Safety Data Sheet



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

1.1 Product identifier

Product Name
• Chroma/Clean
• 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

• (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 453/2010]

2.1 Classification of the substance or mixture

CLP • Not classified

2.2 Label Elements

CLP

Hazard statements • Not classified

Precautionary statements

Prevention • 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

UN GHS

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

2.1 Classification of the substance or mixture

UN GHS

Not classified

2.2 Label elements

UN GHS

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

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

2.1 Classification of the substance or mixture

WHMIS

Not classified

2.2 Label elements

WHMIS

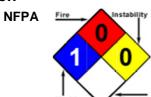
 Corrosive - E Oxidizing - C

2.3 Other hazards

WHMIS

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 |
| Polyethylene glycol nonylphenyl ether | CAS:9016-45-9 EC Number: | 3% TO 4% | Ingestion/Oral-Rat LD50 • 4 g/kg Skin-Rabbit LD50 • 2 mL/kg | WHMIS: Other Toxic Effects - D2B UN GHS: Skin Irrit. 2; Eye Irrit. 2A; Acute Tox. Oral 4 EU CLP: OSHA HCS 2012: | 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 | WHMIS: Other Toxic Effects - D2B; Flam. Liq B2 UN GHS: Skin Irrit. 2; Eye Irrit. 2A; Muta. 1B; Repr. 1B EU CLP: Flam. Liq. 2, H225 OSHA HCS 2012: | NDA |

European Chemicals Agency - Candidate List of Substances of Very High Concern for Authorization

Polyethylene glycol nonylphenyl ether; (4-Nonylphenol, branched and linear, ethoxylated); listed 2013/06/20; 3-4%

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 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. 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

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 of combustion include: carbon oxides (COx), nitrogen oxides (NOx).

Products

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)
 October 1/2 and 1

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/m3 TWA | 1000 ppm TWA; 1907 mg/m3 TWA | 780 ppm TWA LT; 1480 mg/m3 TWA LT |
| | STELs | 1000 ppm STEL | Not established | Not established | Not established | Not established |
| | | Ex | posure Limits/Gu | idelines (Con't.) | | |
| | Result | Canada Alberta | Canada British Columbia | Canada Manitoba | Canada New Brunswick | Canada Northwest Territories |
| Ethanol | TWAs | 1000 ppm TWA; 1880 mg/m3 TWA | Not established | Not established | 1000 ppm TWA; 1880 mg/m3 TWA | 1000 ppm TWA; 1884 mg/m3 TWA |
| (64-17-5) | STELs | Not established | 1000 ppm STEL | 1000 ppm STEL | Not established | 1250 ppm STEL; 2355 mg/m3 STEL |
| | | Ex | posure Limits/Gu | idelines (Con't.) | | |
| | Result | Canada Nova Scotia | Canada Nunavut | Canada Ontario | Canada Quebec | Canada Saskatchewan |
| Ethanol | STELs | 1000 ppm STEL | 1250 ppm STEL; 2355 mg/m3 STEL | 1000 ppm STEL | Not established | 1250 ppm STEL |
| (64-17-5) | TWAs | Not established | 1000 ppm TWA; 1884 mg/m3 TWA | Not established | 1000 ppm TWAEV; 1880 mg/m3 TWAEV | 1000 ppm TWA |
| | | Ex | posure Limits/Gu | idelines (Con't.) | | |
| | Result | Canada Yukon | Chile | Denmark | Finland | France |
| Ethanol | TWAs | 1000 ppm TWA; 1900 mg/m3 TWA | 800 ppm TWA LPP; 1500 mg/m3 TWA LPP | 1000 ppm TWA; 1900 mg/m3 TWA | 1000 ppm TWA; 1900 mg/m3 TWA | 1000 ppm TWA [VME]; 1900 mg/m3 TWA [VME] |
| (64-17-5) | STELs | 1000 ppm STEL; 1900 mg/m3 STEL | Not established | Not established | 1300 ppm STEL; 2500 mg/m3 STEL | 5000 ppm STEL [VLCT]; 9500 mg/m3 STEL [VLCT] |
| | | Ex | posure Limits/Gu | idelines (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/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2) | 1000 ppm TWA; 1900 mg/m3 TWA | 1000 ppm TWA | Not established |
| | STELs | Not established | Not established | Not established | Not established | 1000 ppm STEL |
| | Ceilings | 1000 ppm Peak; 1920 mg/m3 Peak | Not established | Not established | Not established | Not established |
| | MAKs | 500 ppm TWA MAK; 960 mg/m3 TWA MAK | Not established | Not established | Not established | Not established |

