

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

1.1 Product identifier

Product Name • Chroma/Clean

Product Description • Clear liquid

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

Relevant identified use(s) • Liquid cleaning product

1.3 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

1.4 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: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

CLP • Hazardous to the aquatic environment Chronic 3 - H412

2.2 Label Elements

CLP

Hazard statements • H412 - Harmful to aquatic life with long lasting effects

Prevention • P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response • P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage/Disposal • P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

CLP • No data available

UN GHS Revision 6

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Sixth Revised Edition

2.1 Classification of the substance or mixture

UN GHS • Hazardous to the aquatic environment Chronic 3

2.2 Label elements

UN GHS

Hazard statements • Harmful to aquatic life with long lasting effects

Precautionary statements

Prevention • 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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

UN GHS • No data available

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Not classified

2.2 Label elements

OSHA HCS 2012

Hazard statements • Not classified

Precautionary statements

Prevention • Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012 • No data available

Canada

According to: WHMIS 2015

2.1 Classification of the substance or mixture

WHMIS 2015 • Not classified

2.2 Label elements

WHMIS 2015

Hazard statements • Not classified

Precautionary

statements

Prevention • Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

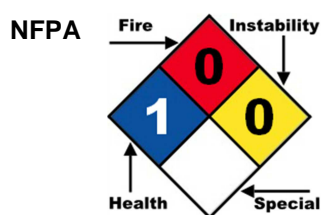
Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

WHMIS 2015

- No data available

2.4 Other information



See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Glycols, polyethylene, mono(nonylphenyl) ether	CAS:9016-45-9 EC Number:500-024-6	3% TO 4%		EU CLP: Acute Tox. Oral 4; Skin Irrit. 2; Eye Irrit. 2; Aquatic Chronic 2 UN GHS Revision 6: OSHA HCS 2012: Eye Irrit. 2; Acute Tox. Oral 4; Acute Tox. Dermal 4 WHMIS 2015:	NDA
Ethanol	CAS:64-17-5 EC Number:200-578-6 EU Index:603-002-00-5 UN:UN1170 EINECS:200-578-6	< 1%	Ingestion/Oral-Rat LD50 • 7 g/kg	EU CLP: Flam. Liq. 2, H225 UN GHS Revision 6: OSHA HCS 2012:	NDA

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. If not breathing, give artificial respiration. 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. Take off contaminated clothing and wash before reuse.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

- No data available

4.3 Indication of any immediate medical attention and special treatment needed

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • SMALL FIRES: Dry chemical, CO₂, water spray or alcohol-resistant foam.
LARGE FIRE: Water spray, fog or regular foam.

Unsuitable Extinguishing Media • No data available

Firefighting Procedures • LARGE FIRES: Use extinguishing agent suitable for type of surrounding fire. Fire fighters should wear complete protective clothing including self-contained breathing apparatus.
Keep unauthorized personnel away.
Ventilate closed spaces before entering.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • Some of these materials may burn, but none ignite readily.

Hazardous Combustion Products • Products of combustion include: carbon oxides (CO_x), nitrogen oxides (NO_x).

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. 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).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures • No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures • Use appropriate Personal Protective Equipment (PPE)
Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container.
Wash away spilled liquid remainder with plenty of water.

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 • Handle and open container with care. Use good safety and industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Storage • Keep container closed when not in use. Ventilate enclosed areas.

