

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

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Printing date 07/07/2015

Reviewed on 07/07/2015

1 Identification

- **Product identifier**
- **Trade name:** ArctiClean 1
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available
- **Product description** Cleaning product
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Arctic Silver Incorporated
9826 West Legacy Ave.
Visalia, CA 93291 USA
Voice: 559.740.0912
Fax: 559.740.0913
infoas@arcticsilver.com
www.arcticsilver.com
- **Emergency telephone number:**
Rocky Mountain Poison Control
Toll Free: 877-740-5015
Alternate: 303-739-1110

2 Hazard(s) identification

Classification of the substance or mixture



GHS07

- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2A H319 Causes serious eye irritation.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- STOT SE 3 H335 May cause respiratory irritation.
- Flam. Liq. 4 H227 Combustible liquid.

Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS07

Signal word Warning

Hazard-determining components of labeling:

d-limonene

Poly(oxy-1,2-ethanediyl), alpha-(4- 4 – 8% nonylphenyl)-omega-hydroxy-, branched

Hazard statements

Combustible liquid.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

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· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves / eye protection / face protection.
 Wear protective gloves.
 Wear eye protection / face protection.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Call a poison center/doctor if you feel unwell.
 Wash contaminated clothing before reuse.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 In case of fire: Use for extinction: CO2, powder or water spray.
 If on skin: Wash with plenty of water.
 Take off contaminated clothing and wash it before reuse.
 Store locked up.
 Store in a well-ventilated place. Keep container tightly closed.
 Keep cool.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

5 percent of the mixture consists of ingredient(s) of unknown toxicity.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1
 Fire = 2
 Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2
 Fire = 2
 Reactivity = 0

· **Hazard(s) not otherwise classified (HNOC): None known**

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

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· **Dangerous Components:**

CAS: 5989-27-5 RTECS: GW 6360000	d-limonene ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; Flam. Liq. 4, H227	≥85%
CAS: 127087-87-0 RTECS: WZ4750000	Poly(oxy-1,2-ethanediyl), alpha-(4- 4 – 8% nonylphenyl)-omega-hydroxy-, branched ⚠ Eye Dam. 1, H318; ⚠ STOT SE 3, H335	5-10%
CAS: 67784-80-9	Methyl ester, soybean oil ⚠ Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	2-12%

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness, place patient securely on side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

· **After eye contact:**

Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** If swallowed and symptoms occur, consult a doctor.

· **Information for doctor:**

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

No further relevant information available.

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

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

Combustible liquid. Vapors can travel to a source of ignition and flash back.

Explosive mixtures may occur at temperatures at or above flashpoint.

· **Advice for firefighters**

· **Protective equipment:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.

· **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

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Do not allow to enter sewers/ surface or ground water.

• **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Dispose of the collected material according to regulations.

• **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

• **Handling:**

• **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

• **Information about protection against explosions and fires:** Protect from heat.

• **Conditions for safe storage, including any incompatibilities**

• **Storage:**

• **Requirements to be met by storerooms and receptacles:** No special requirements.

• **Information about storage in one common storage facility:** Not required.

• **Further information about storage conditions:**

Keep receptacle tightly sealed.

Protect from heat and direct sunlight.

• **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

• **Additional information about design of technical systems:** No further data; see section 7.

• **Control parameters**

• **Components with occupational exposure limits:**

5989-27-5 d-limonene

TWA Short-term value: 10 mg/m³

• **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

• **Exposure controls**

• **Personal protective equipment:**

• **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

• **Breathing equipment:** Not required.

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· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Pale yellow
Odor:	Citrus, reminding of orange peel
Odor threshold:	Not determined.

pH-value:	Not determined.
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· Change in condition

Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	173 °C (343 °F)

Flash point:	91 °C (196 °F)
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Flammability (solid, gaseous):	Not applicable.
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Ignition temperature:	255 °C (491 °F)
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Decomposition temperature:	Not determined.
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Auto igniting:	Product is not self-igniting.
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Danger of explosion:	Not determined.
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· Explosion limits:	
Lower:	0.7 Vol %
Upper:	6.1 Vol %
· Vapor pressure @ 20 °C (68 °F):	2.3 hPa (2 mm Hg)
· Density @ 20 °C (68 °F):	0.85 g/cm ³ (7.093 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	85.0 %
VOC content:	85.0 %
	722.5 g/l / 6.03 lb/gl
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidizing agents.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