| | | | E | cposure Limits/Gu | idelines (Con't.) | | | |
|----------------------|--------|--|----------------|--|---------------------------------|--|--|---------------------------------|
| | Result | Kore | ea | Mexico | Netherlands | New Z | ealand | NIOSH |
| Ethanol (64-17-5) | TWAs | 1000 ppm T (Serial No.: 1900 mg/m: (Serial No.: | 372); 3 TWA | 1000 ppm TWA LMPE-PPT; 1900 mg/m3 TWA LMPE- PPT | 260 mg/m3 TWA | 1000 ppm 1880 mg/n | | 1000 ppm TWA; 1900 mg/m3 TWA |
| | STELs | Not establis | hed | Not established | 1900 mg/m3 STEL | Not establi | shed | Not established |
| | | | E | posure Limits/Gu | <u> </u> | | | |
| | Result | Norwa | ay | OSHA | Philippines | Pola | nd | Portugal |
| Ethanol (64-17-5) | TWAs | 500 ppm TW mg/m3 TWA | | 1000 ppm TWA; 1900 mg/m3 TWA | 1000 ppm TWA; 1900 mg/m3 TWA | 1900 mg/m [NDS] | 3 TWA | 1000 ppm TWA [VLE-MP] |
| | | | E | posure Limits/Gu | idelines (Con't.) | | | |
| | Result | Russ | ia | Singapore | South Africa | Spa | ain | Sweden |
| | STELs | 2000 mg/m3 (vapor) | STEL | Not established | Not established | 1000 ppm : [VLA-EC]; mg/m3 STI EC] | 1910 | 1000 ppm STV; 1900 mg/m3 STV |
| Ethanol (64-17-5) | TWAs | 1000 mg/m3 (vapor) | | 1000 ppm PEL; 1880 mg/m3 PEL | 1000 ppm TWA; 1900 mg/m3 TWA | 1000 ppm [VLA-ED] (prohibited to complete commercia use of this as a phytos biocide cor 1910 mg/m [VLA-ED] (prohibited to complete commercia use of this as a phytos biocide cor | it is he partial edization or substance sanitary or npound); 3 TWA it is he partial edization or substance sanitary or substance sanitary or | 500 ppm LLV; 1000 mg/m3 LLV |
| | | T = - | E | posure Limits/Gu | | | | |
| | | Result | | Switzerland | Taiwan | | | Venezuela |
| | | MAKs | | n TWA [MAK]; 960 TWA [MAK] | Not established | | Not establ | ished |
| Ethanol (64-17-5) | | STELs | | m STEL [KZW] (4 X 0 mg/m3 STEL [KZW] | Not established | Not established | | ished |
| | | TWAs | Not esta | blished | 1000 ppm TWA; 188 TWA | 30 mg/m3 | 1000 ppm | TWA [CAP |

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)

Venezuela

•Ethanol (64-17-5): Ceilings: (A4 - Not Classified as a Carcinogen in Humans)

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

Spain

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

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 Eye/Face Hands

Skin/Body
General Industrial Hygiene

General Industrial Hygiene Considerations

Environmental Exposure Controls

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

- Wear protective eyewear (goggles, face shield, or safety glasses).
- Wear protective gloves rubber or neoprene.
- Wear protective clothing apron or other impervious body coverings.
- Handle in accordance with good industrial hygiene and safety practice.
- No data available