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	Argentina	Australia	Belgium	Brazil
Ethanol (64-17-5)	TWAs	Not established	1000 ppm TWA [CMP]	1000 ppm TWA; 1880 mg/m ³ TWA	1000 ppm TWA; 1907 mg/m ³ TWA	780 ppm TWA LT; 1480 mg/m ³ TWA LT
	STELs	1000 ppm STEL	Not established	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories
Ethanol (64-17-5)	TWAs	1000 ppm TWA; 1880 mg/m ³ TWA	Not established	Not established	1000 ppm TWA; 1880 mg/m ³ TWA	1000 ppm TWA
	STELs	Not established	1000 ppm STEL	1000 ppm STEL	Not established	1250 ppm STEL
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec	Canada Saskatchewan
Ethanol (64-17-5)	STELs	1000 ppm STEL	1250 ppm STEL; 2355 mg/m ³ STEL	1000 ppm STEL	Not established	1250 ppm STEL
	TWAs	Not established	1000 ppm TWA; 1884 mg/m ³ TWA	Not established	1000 ppm TWAEV; 1880 mg/m ³ TWAEV	1000 ppm TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Yukon	Chile	Denmark	Finland	France
Ethanol (64-17-5)	TWAs	1000 ppm TWA; 1900 mg/m ³ TWA	875 ppm TWA LPP; 1645 mg/m ³ TWA LPP	1000 ppm TWA; 1900 mg/m ³ TWA	1000 ppm TWA; 1900 mg/m ³ TWA	1000 ppm TWA [VME]; 1900 mg/m ³ TWA [VME]
	STELs	1000 ppm STEL; 1900 mg/m ³ STEL	Not established	Not established	1300 ppm STEL; 2500 mg/m ³ STEL	5000 ppm STEL [VLCT]; 9500 mg/m ³ STEL [VLCT]
Exposure Limits/Guidelines (Con't.)						
	Result	Germany DFG	Germany TRGS	India	Indonesia	Ireland
Ethanol (64-17-5)	TWAs	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/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)	1000 ppm TWA; 1900 mg/m ³ TWA	1000 ppm TWA	Not established
	STELs	Not established	Not established	Not established	Not established	1000 ppm STEL
	Ceilings	1000 ppm Peak; 1920 mg/m ³ Peak	Not established	Not established	Not established	Not established
	MAKs	500 ppm TWA MAK; 960 mg/m ³ TWA MAK	Not established	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Korea	Mexico	Netherlands	New Zealand	NIOSH
Ethanol	TWAs	1000 ppm TWA	1000 ppm TWA	260 mg/m ³ TWA	1000 ppm TWA;	1000 ppm TWA;

(64-17-5)		(limited to alcoholic beverages, Serial No. 386); 1900 mg/m ³ TWA (limited to alcoholic beverages, Serial No. 386)	LMPE-PPT; 1900 mg/m ³ TWA LMPE-PPT		1880 mg/m ³ TWA	1900 mg/m ³ TWA
	STELs	Not established	Not established	1900 mg/m ³ STEL	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Norway	OSHA	Philippines	Poland	Portugal
Ethanol (64-17-5)	TWAs	500 ppm TWA; 950 mg/m ³ TWA	1000 ppm TWA; 1900 mg/m ³ TWA	1000 ppm TWA; 1900 mg/m ³ TWA	1900 mg/m ³ TWA [NDS]	1000 ppm TWA [VLE-MP]
Exposure Limits/Guidelines (Con't.)						
	Result	Russia	Singapore	South Africa	Spain	Sweden
Ethanol (64-17-5)	STELs	2000 mg/m ³ STEL (vapor)	Not established	Not established	1000 ppm STEL [VLA-EC]; 1910 mg/m ³ STEL [VLA-EC]	1000 ppm STV; 1900 mg/m ³ STV
	TWAs	1000 mg/m ³ TWA (vapor)	1000 ppm PEL; 1880 mg/m ³ PEL	1000 ppm TWA; 1900 mg/m ³ TWA	Not established	500 ppm LLV; 1000 mg/m ³ LLV
Exposure Limits/Guidelines (Con't.)						
	Result	Switzerland	Taiwan	Venezuela		
Ethanol (64-17-5)	MAKs	500 ppm TWA [MAK]; 960 mg/m ³ TWA [MAK]	Not established	Not established		
	STELs	1000 ppm STEL [KZW]; 1920 mg/m ³ STEL [KZW]	Not established	Not established		
	TWAs	Not established	1000 ppm TWA; 1880 mg/m ³ TWA	1000 ppm TWA [VTRE-L-8/40]		

Exposure Control Notations

Mexico

•Ethanol (64-17-5): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)

Switzerland

•Ethanol (64-17-5): **Developmental Risk Groups:** (Developmental Risk Group C)

Portugal

•Ethanol (64-17-5): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Singapore

•Ethanol (64-17-5): **Odour Threshold - High:** (9690 mg/m³) | **Odour Threshold - Low:** (0.3 mg/m³) | **Irritation:** (9500 mg/m³)

Netherlands

•Ethanol (64-17-5): **Skin:** (skin notation)

Argentina

•Ethanol (64-17-5): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)

ACGIH

•Ethanol (64-17-5): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)

Germany DFG

•Ethanol (64-17-5): **Carcinogens:** (Category 5 (low carcinogenic potency)) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

Exposure Limits Supplemental

ACGIH

•Ethanol (64-17-5): **TLV Basis - Critical Effects:** (upper respiratory tract irritation)

8.2 Exposure controls

Engineering Measures/Controls

- Local exhaust is recommended but not required. Provide adequate ventilation as necessary.