5989-27-5 d-limonene

Oral	LD50	4400 mg/kg (rat) Remarks: Behavioral: Change in motor activity (specific assay). Respiratory disorder Skin and Appendages: Other: Hair
Dermal	LD50	>5000 mg/kg (rabbit)

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Trade name: ArctiClean 1

Inhalative LC50/96 hours 0.72 mg/l (Pimephales) (OECD Test Guideline 203)

127087-87-0 Poly(oxy-1,2-ethanediyl), alpha-(4- 4 – 8% nonylphenyl)-omega-hydroxy-, branched

Oral LD50 16000 mg/kg (rat)

Dermal LD50 4490 mg/kg (rabbit) (24 hr occluded contact)

• **Primary irritant effect:**

• **on the skin:**

Irritant to skin and mucous membranes.

May cause an allergic skin reaction.

• **on the eye:**

Irritating effect.

Causes serious eye irritation.

• **Sensitization:** Sensitization possible through skin contact.

• **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

• **Carcinogenic categories**

• **IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to humans

Group 2A - Probably carcinogenic to humans

Group 2B - Possibly carcinogenic to humans

Group 3 - Not classifiable as to its carcinogenicity to humans

Group 4 - Probably not carcinogenic to humans

5989-27-5 d-limonene

3

• **NTP (National Toxicology Program)**

None of the ingredients are listed.

• **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

• **Toxicity**

• **Aquatic toxicity:**

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

5989-27-5 d-limonene

EC50 0.36 mg/l (daphnia) (OECD Test Guideline 202)

• **Persistence and degradability** No further relevant information available.

• **Behavior in environmental systems:**

• **Bioaccumulative potential** No further relevant information available.

• **Mobility in soil** No further relevant information available.

• **Ecotoxicological effects:**

• **Remark:** Very toxic for fish

• **Additional ecological information:**

• **General notes:**

Do not allow product to reach ground water, water course or sewage system.

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Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN2052

· **UN proper shipping name**

· **DOT**

· **ADR**

Dipentene

UN2052 Dipentene, ENVIRONMENTALLY
HAZARDOUS

· **IMDG**

· **IATA**

DIPENTENE, MARINE POLLUTANT

DIPENTENE

· **Transport hazard class(es)**

· **DOT**



· **Class**

· **Label**

3 Flammable liquids

3

· **ADR, IATA**



· **Class**

3 Flammable liquids

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Trade name: ArctiClean 1

· Label	3
· IMDG	
 	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· EMS Number:	F-E, S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: On cargo aircraft only:
· Remarks:	ERG Number: 127
· ADR	
· Excepted quantities (EQ)	Code: E1
· UN "Model Regulation":	UN2052, Dipentene, ENVIRONMENTALLY HAZARDOUS, 3, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

d-limonene

Poly(oxy-1,2-ethanediyl), alpha-(4- 4 – 8% nonylphenyl)-omega-hydroxy-, branched

· **Hazard statements**

Combustible liquid.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area.

Wear protective gloves / eye protection / face protection.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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

Call a poison center/doctor if you feel unwell.

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Trade name: ArctiClean 1

Wash contaminated clothing before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

• **State Right to Know**

CAS: 5989-27-5 RTECS: GW 6360000	d-limonene ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; Flam. Liq. 4, H227	≥85%
CAS: 127087-87-0 RTECS: WZ4750000	Poly(oxy-1,2-ethanediyl), alpha-(4- 4 – 8% nonylphenyl)-omega-hydroxy-, branched ⚠ Eye Dam. 1, H318; ⚠ STOT SE 3, H335	5-10%
CAS: 67784-80-9	Methyl ester, soybean oil ⚠ Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	2-12%

All ingredients are listed.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of preparation / last revision** 04/20/2015 / 1

• **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 4: Flammable liquids, Hazard Category 4

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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Trade name: ArctiClean 1*Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A**Skin Sens. 1: Sensitization - Skin, Hazard Category 1**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3 Aquatic**Acute 1: Hazardous to the aquatic environment – Acute Hazard, Category 1 Aquatic**Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1**· * **Data compared to the previous version altered.***

