0	
• Carbon disulfide	75-15-0	Not Listed
• Methyl Chloride	74-87-3	Not Listed
• Vinyl Chloride	75-01-4	
• Benzyl Chloride	100-44-7	Not Listed
• Vinyl Acetate	108-05-4	Not Listed
• Toluene	108-88-3	Not Listed
• Ethanol	64-17-5	Not Listed
• n-Hexane	110-54-3	Not Listed
• Methyl Ethyl Ketone	78-93-3	Not Listed
• Nitrogen	7727-37-9	Not Listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

15.3 Other Information

WARNING: This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

Relevant Phrases (code & full text)

H220 - Extremely flammable gas
H225 - Highly flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H331 - Toxic if inhaled
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H350 - May cause cancer.
H351 - Suspected of causing cancer.
H361d - Suspected of damaging the unborn child.
H361f - Suspected of damaging fertility.
H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects
EUH066 - Repeated exposure may cause skin dryness or cracking.
H340 - May cause genetic defects.

R11 - Highly flammable.
R12 - Extremely flammable.
R22 - Harmful if swallowed.
R23 - Toxic by inhalation.
R36 - Irritating to eyes.
R36/38 - Irritating to eyes and skin.
R37/38 - Irritating to respiratory system and skin.

R38 - Irritating to skin.
R40 - Limited evidence of a carcinogenic effect.
R41 - Risk of serious damage to eyes.
R45 - May cause cancer.
R46 - May cause heritable genetic damage.
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R51 - Toxic to aquatic organisms.
R53 - May cause long-term adverse effects in the aquatic environment.
R62 - Possible risk of impaired fertility.
R63 - Possible risk of harm to the unborn child.
R65 - Harmful: may cause lung damage if swallowed.
R66 - Repeated exposure may cause skin dryness or cracking.
R67 - Vapours may cause drowsiness and dizziness.

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Preparation Date | 19/December/2014

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Key to abbreviations

NDA = No Data Available