

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 08/13/2015 Revision date: 06/27/2018 Supersedes: 02/10/2017

**SECTION 1: Identification** Identification 1.1. Product form : Mixture Trade name : REVvive by RSG Acid Etch Primer - Gray : UPC - 66623391010 Other means of identification 1.2. Recommended use and restrictions on use Recommended use : For professional use only 1.3. Supplier **United States** Saint-Gobain Abrasives Inc 1 New Bond Street Worcester, MA 01615 T 800-551-4413 www.Nortonabrasives.com 1.4. **Emergency telephone number** Emergency number : 508-795-5000. For emergencies in the US call 800-424-9300

#### SECTION 2: Hazard(s) identification 2.1. Classification of the substance or mixture

#### **GHS Classification**

Flammable aerosol Category 1Extremely flammable aerosolSkin corrosion/irritation Category 2Causes skin irritationSerious eye damage/eye irritation Category 1Causes serious eye damageCarcinogenicity Category 2Suspected of causing cancerSpecific target organ toxicity (single exposure) Category 3May cause drowsiness or dizzinessHazardous to the aquatic environment - Chronic HazardToxic to aquatic life with long lasting effects	
2.2. GHS Label elements, including precautionary statements	
GHS Labelling	
Hazard pictograms (GHS-US)	
Signal word (GHS-US) : Danger	
Hazard statements (GHS-US)       : Extremely flammable aerosol         Causes skin irritation       Causes serious eye damage         May cause drowsiness or dizziness       Suspected of causing cancer         Toxic to aquatic life with long lasting effects	
<ul> <li>Precautionary statements (GHS-US)</li> <li>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. If smoking.</li> <li>Pressurized container: Do not pierce or burn, even after use.</li> <li>Avoid breathing fume, spray, vapors.</li> <li>Wear eye protection, protective clothing, protective gloves.</li> <li>If on skin: Wash with plenty of water</li> <li>IF IN EYES: Rinse first with plenty of water and if necessary take medical advice Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.</li> </ul>	10
2.3. Other hazards which do not result in classification	

No additional information available

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## Not applicable

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# **SECTION 3: Composition/Information on ingredients**

# 3.1. Substances

# Not applicable 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
methyl acetate	(CAS-No.) 79-20-9	5 - 23	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
1-butanol	(CAS-No.) 71-36-3	5 - 23	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336
titanium(IV) oxide	(CAS-No.) 13463-67-7	5 - 23	Carc. 2, H351
cyclohexane	(CAS-No.) 110-82-7	< 5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2-methylpropan-1-ol, iso-butanol	(CAS-No.) 78-83-1	< 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336
ethylbenzene	(CAS-No.) 100-41-4	< 5	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304

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

SECTION 4: First-aid measures	
4.1. Description of first aid measures	
First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	<ul> <li>Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.</li> </ul>
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
4.2. Most important symptoms and effe	ects (acute and delayed)
Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
4.3. Immediate medical attention and s	pecial treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures			
5.1. 8	. Suitable (and unsuitable) extinguishing media		
Suitable ex	xtinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.	
5.2. 5	Specific hazards arising from the che	mical	
Fire hazaro	d	: Extremely flammable aerosol.	
Explosion I	hazard	: Pressurized container: may burst if heated.	
Reactivity		: Extremely flammable aerosol. Pressurized container: may burst if heated.	
5.3. 8	Special protective equipment and pre	cautions for fire-fighters	
Protection	during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.	

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SECTION 6: Accidental release measures			
6.1. Personal precautions, protective equipment and emergency procedures			
6.1.1. For non-emergency personnel			
	: Safety glasses. Protective clothing. Gloves.		
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.		
6.1.2. For emergency responders			
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".		
6.2. Environmental precautions			
Avoid release to the environment.			
6.3. Methods and material for containment	nt and cleaning up		
For containment	: Contain released product, pump into suitable containers. Collect spillage.		
Methods for cleaning up	: Mechanically recover the product. Notify authorities if product enters sewers or public waters.		
Other information	: Dispose of materials or solid residues at an authorized site.		
6.4. Reference to other sections			
For further information refer to section 13.			
SECTION 7: Handling and storage			
7.1. Precautions for safe handling			
Precautions for safe handling	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.		
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.		
7.2. Conditions for safe storage, including any incompatibilities			
Storage conditions	: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.		
Storage temperature	: <25 °C		
Special rules on packaging	: Keep only in original container.		

