

**Section 1: Identification**

**Product identifier**

**Product Name** • **Chroma/Press Wash 450**

**Product Description** • Clear liquid

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

**Recommended use** • Liquid cleaning product

**Details of the supplier of the safety data sheet**

**Manufacturer** • IKONICS Corporation  
4832 Grand Ave.  
Duluth, MN 55807  
United States  
www.ikonics.com  
sds@ikonics.com

**Telephone (General)** • (218) 628-2217

**Telephone (General)** • (800) 328-4261 - Toll free

**Emergency telephone number**

**Chemtrec** • 1-800-424-9300 - Within USA and Canada  
• +1 703-527-3887 - Outside USA and Canada (collect calls accepted)

**Section 2: Hazard Identification**

**UN GHS**

According to: **UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**

**Classification of the substance or mixture**

**UN GHS** • Flammable Liquids 3  
Skin Irritation 2  
Skin Sensitization 1  
Eye Irritation 2A  
Hazardous to the aquatic environment Acute 1  
Hazardous to the aquatic environment Chronic 1

**Label elements**

**UN GHS**

**WARNING**



**Hazard statements** • Flammable liquid and vapor  
Causes skin irritation  
May cause an allergic skin reaction

Causes serious eye irritation  
Very toxic to aquatic life  
Very toxic to aquatic life with long lasting effects

### Precautionary statements

- Prevention**
- Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. Keep container tightly closed.
  - Ground and/or bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Avoid breathing dust, fume, gas, mist, vapors and/or spray.
  - Wash thoroughly after handling.
  - Contaminated work clothing should not be allowed out of the workplace.
  - Avoid release to the environment.
  - Wear protective gloves/protective clothing/eye protection/face protection.
- Response**
- IF ON SKIN: Wash with plenty of soap and water.
  - If skin irritation or rash occurs: Get medical advice/attention.
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If eye irritation persists: Get medical advice/attention.
  - Specific treatment, see supplemental first aid information.
  - Take off contaminated clothing and wash before reuse.
  - In case of fire: Use appropriate media for extinction.
  - Collect spillage.

- Storage/Disposal**
- Store in a well-ventilated place. Keep cool.
  - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Other hazards

- UN GHS
- No data available

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## United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

### Classification of the substance or mixture

- OSHA HCS 2012
- Flammable Liquids 3
  - Skin Irritation 2
  - Skin Sensitization 1
  - Eye Irritation 2A

### Label elements

OSHA HCS 2012

#### WARNING



- Hazard statements**
- Flammable liquid and vapor
  - Causes skin irritation
  - May cause an allergic skin reaction
  - Causes serious eye irritation

### Precautionary statements

- Prevention**
- Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.

Keep container tightly closed.  
Ground and/or bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust, fume, gas, mist, vapors and/or spray.  
Wash thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.

- Response**
- IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
Specific treatment, see supplemental first aid information.
  - Take off contaminated clothing and wash before reuse.
  - In case of fire: Use appropriate media for extinction.

- Storage/Disposal**
- Store in a well-ventilated place. Keep cool.
  - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Other hazards

OSHA HCS 2012      • No data available

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### Canada

According to: WHMIS

### Classification of the substance or mixture

WHMIS      • Combustible Liquids - B3  
Other Toxic Effects - D2B

### Label elements

WHMIS



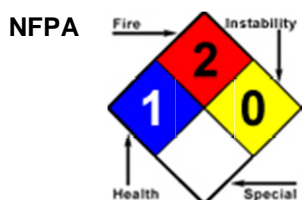
• Combustible Liquids - B3  
Other Toxic Effects - D2B