Section 9 - Physical and Chemical Properties

9.1 Information on 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 | 0 C(32 F) |
| Decomposition Temperature | Not relevant | рН | No data available |
| Specific Gravity/Relative Density | > 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 |
|--|----------|--|
| Polyethylene glycol nonylphenyl ether (3% TO 4%) | 9016-45- | Acute Toxicity: Ingestion/Oral-Rat LD50 • 4 g/kg; Skin-Rabbit LD50 • 2 mL/kg; 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• OSHA HCS 2012• UN GHS• | |
| Aspiration Hazard | EU/CLP• OSHA HCS 2012• UN GHS• | |
| Carcinogenicity | EU/CLP• OSHA HCS 2012• UN GHS• | |
| Germ Cell Mutagenicity | EU/CLP• OSHA HCS 2012• UN GHS• | |
| Skin corrosion/Irritation | EU/CLP• OSHA HCS 2012• UN GHS• | |
| Skin sensitization | EU/CLP• OSHA HCS 2012• UN GHS• | |
| STOT-RE | EU/CLP• OSHA HCS 2012• UN GHS• | |
| STOT-SE | EU/CLP• | |

| | OSHA HCS 2012• UN GHS• |
|-------------------------------|--------------------------------|
| | EU/CLP• OSHA HCS 2012• UN GHS• |
| Respiratory sensitization | EU/CLP• OSHA HCS 2012• UN GHS• |
| Serious eye damage/Irritation | EU/CLP• OSHA HCS 2012• UN GHS• |

Potential Health Effects

Inhalation

Acute (Immediate)

Chronic (Delayed)

Skin

Acute (Immediate)

Chronic (Delayed)

Eye

Acute (Immediate)

Chronic (Delayed)

Ingestion

Acute (Immediate)
Chronic (Delayed)

• No specific information available. May cause irritation.

• Repeated and prolonged exposure may cause irritation.

• No specific information available. May cause irritation.

• Repeated and prolonged exposure may cause irritation.

• No specific information available. May cause irritation.

• Repeated and prolonged exposure may cause irritation.

• No specific information available. May cause irritation.

• Repeated and prolonged exposure may cause irritation.

Section 12 - Ecological Information

12.1 Toxicity

| Component | CAS | Data | Comments |
|----------------|---------|-----------------------------------|----------|
| Ethanol (< 1%) | 64-17-5 | Fish: 5 Day(s) LC50 Fish 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 73/78 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 Rig | ht To Know | |
|---|-----------|-----------|------------|-----|
| Component | CAS | MA | NJ | PA |
| Ethanol | 64-17-5 | Yes | Yes | Yes |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | No | No | No |

| | | | | | | Inventory | 1 | | | | |
|---|-------|---------|-----|--------------|------|------------|---------|-------|--------------|-----|------------|
| Component | CA | AS | Au | stralia AICS | Cana | da DSL | China | 1 | EU EINECS | | Japan ENCS |
| Ethanol | 64-17 | '-5 | Yes | | Yes | | Yes | | Yes | | Yes |
| Polyethylene glycol nonylphenyl ether | 9016- | 45-9 | Yes | | Yes | | Yes | | No | | Yes |
| | | | | | Inve | entory (Co | on't.) | | | | |
| Component | | CAS | ; | Korea KI | CL | New 2 | Zealand | Phili | ppines PICCS | | TSCA |
| Ethanol | 64 | 1-17-5 | | Yes | | Yes | | Yes | | Yes | i |
| Polyethylene glycol nonylphenyl ether | 90 |)16-45- | 9 | Yes | | Yes | | Yes | | Yes | |