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

ethylbenzene (100-41-4)		
ACGIH	Local name	Ethyl benzene
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	URT irr; kidney dam (nephropathy)
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
2-methylpropan-1-	ol, iso-butanol (78-83-1)	
ACGIH	Local name	Isobutanol
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	Skin & eye irr
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

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2-methylpropan-1-ol, iso-butanol (78-83-1)			
OSHA	Regulatory reference (US-OSHA)	OSHA	
1-butanol (71-36-3)			
ACGIH	Local name	n-Butanol	
ACGIH	ACGIH TWA (ppm)	20 ppm	
ACGIH	Remark (ACGIH)	Eye & URT irr	
ACGIH	Regulatory reference	ACGIH 2018	
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup>	
OSHA	OSHA PEL (TWA) (ppm)	100 ppm	
OSHA	Regulatory reference (US-OSHA)	OSHA	
titanium(IV) oxide (13	3463-67-7)		
ACGIH	Local name	Titanium dioxide	
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m³	
ACGIH	Remark (ACGIH)	LRT irr; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)	
ACGIH	Regulatory reference	ACGIH 2018	
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>	
OSHA	Regulatory reference (US-OSHA)	OSHA	
cyclohexane (110-82	-7)		
ACGIH	Local name	Cyclohexane	
ACGIH	ACGIH TWA (ppm)	100 ppm	
ACGIH	Remark (ACGIH)	CNS impair	
ACGIH	Regulatory reference	ACGIH 2018	
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1050 mg/m <sup>3</sup>	
OSHA	OSHA PEL (TWA) (ppm)	300 ppm	
OSHA	Regulatory reference (US-OSHA)	OSHA	
methyl acetate (79-20-9)			
ACGIH	Local name	Methyl acetate	
ACGIH	ACGIH TWA (ppm)	200 ppm	
ACGIH	ACGIH STEL (ppm)	250 ppm	
ACGIH	Remark (ACGIH)	eye & URT irr	
ACGIH	Regulatory reference	ACGIH 2018	
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	610 mg/m <sup>3</sup>	
OSHA	OSHA PEL (TWA) (ppm)	200 ppm	
OSHA	Regulatory reference (US-OSHA)	OSHA	

## 8.2. Appropriate engineering controls

Appropriate engineering controls Environmental exposure controls : Ensure good ventilation of the work station.

: Avoid release to the environment.

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8.3. Individual protection measures/Personal protective equipment

## Personal protective equipment:

Gloves. Protective clothing. Safety glasses.

## Materials for protective clothing:

Impermeable clothing

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

### **Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



#### **SECTION 9: Physical and chemical properties** Information on basic physical and chemical properties 9.1. Physical state : Liquid Appearance : Aerosol. Color : Light gray Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Petroleum-like odour Sweet odour Aromatic odour Pleasant odour Odourless Alcohol odour Mild odour Irritating/pungent odour Ether-like odour Commercial/unpurified substance: irritating/pungent odour Fruity odour Odor threshold No data available pН No data available Not applicable Melting point Freezing point : No data available Boiling point : No data available Flash point -41 °C Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) : Extremely flammable aerosol. Vapor pressure : No data available Relative vapor density at 20 °C : No data available Relative density No data available • Specific gravity / density : 0.83 g/cm<sup>3</sup> Solubility : insoluble in water. soluble in most organic solvents. Log Pow : No data available Auto-ignition temperature : No data available Decomposition temperature : No data available : No data available Viscosity, kinematic Viscosity, dynamic : No data available Explosion limits : No data available Explosive properties : Pressurized container: may burst if heated.