### Other hazards

WHMIS      • No data available

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### Other information



## Section 3 - Composition/Information on Ingredients

### Substances

### Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	<b>CAS:</b> 5989-27-5 <b>EC Number:</b> 227-813-5 <b>EU Index:</b> 601-029-00-7 <b>EINECS:</b> 227-813-5	30% TO 40%	Ingestion/Oral- Rat LD50 • 4400 mg/kg Skin-Rabbit LD50 • >5 g/kg	<b>WHMIS:</b> Other Toxic Effects - D2B <b>UN GHS:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Aquatic Acute 1 <b>OSHA HCS 2012:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Aquatic Acute 1	NDA
1-Methoxy-2-propanol acetate	<b>CAS:</b> 108-65-6 <b>EC Number:</b> 203-603-9 <b>EU Index:</b> 607-195-00-7 <b>EINECS:</b> 203-603-9	20% TO 30%	Ingestion/Oral- Rat LD50 • 8532 mg/kg Skin-Rabbit LD50 • >5 g/kg	<b>WHMIS:</b> Other Toxic Effects - D2B; Comb. Liq. - B3 <b>UN GHS:</b> Eye Irrit. 2A; Flam. Liq. 3 <b>OSHA HCS 2012:</b> Eye Irrit. 2A; Flam. Liq. 3	NDA
Isobutyric acid, isobutyl ester	<b>CAS:</b> 97-85-8 <b>UN:</b> UN2528 <b>EINECS:</b> 202-612-5	10% TO 20%		<b>WHMIS:</b> <b>UN GHS:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A <b>OSHA HCS 2012:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A	NDA
2-Propanol, 1-butoxy-	<b>CAS:</b> 5131-66-8 <b>EC Number:</b> 225-878-4 <b>EU Index:</b> 603-052-00-8 <b>EINECS:</b> 225-878-4	10% TO 20%		<b>WHMIS:</b> <b>UN GHS:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A <b>OSHA HCS 2012:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A	NDA
1-propoxy-2-propanol	<b>CAS:</b> 1569-01-3 <b>EC Number:</b> 216-372-4 <b>EINECS:</b> 216-372-4	10% TO 20%	Ingestion/Oral- Rat LD50 • 2504 mg/kg Skin-Rabbit LD50 • 3550 mg/kg	<b>WHMIS:</b> <b>UN GHS:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A; Acute Tox. Oral 5 <b>OSHA HCS 2012:</b> Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2A; Acute Tox. Oral 5	NDA

See Section 11 for Toxicological Information.

## Section 4: First-Aid Measures

### Description of first aid measures

#### Inhalation

- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration and call 911 or emergency medical service.

#### Skin

- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

- Eye**
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth. Never give anything by mouth to an unconscious person. If large quantities are swallowed, call a physician immediately.

### **Most important symptoms and effects, both acute and delayed**

- Refer to Section 11 - Toxicological Information.

### **Indication of any immediate medical attention and special treatment needed**

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## **Section 5: Fire-Fighting Measures**

### **Extinguishing media**

- Suitable Extinguishing Media**
- SMALL FIRES: Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.
  - LARGE FIRES: Water spray, fog or alcohol-resistant foam.

- Unsuitable Extinguishing Media**
- No data available

- Firefighting Procedures**
- Fire fighters should wear complete protective clothing including self-contained breathing apparatus.
  - Keep unauthorized personnel away.
  - Ventilate closed spaces before entering.

### **Special hazards arising from the substance or mixture**

- Unusual Fire and Explosion Hazards**
- Flammable; may be ignited by heat, sparks or flames.

- Hazardous Combustion Products**
- Products of combustion include: carbon oxides (CO<sub>x</sub>).

### **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 chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Wear positive pressure self-contained breathing apparatus (SCBA).

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## **Section 6 - Accidental Release Measures**

### **Personal precautions, protective equipment and emergency procedures**

- Personal Precautions**
- Ventilate enclosed areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not walk through spilled material.
- Emergency Procedures**
- Personal protective equipment is required for clean-up personnel. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away.

### **Environmental precautions**

- LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.

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

- Containment/Clean-up Measures**
- Use appropriate Personal Protective Equipment (PPE)
  - Stop leak if you can do it without risk.
  - Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container.

### **Reference to other sections**

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

## Section 7 - Handling and Storage

### Precautions for safe handling

#### Handling

- Use good safety and industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

#### Storage

- Do not store near heat, sparks or open flames. Keep container closed when not in use.

### Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

## Section 8 - Exposure Controls/Personal Protection

### Control parameters

Exposure Limits/Guidelines						
	Result	Australia	Belgium	Canada British Columbia	Canada Ontario	Denmark
1-Methoxy-2-propanol acetate (108-65-6)	STELs	100 ppm STEL; 548 mg/m3 STEL	100 ppm STEL; 550 mg/m3 STEL	75 ppm STEL	Not established	Not established
	TWAs	50 ppm TWA; 274 mg/m3 TWA	50 ppm TWA; 275 mg/m3 TWA	50 ppm TWA	50 ppm TWA; 270 mg/m3 TWA	50 ppm TWA; 275 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Finland	France	Germany DFG	Germany TRGS	Ireland
1-Methoxy-2-propanol acetate (108-65-6)	STELs	100 ppm STEL; 550 mg/m3 STEL	100 ppm STEL [VLCT] (restrictive limit); 550 mg/m3 STEL [VLCT] (restrictive limit)	Not established	Not established	100 ppm STEL; 550 mg/m3 STEL
	TWAs	50 ppm TWA; 270 mg/m3 TWA	50 ppm TWA [VME] (restrictive limit); 275 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 1); 270 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)	50 ppm TWA; 275 mg/m3 TWA
	Ceilings	Not established	Not established	50 ppm Peak; 270 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	50 ppm TWA MAK; 270 mg/m3 TWA MAK	Not established	Not established
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5)	STELs	50 ppm STEL; 280 mg/m3 STEL	Not established	Not established	Not established	Not established
	TWAs	25 ppm TWA; 140 mg/m3 TWA	Not established	Not established	5 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); 28 mg/m3	Not established

					TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4)	
	Ceilings	Not established	Not established	20 ppm Peak; 112 mg/m <sup>3</sup> Peak	Not established	Not established
	MAKs	Not established	Not established	5 ppm TWA MAK; 28 mg/m <sup>3</sup> TWA MAK	Not established	Not established

#### Exposure Limits/Guidelines (Con't.)

	Result	Italy	Netherlands	Norway	Poland	Spain
1-Methoxy-2-propanol acetate (108-65-6)	TWAs	50 ppm TWA; 275 mg/m <sup>3</sup> TWA	550 mg/m <sup>3</sup> TWA	50 ppm TWA; 270 mg/m <sup>3</sup> TWA	260 mg/m <sup>3</sup> TWA [NDS]	50 ppm TWA [VLA-ED] (indicative limit value); 275 mg/m <sup>3</sup> TWA [VLA-ED] (indicative limit value)
	STELs	100 ppm STEL; 550 mg/m <sup>3</sup> STEL	Not established	Not established	520 mg/m <sup>3</sup> STEL [NDSch]	100 ppm STEL [VLA-EC]; 550 mg/m <sup>3</sup> STEL [VLA-EC]
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5)	TWAs	Not established	Not established	25 ppm TWA; 140 mg/m <sup>3</sup> TWA	Not established	Not established

#### Exposure Limits/Guidelines (Con't.)

	Result	Sweden	Switzerland
1-Methoxy-2-propanol acetate (108-65-6)	MAKs	Not established	50 ppm TWA [MAK]; 275 mg/m <sup>3</sup> TWA [MAK]
	STELs	75 ppm STV; 400 mg/m <sup>3</sup> STV	50 ppm STEL [KZW] (15 min); 275 mg/m <sup>3</sup> STEL [KZW] (15 min)
	TWAs	50 ppm LLV; 250 mg/m <sup>3</sup> LLV	Not established
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5)	MAKs	Not established	20 ppm TWA [MAK]; 110 mg/m <sup>3</sup> TWA [MAK]
	STELs	Not established	40 ppm STEL [KZW] (4 X 15); 220 mg/m <sup>3</sup> STEL [KZW] (4 X 15)

### Exposure Control Notations

#### Australia

- 1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (skin notation)

#### Switzerland

- Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5): **Developmental Risk Groups:** (Developmental Risk Group C) | **Sensitizers:** (Sensitizer)

- 1-Methoxy-2-propanol acetate (108-65-6): **Developmental Risk Groups:** (Developmental Risk Group C)

#### Denmark

- 1-Methoxy-2-propanol acetate (108-65-6): **Skin Notations:** (Potential for cutaneous absorption)

#### Norway

- Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5): **Sensitizers:** (Sensitizing substance)

- 1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (Skin notation)

#### Italy

- 1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (skin - potential for cutaneous absorption)

#### Belgium

- 1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (Skin)

#### Finland

- 1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (Potential for cutaneous absorption)

#### Ireland

- 1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (Potential for cutaneous absorption)

#### Spain

•1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (skin - potential for cutaneous exposure)

**Sweden**

•1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (Skin notation)

**Germany TRGS**

•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5): **Skin:** (skin notation)

**Germany DFG**

•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) |

**Sensitizers:** (skin sensitizer) | **Skin:** (skin notation)

•1-Methoxy-2-propanol acetate (108-65-6): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

**Exposure Limits Supplemental**

**Spain**

•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (5989-27-5): **Under Review:** (20 ppm VLA-ED; 110 mg/m3 VLA-ED; 40 ppm VLA-EC; 220 mg/m3 VLA-EC; sen)

**Exposure controls**

**Engineering Measures/Controls**

- Local exhaust ventilation.