Australia

Labor

Australia - High Volume Industrial Chemicals List

•Ethanol 64-17-5 •Polyethylene glycol nonylphenyl ether 9016-45-9

Australia - List of Designated Hazardous Substances - Classification

•Ethanol 64-17-5 F R11 •Polyethylene glycol 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 |
| Polyethylene glycol nonylphenyl ether Australia - Priority Existing Chemical Program | 9016-45-9 | Not Listed |
| •Ethanol | 64-17-5 | Not Listed |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Candidate chemical |
| Canada | | |
| Labor | | |
| Canada - WHMIS - Classifications of Substances •Ethanol | 64-17-5 | B2, D2B |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | D2B |
| Canada - WHMIS - Ingredient Disclosure List | | |
| •Ethanol | 64-17-5 | 0.1 % |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| Environment Canada - CEPA - Priority Substances List | | |
| •Ethanol | 64-17-5 | Not Listed |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Priority Substance List 2 |
| Canada - CEPA - Schedule I - List of Toxic Substances | 0010 10 0 | (substance considered toxic) |
| •Ethanol | 64-17-5 | Not Listed |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | |
| Canada - Council of Ministers of the Environment - Water Quality Guidelines for I | | |
| •Ethanol | 64-17-5 | Not Listed 1.0 µg/L (expressed on a |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | TEQ basis using NP TEFs) |
| Canada - Council of Ministers of the Environment - Water Quality Guidelines for I | • | |
| •Ethanol | 64-17-5 | Not Listed 0.7 µg/L (expressed on a |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | TEQ basis using NP TEFs) |
| China | | |
| Cilila | | |
| Other | | |
| Other China - Dangerous Goods List | | |
| Other China - Dangerous Goods List •Ethanol | 64-17-5 | New Linear |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether | 64-17-5 9016-45-9 | Not Listed |
| Other China - Dangerous Goods List •Ethanol | | Not Listed 500 tonne TQ |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 | 9016-45-9 | |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol | 9016-45-9 64-17-5 | 500 tonne TQ |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether | 9016-45-9 64-17-5 | 500 tonne TQ |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function | 9016-45-9 64-17-5 9016-45-9 | 500 tonne TQ Not Listed |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment | 9016-45-9 64-17-5 | 500 tonne TQ Not Listed |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol | 9016-45-9 64-17-5 9016-45-9 64-17-5 | 500 tonne TQ Not Listed Not Listed Surfactants that are used in |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol •Polyethylene glycol nonylphenyl ether | 9016-45-9 64-17-5 9016-45-9 | 500 tonne TQ Not Listed |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol •Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | 500 tonne TQ Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol •Polyethylene glycol nonylphenyl ether | 9016-45-9 64-17-5 9016-45-9 64-17-5 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol •Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol •Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol •Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; Nonylphenol, Octylphenol |
| Other China - Dangerous Goods List Ethanol Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 Ethanol Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function Ethanol Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection Ethanol | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; Nonylphenol, Octylphenol and Nonylphenols ethoxylate are on the EU priority list of |
| Other China - Dangerous Goods List •Ethanol •Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 •Ethanol •Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function •Ethanol •Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; Nonylphenol, Octylphenol and Nonylphenols ethoxylate are on the EU priority list of substances that should be |
| Other China - Dangerous Goods List Ethanol Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 Ethanol Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function Ethanol Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection Ethanol | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; Nonylphenol, Octylphenol and Nonylphenols ethoxylate are on the EU priority list of substances that should be further investigated for hormone-disturbing |
| Other China - Dangerous Goods List Ethanol Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 Ethanol Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function Ethanol Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection Ethanol | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; Nonylphenol, Octylphenol and Nonylphenols ethoxylate are on the EU priority list of substances that should be further investigated for hormone-disturbing properties; N, R50/53 and |
| Other China - Dangerous Goods List Ethanol Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 Ethanol Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function Ethanol Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection Ethanol | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; Nonylphenol, Octylphenol and Nonylphenols ethoxylate are on the EU priority list of substances that should be further investigated for hormone-disturbing |
| Other China - Dangerous Goods List Ethanol Polyethylene glycol nonylphenyl ether China - Major Hazard Installations for Dangerous Chemicals - Table 1 Ethanol Polyethylene glycol nonylphenyl ether Denmark Environment Denmark - List of Undesirable Substances - Product Groups/Function Ethanol Polyethylene glycol nonylphenyl ether Denmark - List of Undesirable Substances - Reason for Selection Ethanol | 9016-45-9 64-17-5 9016-45-9 64-17-5 9016-45-9 | Not Listed Not Listed Surfactants that are used in paint and coating curing agents and glue Not Listed Some substances have problematical properties according to the List of Dangerous Substances; Nonylphenol, Octylphenol and Nonylphenols ethoxylate are on the EU priority list of substances that should be further investigated for hormone-disturbing properties; N, R50/53 and one compound that also has |