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Oxidizing properties	: No data available		
9.2. Other information			
MIR	: 0.95		
Gas group	: Press. Gas (Ref. Liq.)		
SECTION 10: Stability and reactivity			
10.1. Reactivity			
Extremely flammable aerosol. Pressurized contair	er: may burst if heated		
•			
10.2. Chemical stability Stable under normal conditions.			
10.3. Possibility of hazardous reactions			
No dangerous reactions known under normal cond	litions of use.		
10.4. Conditions to avoid			
Avoid contact with hot surfaces. Heat. No flames,	no sparks. Eliminate all sources of ignition.		
10.5. Incompatible materials			
No additional information available			
<b>10.6.</b> Hazardous decomposition products			
	rdous decomposition products should not be produced.		
SECTION 11: Toxicological information			
11.1. Information on toxicological effects			
Ŭ	: Not classified		
ethylbenzene (100-41-4)			
LD50 oral rat	3500 mg/kg (Rat, Male/female, Experimental value)		
LD50 dermal rabbit	15432 mg/kg body weight (24 h, Rabbit, Male, Experimental value)		
LC50 inhalation rat (mg/l)	17.8 mg/l (4 h, Rat, Male, Experimental value)		
ATE US (oral)	3500 mg/kg body weight		
ATE US (dermal) ATE US (gases)	15432 mg/kg body weight 4500 ppmV/4h		
ATE US (gases) ATE US (vapors)	17.8 mg/l/4h		
ATE US (dust, mist)	1.5 mg/l/4h		
2-methylpropan-1-ol, iso-butanol (78-83-1)			
LD50 oral rat	> 2830 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value)		
LD50 dermal rabbit	<ul> <li>&gt; 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male, Experimental value)</li> </ul>		
LC50 inhalation rat (mg/l)	24.6 mg/l air (Other, 4 h, Rat, Male/female, Experimental value)		
1-butanol (71-36-3)			
LD50 oral rat	2292 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Female, Experimental value)		
LD50 dermal rabbit	3430 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value)		
ATE US (oral)	500 mg/kg body weight		
ATE US (dermal)	3430 mg/kg body weight		
titanium(IV) oxide (13463-67-7)			
LD50 oral rat	> 5000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value)		
LC50 inhalation rat (mg/l)	> 6.82 mg/l (Other, 4 h, Rat, Male, Experimental value)		
cyclohexane (110-82-7)			
LD50 oral rat	> 5000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value)		
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Male/female, Experimental value)		
LC50 inhalation rat (mg/l)	> 32.88 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male/female, Experimental value)		
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methyl acetate (79-20-9)	
LD50 oral rat	6482 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value)
ATE US (oral)	6482 mg/kg body weight
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
titanium(IV) oxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	Not classified
Specific target organ toxicity – single exposure	: May cause drowsiness or dizziness.
Specific target organ toxicity – single exposure	. May cause drowsiness of dizziness.
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after skin contact	Irritation
Symptoms/effects after eye contact	: Serious damage to eyes.
12.1. Toxicity	
12.1. Toxicity	: Toxic to aquatic life with long lasting effects.
12.1. Toxicity	: Toxic to aquatic life with long lasting effects.
12.1. Toxicity Ecology - general	<ul> <li>Toxic to aquatic life with long lasting effects.</li> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> </ul>
12.1.       Toxicity         Ecology - general	4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system,
Toxicity         Ecology - general         ethylbenzene (100-41-4)         LC50 fish 1	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental</li> </ul>
Toxicity         Ecology - general         ethylbenzene (100-41-4)         LC50 fish 1         EC50 Daphnia 1	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental</li> </ul>
12.1.       Toxicity         Ecology - general	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water,</li> </ul>
Ecology - general ethylbenzene (100-41-4) LC50 fish 1 EC50 Daphnia 1 2-methylpropan-1-ol, iso-butanol (78-83-1) LC50 fish 1	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)</li> </ul>
12.1.       Toxicity         Ecology - general       ••••••••••••••••••••••••••••••••••••	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)</li> <li>1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value)</li> <li>1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata,</li> </ul>
12.1.       Toxicity         Ecology - general       ••••••••••••••••••••••••••••••••••••	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)</li> <li>1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value)</li> <li>1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata,</li> </ul>
12.1. ToxicityEcology - generalethylbenzene (100-41-4)LC50 fish 1EC50 Daphnia 12-methylpropan-1-ol, iso-butanol (78-83-1)LC50 fish 1EC50 Daphnia 1EC50 Daphnia 1ErC50 (algae)1-butanol (71-36-3)	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)</li> <li>1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value)</li> <li>1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)</li> <li>1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Static system, Fresh water, Static system, Fresh water, Experimental value)</li> </ul>
12.1. ToxicityEcology - generalethylbenzene (100-41-4)LC50 fish 1EC50 Daphnia 12-methylpropan-1-ol, iso-butanol (78-83-1)LC50 fish 1EC50 Daphnia 1ErC50 (algae)1-butanol (71-36-3)LC50 fish 1	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)</li> <li>1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value)</li> <li>1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)</li> <li>1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value)</li> <li>1328 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static</li> </ul>
12.1.       Toxicity         Ecology - general       ethylbenzene (100-41-4)         LC50 fish 1       EC50 Daphnia 1         EC50 Daphnia 1       EC50 Daphnia 1         EC50 Daphnia 1       ErC50 (algae)         1-butanol (71-36-3)       LC50 fish 1         EC50 Daphnia 1       EC50 fish 1	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)</li> <li>1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value)</li> <li>1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)</li> <li>1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value)</li> <li>1328 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static</li> </ul>
12.1. ToxicityEcology - generalethylbenzene (100-41-4)LC50 fish 1EC50 Daphnia 12-methylpropan-1-ol, iso-butanol (78-83-1)LC50 fish 1EC50 Daphnia 1ErC50 (algae)1-butanol (71-36-3)LC50 fish 1EC50 Daphnia 1EC50 Daphnia 1titanium(IV) oxide (13463-67-7)	<ul> <li>4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)</li> <li>1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)</li> <li>1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value)</li> <li>1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)</li> <li>1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value)</li> <li>1328 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)</li> <li>&gt; 100 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system,</li> </ul>
12.1.         Toxicity           Ecology - general         ethylbenzene (100-41-4)           LC50 fish 1         EC50 Daphnia 1           EC50 Daphnia 1         EC50 Daphnia 1           EC50 Daphnia 1         EC50 Daphnia 1           EC50 Daphnia 1         EC50 Galgae)           1-butanol (71-36-3)         LC50 fish 1           EC50 Daphnia 1         EC50 Daphnia 1           EC50 Daphnia 1         LC50 fish 1	4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)         1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)         1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)         1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value)         1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)         1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value)         1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value)         1376 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)         1328 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)         > 100 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)         > 100 mg/l (EPA 600/9-78-018, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh

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cyclohexane (110-82-7)		
EC50 Daphnia 1	0.9 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)	
ErC50 (algae)	9.317 mg/l (Equivalent or similar to OECD 201, 72 h, Pseudokirchneriella subcapitata, Experimental value)	
methyl acetate (79-20-9)		
LC50 fish 1	250 - 350 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Static system, Fresh water, Experimental value)	
EC50 Daphnia 1	1026.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)	

## 12.2. Persistence and degradability

ethylbenzene (100-41-4)		
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	1.44 g O <sub>2</sub> /g substance (20d.)	
Chemical oxygen demand (COD)	2.1 g O <sub>2</sub> /g substance	
ThOD	3.17 g O <sub>2</sub> /g substance	
2-methylpropan-1-ol, iso-butanol (78-83-1)		
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.	
1-butanol (71-36-3)		
Persistence and degradability	Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	1.1 - 1.92 g O <sub>2</sub> /g substance	
Chemical oxygen demand (COD)	2.46 g $O_2/g$ substance	
ThOD	2.59 g O <sub>2</sub> /g substance	
BOD (% of ThOD)	0.33 - 0.79	
titanium(IV) oxide (13463-67-7)		
Persistence and degradability	Biodegradability: not applicable.	
Biochemical oxygen demand (BOD)	Not applicable (inorganic)	
Chemical oxygen demand (COD)	Not applicable (inorganic)	
ThOD	Not applicable (inorganic)	
cyclohexane (110-82-7)		
Persistence and degradability	Non degradable in the soil. Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	0.22 g O <sub>2</sub> /g substance	
ThOD	3.425 g O <sub>2</sub> /g substance	
methyl acetate (79-20-9)		
Persistence and degradability	Readily biodegradable in water. Inherently biodegradable.	