**Personal Protective Equipment**

**Pictograms**



**Respiratory**

- In case of insufficient ventilation, wear suitable respiratory equipment.

**Eye/Face**

- Wear protective eyewear (goggles, face shield, or safety glasses).

**Hands**

- Wear protective gloves - rubber or neoprene.

**Skin/Body**

- Wear protective clothing - apron or other impervious body coverings.

**General Industrial Hygiene**

- Handle in accordance with good industrial hygiene and safety practice.

**Considerations**

**Environmental Exposure Controls**

- No data available

**Section 9 - Physical and Chemical Properties**

**Information on Physical and Chemical Properties**

<b>Material Description</b>			
Physical Form	Liquid	Appearance/Description	Clear liquid.
Color	Colorless	Odor	Citrus
Taste	No data available.	Odor Threshold	No data available
<b>General Properties</b>			
Boiling Point	310 F(154.4444 C)	Melting Point	No data available
Decomposition Temperature	No data available	pH	Not relevant
Density	7.29 lbs/gal	Water Solubility	Appreciable
Viscosity	No data available	Explosive Properties	Not relevant
Oxidizing Properties:	Not relevant		
<b>Volatility</b>			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	VOC (Vol.)	875 g/L
<b>Flammability</b>			
Flash Point	105 F(40.5556 C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	Classification criteria not met.		
<b>Environmental</b>			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Bioaccumulation Factor	No data available	Bioconcentration Factor	No data available



Biochemical Oxygen Demand BOD/BOD5	No data available	Chemical Oxygen Demand	No data available
Persistence	No data available	Degradation	No data available

### Other Information

- No additional physical and chemical parameters noted.

## Section 10: Stability and Reactivity

### Reactivity

- No dangerous reaction known under conditions of normal use.

### Chemical stability

- Stable under normal temperatures and pressures.

### Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### Conditions to avoid

- Heat, sparks or open flame.

### Incompatible materials

- Strong oxidizing or reducing agents.

### Hazardous decomposition products

- No decomposition is expected under normal storage and use conditions. Hazardous decomposition products formed under fire conditions - carbon oxides (COx).

## Section 11 - Toxicological Information

### Information on toxicological effects

Components		
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (30% TO 40%)	5989-27-5	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 4400 mg/kg; <i>Behavioral:Changes in motor activity (specific assay); Lungs, Thorax, or Respiration:Respiratory depression; Skin and Appendages:Other:Hair;</i> Skin-Rabbit LD50 • >5 g/kg; <b>Irritation:</b> Skin-Rabbit • 10 % 24 Hour(s) • Mild irritation
Isobutyric acid, isobutyl ester (10% TO 20%)	97-85-8	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 12800 mg/kg; Skin-Rabbit LD50 • >8600 mg/kg
1-Methoxy-2-propanol acetate (20% TO 30%)	108-65-6	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 8532 mg/kg; Skin-Rabbit LD50 • >5 g/kg
1-propoxy-2-propanol (10% TO 20%)	1569-01-3	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 2504 mg/kg; <i>Behavioral:Altered sleep time (including change in righting reflex); Behavioral:Ataxia;</i> Skin-Rabbit LD50 • 3550 mg/kg; <b>Irritation:</b> Eye-Rabbit • 100 mg • Moderate irritation; Skin-Rabbit • 500 mg
2-Propanol, 1-butoxy- (10% TO 20%)	5131-66-8	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 5660 µL/kg; <i>Behavioral:Somnolence (general depressed activity); Gastrointestinal:Changes in structure or function of salivary glands; Skin and Appendages:Other:Hair;</i> Skin-Rabbit LD50 • 3100 mg/kg

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012• UN GHS•
Aspiration Hazard	OSHA HCS 2012• UN GHS•
Carcinogenicity	OSHA HCS 2012• UN GHS•
Germ Cell Mutagenicity	OSHA HCS 2012• UN GHS•

Skin corrosion/Irritation	OSHA HCS 2012•Skin Irritation 2 UN GHS•Skin Irritation 2
Skin sensitization	OSHA HCS 2012•Skin Sensitizer 1 UN GHS•Skin Sensitizer 1
STOT-RE	OSHA HCS 2012• UN GHS•
STOT-SE	OSHA HCS 2012• UN GHS•
Toxicity for Reproduction	OSHA HCS 2012• UN GHS•
Respiratory sensitization	OSHA HCS 2012• UN GHS•
Serious eye damage/Irritation	OSHA HCS 2012•Eye Irritation 2A UN GHS•Eye Irritation 2A

## Potential Health Effects

### Inhalation

- Acute (Immediate)** • May cause irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure to high concentrations of vapors or mists may cause irritation to nose and throat, loss of coordination, fatigue, drowsiness, and/or dizziness.