considered to be environmentally objectionable

| Europe | | |
|--|----------------|--|
| Other | | |
| EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification | | |
| •Ethanol | 64-17-5 | F; R11 |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling | 04.47.5 | E D.44 C.(2) 7.40 |
| •Ethanol | 64-17-5 | F R:11 S:(2)-7-16 |
| Polyethylene glycol nonylphenyl ether EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases | 9016-45-9 | Not Listed |
| •Ethanol | 64-17-5 | S:(2)-7-16 |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| EU - Endocrine Disrupters (COM (2001)262) - Candidate List of Substances | 00.0 .0 0 | . 101 2.0100 |
| •Ethanol | 64-17-5 | Not Listed |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Group III Chemical |
| EU - Export and Import Restrictions (689/2008) - Chemicals Qualifying for PIC Notifi | cation | |
| •Ethanol | 64-17-5 | Not Listed |
| | 0040 45 0 | Banned as a pesticide; |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Severe restriction as an industrial chemical |
| EU - Export and Import Restrictions (689/2008) - Chemicals Subject to Export Notific | cation Procedu | |
| •Ethanol | 64-17-5 | Not Listed |
| | | Severe restriction as an |
| | | industrial chemical for |
| Debuggler de la constant de la const | 0040 45 0 | professional use; Banned as |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | 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 |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | NLP No. 500-024-6 |
| Germany | | |
| Environment | | |
| Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes | | |
| | | ID Number 96, hazard class |
| •Ethanol | 64-17-5 | 1 - low hazard to waters |
| | | (footnote 10) |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | ID Number 671, hazard class 2 - hazard to waters |
| | | class 2 - flazaru to waters |
| Hong Kong | | |
| Labor | | |
| Hong Kong - Dangerous Substances Regulations - Classification | | |
| •Ethanol | 64-17-5 | Flammable |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| Hong Kong - Dangerous Substances Regulations - Particular Risks | | |
| •Ethanol | 64-17-5 | R-11 |
| Polyethylene glycol nonylphenyl ether Henry Kong, Dangerous Sylphotoness Begyletians, Safety Bressyltians | 9016-45-9 | Not Listed |
| Hong Kong - Dangerous Substances Regulations - Safety Precautions •Ethanol | 64-17-5 | S-6/8 S-13 |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | S-6/8, S-13 Not Listed |
| | 3010 40-9 | Not Listou |
| Other | | |

Hong Kong - Dangerous Goods - Category 5 - Substances Giving Off Flammable Vapour

Class 2, Division 1 (flash point >23-66°C); Class 1, •Ethanol 64-17-5 Division 2 (flash point <23°C)