## 12.3. Bioaccumulative potential

ethylbenzene (100-41-4)			
BCF fish 1	1 - 2.4 (Other, 6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)		
Log Pow	3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)		
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).		
2-methylpropan-1-ol, iso-butanol (78-83-1)			
Log Pow	1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)		
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).		
1-butanol (71-36-3)			
BCF other aquatic organisms 1 3.16 (BCFWIN, Calculated value)			
Log Pow	1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)		

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1-butanol (71-36-3)			
Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).			
titanium(IV) oxide (13463-67-7)			
Bioaccumulative potential	Not bioaccumulative.		
cyclohexane (110-82-7)			
BCF fish 1	167 (Pimephales promelas, QSAR)		
Log Pow	3.44 (Experimental value, Other, 25 °C)		
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).		
methyl acetate (79-20-9)			
BCF fish 1	< 1 (Pisces, Literature study)		
Log Pow	0.37 (Calculated, KOWWIN, 25 °C)		
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).		
2.4. Mobility in soil			
ethylbenzene (100-41-4)			
Surface tension	0.071 N/m (23 °C, 0.0582 g/l)		
Log Koc	2.71 (log Koc, PCKOCWIN v1.66, QSAR)		
Ecology - soil         Low potential for adsorption in soil. Toxic to soil organisms.			
2-methylpropan-1-ol, iso-butanol (78-83	3-1)		
Surface tension         0.0697 N/m (20 °C, 1 g/l)			
g Koc 0.31 (log Koc, SRC PCKOCWIN v1.66, Calculated value)			
Ecology - soil Highly mobile in soil.			
1-butanol (71-36-3)			
Surface tension	0.07 N/m (20 °C, 1 g/l)		
Log Koc 0.388 (log Koc, PCKOCWIN v1.66, Calculated value)			
Ecology - soil Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.			
titanium(IV) oxide (13463-67-7)			
Ecology - soil	Low potential for mobility in soil.		
cyclohexane (110-82-7)			
Surface tension	0.025 N/m (20 °C)		
Log Koc	2.89 (log Koc, Other, QSAR)		
cology - soil Low potential for adsorption in soil.			
methyl acetate (79-20-9)			
	0.024 N/m (20 °C)		
methyl acetate (79-20-9)	0.024 N/m (20 °C) 0.18 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value GLP)		

No additional information available

SECTION 13: Disposal consider	rations
13.1. Disposal methods	
Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
SECTION 14: Transport informa	tion
Department of Transportation (DOT)	
In accordance with DOT	
Transport document description	: UN1950 Aerosols (flammable, (each not exceeding 1 L capacity)), 2.1

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UN-No.(DOT)	: UN1950
Proper Shipping Name (DOT)	: Aerosols
	flammable, (each not exceeding 1 L capacity)
Class (DOT)	: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115
Hazard labels (DOT)	: 2.1 - Flammable gas
	PLANABLE GAS
Dangerous for the environment	: Yes
Marine pollutant	: Yes
DOT Packaging Non Bulk (49 CFR 173.xxx)	: None
DOT Packaging Bulk (49 CFR 173.xxx)	: None
DOT Special Provisions (49 CFR 172.102)	: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 25 - Shade from radiant heat,87 - Stow "separated from" Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials
Other information	: No supplementary information available.
Transportation of Dangerous Goods	
Transport document description	: UN1950 AEROSOLS (flammable), 2.1
UN-No. (TDG)	: UN1950
Proper Shipping Name (Transportation of Dangerous Goods)	: AEROSOLS
TDG Primary Hazard Classes	: 2.1 - Class 2.1 - Flammable Gas.
TDG Special Provisions	: 80 - Despite section 1.17 of Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases, a person must not offer for transport or transport these dangerous goods unless they are in a means of containment that is in compliance with section 5.11 of Part 5, Means of Containment, except that the requirement for aerosol containers to be tightly packed in a wood, fibreboard or plastic box does not apply to a user or purchaser who transports no more than six aerosol containers. For a similar rule respecting aerosol containers, see subparagraph 1.15(1)(a)(i) of Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases. SOR/2012-245,107 - (1)These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2, (Classification), do not apply to the handling, offering for transport or transporting of UN1950, AEROSOLS, and UN2037, GAS CARTRIDGES, that contain dangerous goods included in Class 2.1 or Class 2.2 and that are transported on a road vehicle, a railway vehicle or a ship on
	a domestic voyage, if the aerosols or gas cartridges have a capacity less than or equal to 50 mL. (2)Subsection (1) does not apply to self-defence spray. SOR/2014-306
Explosive Limit and Limited Quantity Index	: 1L
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 75 L
Transport by sea	
Transport document description (IMDG)	: UN 1950 AEROSOLS, 2.1, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
UN-No. (IMDG)	: 1950
Proper Shipping Name (IMDG)	: AEROSOLS