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 Considerations

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

Environmental Exposure Controls

- No data available

Section 9 - Physical and Chemical Properties**9.1 Information on Basic Physical and Chemical Properties**

Material Description			
Physical Form	Liquid	Appearance/Description	Clear liquid.
Color	Colorless	Odor	Mild
Taste	Not relevant	Odor Threshold	No data available
General Properties			
Boiling Point	100 °C(212 °F)	Melting Point/Freezing Point	0 °C(32 °F)
Decomposition Temperature	Not relevant	pH	No data available
Specific Gravity/Relative Density	> 1 Water=1	Density	8.41 lbs/gal
Water Solubility	Miscible	Viscosity	600 Centipoise (cPs, cP) or mPas
Explosive Properties	Not relevant	Oxidizing Properties:	Not relevant
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	VOC (Wt.)	1 %
Volatiles (Wt.)	81 to 82 %		
Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	Not relevant		
Environmental			
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	Persistence	No data available
Degradation	No data available		

9.2 Other Information

- No data available

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

- None known.

10.5 Incompatible materials

- None known.

10.6 Hazardous decomposition products

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

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Glycols, polyethylene, mono(nonylphenyl) ether (3% TO 4%)	9016-45-9	Irritation: Eye-Rabbit • 5 mg • Severe irritation; Skin-Rabbit • 500 mg-Open • Mild irritation
Ethanol (< 1%)	64-17-5	Acute Toxicity: Ingestion/Oral-Rat LD50 • 7 g/kg; Skin-Rabbit LDLo • 20000 mg/kg; Irritation: Eye-Rabbit • 500 mg 24 Hour(s) • Mild irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation

GHS Properties	Classification
Acute toxicity	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Skin corrosion/Irritation	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Serious eye damage/Irritation	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Skin sensitization	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Respiratory sensitization	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Aspiration Hazard	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Carcinogenicity	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Germ Cell Mutagenicity	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
Toxicity for Reproduction	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
STOT-SE	EU/CLP• UN GHS 6• OSHA HCS 2012• WHMIS 2015•
STOT-RE	EU/CLP• UN GHS• OSHA HCS 2012• WHMIS 2015•

Potential Health Effects

Inhalation

- Acute (Immediate)** • No specific information available. May cause irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.
- Skin**
- Acute (Immediate)** • No specific information available. May cause irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.
- Eye**
- Acute (Immediate)** • No specific information available. May cause irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.
- Ingestion**
- Acute (Immediate)** • No specific information available. May cause irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.

Section 12 - Ecological Information

12.1 Toxicity

Components		
Ethanol (< 1%)	64-17-5	Aquatic Toxicity-Fish: 5 Day(s) LC50 <i>Danio rerio</i> 310 µg/L

12.2 Persistence and degradability

- No data available

12.3 Bioaccumulative potential

- No data available

12.4 Mobility in Soil

- No data available

12.5 Results of PBT and vPvB assessment

- No data available

12.6 Other adverse effects

Section 13 - Disposal Considerations

13.1 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.

13.2 Other Information

- Dispose of wastes in an approved waste disposal facility.

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	NDA	NDA	NDA	NDA	NDA
IMO/IMDG	NDA	NDA	NDA	NDA	NDA
IATA/ICAO	NDA	NDA	NDA	NDA	NDA

- 14.6 Special precautions for user** • None specified.

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** • Not relevant.

14.8 Other information

DOT • Not regulated.

IMO/IMDG • Not regulated.

IATA/ICAO • Not regulated.