9016-45-9 Not Listed

India

Environment

•Polyethylene glycol nonylphenyl ether

India - Hazardous Chemical Rules - List of Hazardous and Toxic Chemicals

| EthanolPolyethylene glycol nonylphenyl ether | 64-17-5 9016-45-9 | Not Listed |
|---|----------------------|--|
| Japan | | |
| Labor | | |
| Japan - ISHL Dangerous Substances •Ethanol | 64-17-5 | Flammable substance |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| Japan - ISHL Notifiable Substances •Ethanol | 64-17-5 | >0.1 % weight [Table 9, 61] |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| Environment | | |
| Japan - Pollutant Release Transfer Register (PRTR) - Class 1 Substances •Ethanol | 64-17-5 | Not Listed |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | 410 >=1 % |
| Other | | |
| Japan - Chemical Substance Control Law (CSCL) - Examined Existing Chemical Sub •Ethanol | stances 64-17-5 | Readily biodegradable |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Non-biodegradable/Low bioconcentration |
| Japan - Fire Service Law - Hazardous Materials | | bioconcentiation |
| •Ethanol | 64-17-5 | Group 4 - Flammable liquids II (listed under Alcohols) |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| Japan - Japanese Pharmacopoeia Listing - Synthetics | | (including anhydrous, |
| •Ethanol | 64-17-5 | ethanol for disinfection) |
| Polyethylene glycol nonylphenyl ether | 9016-45-9 | Not Listed |
| Korea | | |
| Other Korea - MOE - Toxic Chemicals Control Act (TCCA) - Restricted Chemicals | | |
| •Ethanol | 64-17-5 | Not Listed |
| | | 06-5-6, 0.1% or more in mixtures (prohibited from |
| •Polyethylene glycol nonylphenyl ether | 9016-45-9 | manufacturing, importing or |
| | | using for home cleaning solutions, inks and paint) |
| Netherlands | | , , |
| Other | | |
| Netherlands - List of Carcinogens | | |
| Ethanol Polyethylene glycol nonylphenyl ether | 64-17-5 9016-45-9 | Not Listed |
| Singapore | | |
| Environment | | |
| Singapore - Petroleum and Flammable Materials - Hazard Classes | | |
| Ethanol Polyethylene glycol nonylphenyl ether | 64-17-5 9016-45-9 | Hazard Class = 3 Not Listed |
| Singapore - Petroleum and Flammable Materials - Regulated Products | 3010-43-3 | Not Listed |
| Ethanol Polyethylene glycol nonylphenyl ether | 64-17-5 9016-45-9 | SCDETH1170L2 Not Listed |
| | 9016-45-9 | Not Listed |
| Taiwan | | |
| Environment Taiwan - Toxic Chemical Substances Control Act - Threshold Regulated Quantities | | |
| •Ethanol | 64-17-5 | Not Listed |
| Polyethylene glycol nonylphenyl ether Taiwan - Toxic Chemical Substances Control Act - Classification and Control Levels | 9016-45-9 | 50 kg TRQ |
| •Ethanol | 64-17-5 | Not Listed |
| •Polyethylene glycol nonylphenyl ether | 9016-45-9 | Class 1 Cutoff: 10 wt% |
| Thailand | | |

Thailand

Environment

| Thailand - Quantities of Chemicals | | |
|------------------------------------|---------|-----------------------------------|
| •Ethanol | 64-17-5 | 2.5 mg/m3 Quantities of Chemicals |

emicals Not Listed •Polyethylene glycol nonylphenyl ether 9016-45-9

Other

Thailand - Hazardous Substances Ethanol 64-17-5 Not Listed

Type 3 Hazardous Polyethylene glycol nonylphenyl ether 9016-45-9

Substance Thailand - Hazardous Substances - FDA Responsible Substances

Ethanol 64-17-5 Not Listed

> Products used in household or public health for disinfecting and cleaning floor, surface, sanitary

•Polyethylene glycol nonylphenyl ether 9016-45-9

products and other materials or for anticlogging of

drainage system or sewer

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)

• 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.

Last Revision Date

• 14 July 2014

Preparation Date

• 06 April 2015

Other Information

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

Liability

Disclaimer/Statement of • 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.