### Skin

- Acute (Immediate)** • May cause irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure may cause burning, cracking or drying of the skin.

### Eye

- Acute (Immediate)** • Causes serious eye irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.

### Ingestion

- Acute (Immediate)** • May cause irritation.
- Chronic (Delayed)** • No specific information available.

## Section 12 - Ecological Information

### Toxicity

Component	CAS	Data	Comments
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R) (30% TO 40%)	5989-27-5	<b>Crustacea:</b> 48 Hour(s) EC50 Crustacea <i>Daphnia pulex</i> (Water flea) 69.6 mg/L ; <b>Fish:</b> 96 Hour(s) LC50 Fish <i>Pimephales promelas</i> (fathead minnow) 0.702 mg/L	

### Persistence and degradability

- No data available

### Bioaccumulative potential

- No data available

### Mobility in Soil

- No data available

### Other adverse effects

## Section 13 - Disposal Considerations

### Waste treatment methods

#### Product waste

- Dispose of content in accordance with local, regional, national, and/or international regulations.

#### Packaging waste

- Dispose of container in accordance with local, regional, national, and/or international regulations.

### Other Information

- Dispose of wastes in an approved waste disposal facility.

## Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	1993	Flammable liquids, n.o.s. (d-limonene, 1-Methoxy-2-propanol acetate mixture)	3	III	Marine Pollutant

#### Special precautions for user

- None specified.

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

- Not relevant.

## Section 15 - Regulatory Information

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

#### SARA Hazard Classifications • Acute

State Right To Know		
Component	CAS	NJ
1-Methoxy-2-propanol acetate	108-65-6	No
1-propoxy-2-propanol	1569-01-3	No
2-Propanol, 1-butoxy-	5131-66-8	No
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	No
Isobutyric acid, isobutyl ester	97-85-8	Yes

Inventory						
Component	CAS	Australia AICS	Canada DSL	China	EU EINECS	Japan ENCS
1-Methoxy-2-propanol acetate	108-65-6	Yes	Yes	Yes	Yes	Yes
1-propoxy-2-propanol	1569-01-3	Yes	Yes	Yes	Yes	Yes
2-Propanol, 1-butoxy-	5131-66-8	Yes	Yes	Yes	Yes	Yes
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Yes	Yes	Yes	Yes	Yes
Isobutyric acid	97-85-8	Yes	Yes	Yes	Yes	Yes

Component	CAS	Korea KECL	New Zealand	Philippines PICCS	TSCA
1-Methoxy-2-propanol acetate	108-65-6	Yes	Yes	Yes	Yes
1-propoxy-2-propanol	1569-01-3	Yes	Yes	Yes	Yes
2-Propanol, 1-butoxy-	5131-66-8	Yes	Yes	Yes	Yes
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Yes	Yes	Yes	Yes
Isobutyric acid, isobutyl ester	97-85-8	Yes	Yes	Yes	Yes

## Australia

### Labor

#### Australia - High Volume Industrial Chemicals List

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Not Listed

#### Australia - List of Designated Hazardous Substances - Classification

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Xi R36/38
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	R10
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Xi, N R10, R38, R43, R50, R53

### Environment

#### Australia - Priority Existing Chemical Program

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Full assessment - report published May 2002

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

•Isobutyric acid, isobutyl ester	97-85-8	B2
•2-Propanol, 1-butoxy-	5131-66-8	B3, D2B
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	B3
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	B3, D2B

#### Canada - WHMIS - Ingredient Disclosure List

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	1 %

## China

### Other

#### China - Dangerous Goods List

•Isobutyric acid, isobutyl ester	97-85-8	
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Not Listed

## Denmark

### Environment

#### Denmark - Advisory List for Self-Classification of Dangerous Substances

•Isobutyric acid, isobutyl ester	97-85-8	N R50
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Not Listed