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## Air transport

Transport document description (IATA)	: UN 1950 Aerosols, flammable, 2.1, ENVIRONMENTALLY HAZARDOUS
UN-No. (IATA)	: 1950
Proper Shipping Name (IATA)	: Aerosols, flammable
Class (IATA)	: 2

## **SECTION 15: Regulatory information**

## 15.1. US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

ethylbenzene		CAS-No. 100-41-4	< 5%	
1-butanol		CAS-No. 71-36-3	5 - 23%	
cyclohexane		CAS-No. 110-82-7	< 5%	
ethylbenzene (100-41-4)				
Listed on the United States TSCA (Toxic Substances Control Act) inventory				
Listed on EPA Hazardous Air Pollutant (HAPS)				
CERCLA RQ	1000 lb			
2-methylpropan-1-ol, iso-butanol (78-83-1)				
Listed on the United States TSCA (Toxic Substances Control Act) inventory				
CERCLA RQ	5000 lb			
1-butanol (71-36-3)				
Listed on the United States TSCA (Toxic Substances Control Act) inventory				
	5000 II			

CERCLA RQ	5000 lb		
titanium(IV) oxide (13463-67-7)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
cyclohexane (110-82-7)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
CERCLA RQ	1000 lb		
methyl acetate (79-20-9)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			

# 15.2. International regulations CANADA ethylbenzene (100-41-4) Listed on the Canadian DSL (Domestic Substances List) 2-methylpropan-1-ol, iso-butanol (78-83-1) Listed on the Canadian DSL (Domestic Substances List) 1-butanol (71-36-3) Listed on the Canadian DSL (Domestic Substances List) 1tanium(IV) oxide (13463-67-7) Listed on the Canadian DSL (Domestic Substances List) cyclohexane (110-82-7) Listed on the Canadian DSL (Domestic Substances List)

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#### methyl acetate (79-20-9)

Listed on the Canadian DSL (Domestic Substances List)
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#### **EU-Regulations**

No additional information available

## **National regulations**

## ethylbenzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer) Listed on EPA Hazardous Air Pollutant (HAPS)

## titanium(IV) oxide (13463-67-7)

Listed on IARC (International Agency for Research on Cancer)

## 15.3. US State regulations

This product can expose you to ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

ethylbenzene (100-41-4)					
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	54 μg/day	

# **SECTION 16: Other information**

Revision date

: 06/27/2018

#### Full text of H-phrases:

i un					
	H225 Highly flammable liquid and vapor				
	H226	Flammable liquid and vapor			
	H302	Harmful if swallowed			
H304 May be fatal if swallowed		May be fatal if swallowed and enters airways			
	H315	Causes skin irritation			
H318 Causes serious eye damage		Causes serious eye damage			
	H319	Causes serious eye irritation			
H332 Harmful if inhaled		Harmful if inhaled			
	H335	May cause respiratory irritation			
	H336	May cause drowsiness or dizziness			
	H351	Suspected of causing cancer			
	H373	May cause damage to organs through prolonged or repeated exposure			
	H400	Very toxic to aquatic life			
	H410	Very toxic to aquatic life with long lasting effects			
NFPA health hazard		: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.			
NFPA fire hazard		: 4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.			
NFPA reactivity		: 3 - Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or must be heated under confinement before initiation.			

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product