Section 15 - Regulatory Information

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

SARA Hazard Classifications • Not classified

State Right To Know				
Component	CAS	MA	NJ	PA
Ethanol	64-17-5	Yes	Yes	Yes
Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	No	No	No

Inventory						
Component	CAS	Australia AICS	Canada DSL	China	EU EINECS	Japan ENCS
Ethanol	64-17-5	Yes	Yes	Yes	Yes	Yes
Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Yes	Yes	Yes	No	No

Inventory (Con't.)					
Component	CAS	Korea KECL	New Zealand	Philippines PICCS	TSCA
Ethanol	64-17-5	Yes	Yes	Yes	Yes
Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Yes	Yes	Yes	Yes

Australia

Labor

Australia - High Volume Industrial Chemicals List

- Ethanol 64-17-5
- Glycols, polyethylene, mono(nonylphenyl) ether 9016-45-9

Australia - List of Designated Hazardous Substances - Classification

- Ethanol 64-17-5 F, Xi R11, R36
- Glycols, polyethylene, mono(nonylphenyl) ether 9016-45-9 Not Listed

Environment

Australia - National Pollutant Inventory (NPI) Substance List

- Ethanol 64-17-5 10 tonne/yr Threshold category 1
- Glycols, polyethylene, mono(nonylphenyl) ether 9016-45-9 Not Listed

Australia - Priority Existing Chemical Program

- Ethanol 64-17-5 Not Listed
- Glycols, polyethylene, mono(nonylphenyl) ether 9016-45-9 Candidate chemical

Canada

Labor

Canada - WHMIS 1988 - Classifications of Substances

- Ethanol 64-17-5 B2, D2B
- Glycols, polyethylene, mono(nonylphenyl) ether 9016-45-9 D2B

Canada - WHMIS 1988 - Ingredient Disclosure List

- Ethanol 64-17-5 0.1 %
- Glycols, polyethylene, mono(nonylphenyl) ether 9016-45-9 Not Listed

Environment

Canada - CEPA - Priority Substances List

- Ethanol 64-17-5 Not Listed
- Glycols, polyethylene, mono(nonylphenyl) ether 9016-45-9 Priority Substance List 2 (substance considered toxic)

Canada - CEPA - Schedule I - List of Toxic Substances

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	
Canada - Council of Ministers of the Environment - Water Quality Guidelines for Freshwater Aquatic Life		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	1.0 µg/L (expressed on a TEQ basis using NP TEFs)
Canada - Council of Ministers of the Environment - Water Quality Guidelines for Marine Aquatic Life		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	0.7 µg/L (expressed on a TEQ basis using NP TEFs)

Canada Alberta

Environment

Canada - Alberta - Water Quality Guidelines for Freshwater Aquatic Life - Acute

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	28 µg/L (1 hour averaging period, derived for Nonylphenol, to include ethoxylates, toxic equivalents to be used)

Canada - Alberta - Water Quality Guidelines for Freshwater Aquatic Life - Chronic

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	6.6 µg/L (4 day averaging period, derived for Nonylphenol, to include ethoxylates, toxic equivalents to be used)

China

Other

China - Dangerous Goods List

•Ethanol	64-17-5	
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
China - Major Hazard Installations for Dangerous Chemicals - Table 1		
•Ethanol	64-17-5	500 tonne TQ (listed under Flammable liquids)
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Surfactants (that are used in paint and coating curing agents and glue)

Denmark - List of Undesirable Substances - Reason for Selection

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Some substances have properties of concern with regard to the List of hazardous substances. Nonylphenol, Octylphenol and nonylphenol ethoxylate are on the EU 'Priority list of substances for further evaluation of their role in endocrine disruption. The substances are only subject to partial restrictions on, however other uses are also considered to be a cause for concern with regard to the environment.