#### Denmark - List of Undesirable Substances - Product Groups/Function

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed

•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Fragrances in cosmetics, cleaning agents, odor removers and other consumer products
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## Europe

### Other

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

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Xi; R36/38
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	R10
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	R10 Xi; R38 R43 N; R50-53

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

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Xi R:36/38 S:(2)
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	R:10 S:(2)
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Xi N R:10-38-43-50/53 S:(2)-24-37-60-61

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

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	C

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

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	S:(2)
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	S:(2)
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	S:(2)-24-37-60-61

## Germany

### Environment

#### Germany - Water Classification (VwVwS) - Annex 3

•Isobutyric acid, isobutyl ester	97-85-8	ID Number 5021, hazard class 2 - hazard to waters
•2-Propanol, 1-butoxy-	5131-66-8	ID Number 8304, hazard class 1 - low hazard to waters
•1-propoxy-2-propanol	1569-01-3	ID Number 8522, hazard class 1 - low hazard to waters
•1-Methoxy-2-propanol acetate	108-65-6	ID Number 5033, hazard class 1 - low hazard to waters
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	ID Number 87, hazard class 2 - hazard to waters

## Japan

## Labor

### Japan - ISHL Dangerous Substances

•Isobutyric acid, isobutyl ester	97-85-8	Flammable substance
•2-Propanol, 1-butoxy-	5131-66-8	Flammable substance
•1-propoxy-2-propanol	1569-01-3	Flammable substance
•1-Methoxy-2-propanol acetate	108-65-6	Flammable substance
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Flammable substance

## Environment

### Inventory - Japan - Industrial Safety and Health Law Substances (ISHL)

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Not Listed
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	3-(4)-202; 3-(4)-222

## Other

### Japan - Chemical Substance Control Law (CSCL) - Examined Existing Chemical Substances

•Isobutyric acid, isobutyl ester	97-85-8	Not Listed
•2-Propanol, 1-butoxy-	5131-66-8	Readily biodegradable
•1-propoxy-2-propanol	1569-01-3	Not Listed
•1-Methoxy-2-propanol acetate	108-65-6	Not Listed
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Not Listed

### Japan - Fire Service Law - Hazardous Materials

•Isobutyric acid, isobutyl ester	97-85-8	Group 4 - Flammable liquids III (listed under 2nd Class petroleum - insoluble)
•2-Propanol, 1-butoxy-	5131-66-8	Group 4 - Flammable liquids III (listed under 2nd Class petroleum - soluble)
•1-propoxy-2-propanol	1569-01-3	Group 4 - Flammable liquids III (listed under 2nd Class petroleum - soluble)
•1-Methoxy-2-propanol acetate	108-65-6	Group 4 - Flammable liquids III (listed under 2nd Class petroleum - insoluble)
•Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)	5989-27-5	Group 4 - Flammable liquids III (listed under 2nd Class petroleum - insoluble)

## Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

## Section 16 - Other Information

### Relevant Phrases (code & full text)

H226 - Flammable liquid and vapor  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects  
P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground and/or bond container and receiving equipment.  
P241 - Use explosion-proof electrical/ventilating/lighting/equipment.  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P261 - Avoid breathing dust, fume, gas, mist, vapors and/or spray.  
P264 - Wash thoroughly after handling.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 - Specific treatment, see supplemental first aid information.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P362 - Take off contaminated clothing and wash before reuse.  
P370+P378 - In case of fire: Use appropriate media for extinction.  
P391 - Collect spillage.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

<b>Classification method for mixtures</b>	<ul style="list-style-type: none"><li>• Calculation method.</li></ul>
<b>Last Revision Date</b>	<ul style="list-style-type: none"><li>• 30 January 2015</li></ul>
<b>Preparation Date</b>	<ul style="list-style-type: none"><li>• 1 June 2015</li></ul>
<b>Other Information</b>	<ul style="list-style-type: none"><li>• Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.</li></ul>
<b>Disclaimer/Statement of Liability</b>	<ul style="list-style-type: none"><li>• The information contained herein is based on data available to us and is believed to be correct. Since this information may have been obtained in part from independent laboratories or other sources not under direct supervision, no representation is made that the information is accurate, reliable, complete, or representative and Buyer may rely thereon only at the Buyer's risk. We make no guarantee that the health and safety precautions we have suggested will be adequate for all individuals and / or situations involving its handling and uses. No warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet.</li></ul>

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