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1 Identification

- **Product identifier**
- **Trade name:** ArctiClean 2
- **Relevant identified uses of the substance or mixture and uses advised against**
Product description: Surface cleaner-purifier
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Arctic Silver Incorporated
9826 West Legacy Ave.
Visalia, CA 93291 USA
Voice: 559.740.0912 Fax: 559.740.0913
infoas@arcticsilver.com
www.arcticsilver.com
- **Emergency telephone number:**
Rocky Mountain Poison Control
Toll Free: 877-740-5015
Alternate: 303-739-1110

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard statements**

Causes skin and eye irritation.

- **Precautionary statements**

Wear protective gloves.

Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

- **Unknown acute toxicity:**

10 percent of the mixture consists of ingredient(s) of unknown toxicity.

- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

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Trade name: Arctic Clean 2

· **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

· **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/information on ingredients

CAS: 7732-18-5 RTECS: ZC 0110000	Water, de-ionized	94-97%
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· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous Components:**

CAS: 9016-45-9	Nonylphenoxypoly(ethyleneoxy)ethanol	1-3%
	⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	
CAS: 34590-94-8 RTECS: JM 1575000	(2-methoxymethylethoxy)propanol	1-3%
	Flam. Liq. 4, H227	

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Consult a doctor for complaints.

In case of unconsciousness, place patient securely on side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Immediately call a doctor.

· **Information for doctor:**

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

No further relevant information available.

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Trade name: Arctic Clean 2

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

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· Control parameters

· Components with occupational exposure limits:

34590-94-8 (2-methoxymethylethoxy)propanol

PEL Long-term value: 600 mg/m³, 100 ppm
Skin

REL Short-term value: 900 mg/m³, 150 ppm
Long-term value: 600 mg/m³, 100 ppm
Skin

TLV Short-term value: 909 mg/m³, 150 ppm
Long-term value: 606 mg/m³, 100 ppm
Skin

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· Eye protection:



Tightly sealed goggles

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Reviewed on 07/06/2015

Trade name: Arctic Clean 2

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Mild
Odor threshold:	Not determined.

· pH-value @ 20 °C (68 °F): 7.5

· Change in condition

Melting point/Melting range:	--
Boiling point/Boiling range:	> 34 °C (> 93 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 270 °C (518 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Product is not self-igniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	0.0 Vol %
Upper:	0.0 Vol %

· Vapor pressure @ 20 °C (68 °F): 23 hPa (17 mm Hg)

· Density @ 20 °C (68 °F): 1.01 g/cm³ (8.21 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic @ 20 °C (68 °F):	1 mPas
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	2-5 %
Water:	94-97 %
VOC content:	<2 %

Solids content: <1 %

· Other information: No further relevant information available.

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10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **NTP (National Toxicology Program)**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:**
- **9016-45-9 Nonylphenoxypoly(ethyleneoxy)ethanol**
- **EC50** 12.2 mg/kg (daphnia) (48 hours)
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish

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· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **DOT, ADR, ADN, IMDG, IATA**

Non-Regulated Material

· **UN proper shipping name**

Not Regulated for Transportation

· **DOT, ADR, ADN, IMDG, IATA**

Non-Regulated Material

· **Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**

· **Class**

Non-Regulated Material

· **Packing group**

· **DOT, ADR, IMDG, IATA**

Non-Regulated Material

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **UN "Model Regulation":**

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

- **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard statements**

Causes skin and eye irritation.

- **Precautionary statements**

Wear protective gloves.

Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.

• National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

• State Right to Know

CAS: 9016-45-9	Nonylphenoxypoly(ethyleneoxy)ethanol ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	1-3%
CAS: 34590-94-8 RTECS: JM 1575000	(2-methoxymethylethoxy)propanol Flam. Liq. 4, H227	1-3%
CAS: 7732-18-5 RTECS: ZC 0110000	Water, de-ionized	94-97%
All ingredients are listed.		

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of preparation / last revision** 04/16/2015 / 5

• Abbreviations and acronyms:

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
Flam. Liq. 4: Flammable liquids, Hazard Category 4
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

• *** Data compared to the previous version altered.**