Europe

Other

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

•Ethanol	64-17-5	F; R11
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
•Ethanol	64-17-5	F R:11 S:(2)-7-16
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
•Ethanol	64-17-5	S:(2)-7-16
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
EU - Endocrine Disrupters (COM (2001)262) - Candidate List of Substances		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Group III Chemical
EU - Export and Import Restrictions (649/2012) - Chemicals Qualifying for PIC Notification		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Banned as a pesticide; Severe restriction as an industrial chemical
EU - Export and Import Restrictions (649/2012) - Chemicals Subject to Export Notification Procedure		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Severe restriction as an industrial chemical for professional use; Banned as a pesticide in the group of plant protection products; Banned as other pesticide including biocides
EU - No-Longer Polymers List (67/548/EEC)		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	NLP No. 500-024-6
Germany		
Environment		
Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes		
•Ethanol	64-17-5	ID Number 96, hazard class 1 - low hazard to waters (footnote 10)
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	ID Number 671, hazard class 2 - hazard to waters
Hong Kong		
Labor		
Hong Kong - Dangerous Substances Regulations - Classification		
•Ethanol	64-17-5	Flammable
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Hong Kong - Dangerous Substances Regulations - Particular Risks		
•Ethanol	64-17-5	R-11
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Hong Kong - Dangerous Substances Regulations - Safety Precautions		
•Ethanol	64-17-5	S-6/8, S-13
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Other		
Hong Kong - Dangerous Goods - Category 5 - Substances Giving Off Flammable Vapour		
•Ethanol	64-17-5	Class 2, Division 1 (flash point >23-66°C, listed under Alcohol); Class 1, Division 2 (flash point <23°C, including denatured alcohol and Acrolein methylated spirits)
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
India		
Environment		
India - Hazardous Chemical Rules - List of Hazardous and Toxic Chemicals		
•Ethanol	64-17-5	
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Japan		
Labor		
Japan - ISHL Dangerous Substances		
•Ethanol	64-17-5	Flammable substance

•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Japan - ISHL Harmful Substances Whose Names Are to be Indicated on the Label		
•Ethanol	64-17-5	>=0.1 % weight
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Japan - ISHL Notifiable Substances		
•Ethanol	64-17-5	>=0.1 % weight [Ordinance Table 2]
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Environment		
Japan - Pollutant Release Transfer Register (PRTR) - Class 1 Substances		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	410 >=1 %
Other		
Japan - Chemical Substance Control Law (CSCL) - Examined Existing Chemical Substances		
•Ethanol	64-17-5	Readily biodegradable
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Non-biodegradable/Low bioconcentration
Japan - Fire Service Law - Hazardous Materials		
•Ethanol	64-17-5	Group 4 Flammable liquids; Alcohols; Hazard rank II
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Japan - Japanese Pharmacopoeia Listing - Synthetics		
•Ethanol	64-17-5	(including anhydrous, ethanol for disinfection)
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Korea		
Other		
Korea - MOE - K-REACH/CCA - Restricted Substances		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	06-5-6, 0.1% or more in mixtures (prohibited from manufacturing, importing or using for home cleaning solutions, inks and paint)
Netherlands		
Other		
Netherlands - List of Carcinogens		
•Ethanol	64-17-5	
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Norway		
Environment		
Norway - Restricted Substances and Preparations		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Use restricted. See item 2-30 of the regulation. (listed under Material, preparations and products regulated under REACH Regulation Annex XVII)
Singapore		
Environment		
Singapore - Petroleum and Flammable Materials - Hazard Classes		
•Ethanol	64-17-5	3
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Singapore - Petroleum and Flammable Materials - Regulated Products		
•Ethanol	64-17-5	SCDETH1170L2
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed
Taiwan		
Environment		
Taiwan - Toxic Chemical Substances Control Act - Threshold Regulated Quantities		
•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	50 kg TRQ

Taiwan - Toxic Chemical Substances Control Act - Classification and Control Levels

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Class 1 Cutoff: 5 wt%

Thailand**Environment****Thailand - Quantities of Chemicals**

•Ethanol	64-17-5	1000 ppm Quantities of Chemicals; 1900 mg/m3 Quantities of Chemicals
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Not Listed

Other**Thailand - Hazardous Substances**

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Type 3 Hazardous Substance (FDA; Department of Livestock Development)

Thailand - Hazardous Substances - FDA Responsible Substances

•Ethanol	64-17-5	Not Listed
•Glycols, polyethylene, mono(nonylphenyl) ether	9016-45-9	Type 3 Hazardous Substance (In products used in household or public health activity with purposes for disinfecting floor, wall, sanitary ware, and other materials or for anti-clogging of drainage system or sewer line)

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H412 - Harmful to aquatic life with long lasting effects
- 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.
- P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Classification method for mixtures

- Calculation method.

Revision Date

- 31 August 2016

Last Revision Date

- 07 April 2016

Other Information

- Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.

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