

## Safety Data Sheet (SDS)

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

### \* 1 Identification

- **Product Identifier**
- **Trade Name:** New ethanol product
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** Denatured alcohol
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
EcoGreen Industries, LLC  
PO Box 1308  
Anderson, CA 96007  
Phone: (530) 378-4443  
Fax: (888) 612-3207
- **Emergency telephone number:** Chemtrec 1-800-424-9300 or outside USA 1-703-527-3887

### 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements:**

- **GHS label elements**

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

- **Hazard pictograms:**



GHS02 GHS07

- **Signal word:** Danger
- **Hazard-determining components of labeling:**  
Heptane
- **Hazard statements:**  
H225 Highly flammable liquid and vapor.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.



## Safety Data Sheet (SDS)

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

Issue date 07/22/2018

Reviewed on 07/22/2018

### Trade Name: New ethanol product

#### Precautionary statements:

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting/equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P264 Wash thoroughly after handling.  
P280 Wear protective gloves.  
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.  
P330 Rinse mouth.  
P302+P352 If on skin: Wash with plenty of water.  
P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep 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.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P370+P378 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Unknown acute toxicity:

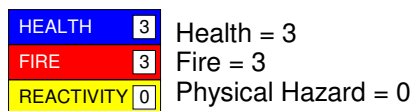
This value refers to knowledge of known, established toxicological or ecotoxicological values.  
0 % of the mixture consists of component(s) of unknown toxicity.

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

#### NFPA ratings (scale 0 - 4)



#### HMIS-ratings (scale 0 - 4)



#### Hazard(s) not otherwise classified (HNOC): None known

### \* 3 Composition/Information on Ingredients

#### Chemical characterization: Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

#### Dangerous Components:

CAS: 64-17-5	Ethanol	92-97%
RTECS: KQ 6300000	Flam. Liq. 2, H225; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	

(Contd. on page 3)



## Safety Data Sheet (SDS)

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

Issue date 07/22/2018

Reviewed on 07/22/2018

### Trade Name: New ethanol product

CAS: 142-82-5 RTECS: MI 7700000	Heptane ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	3-8%
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• **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

### \* 4 First-Aid Measures

• **Description of first aid measures**

• **After inhalation:**

Get exposed person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Contact a poison control center or doctor for treatment advice.

In case of unconsciousness place patient stably in side position for transportation.

WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive.

• **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.

If easy to do so, remove contact lenses if worn.

• **After swallowing:**

Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

• **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:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

• **For safety reasons unsuitable extinguishing agents:** Water with full jet

• **Special hazards arising from the substance or mixture:** No further relevant information available.

• **Advice for firefighters**

• **Special protective equipment for firefighters:**

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:**

Wear protective equipment. Keep unprotected persons away.

Use special care to avoid static electric charges/

Keep away from heat, sparks, open flames, hot surfaces - No smoking.

Avoid all eyes and skin contact and do not breathe vapor and mist.

• **Environmental precautions:**

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

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

(Contd. on page 4)



## Safety Data Sheet (SDS)

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

Issue date 07/22/2018

Reviewed on 07/22/2018

### Trade Name: New ethanol product

- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents  
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.
- **Protective Action Criteria for Chemicals**

• <b>PAC-1:</b>		
64-17-5	Ethanol	1,800 ppm
142-82-5	Heptane	500 ppm
• <b>PAC-2:</b>		
64-17-5	Ethanol	3300* ppm
142-82-5	Heptane	830 ppm
• <b>PAC-3:</b>		
64-17-5	Ethanol	15000* ppm
142-82-5	Heptane	5000* ppm

### \* 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**  
Avoid release into the environment.  
Open and handle receptacle with care.  
Avoid splashes or spray in enclosed areas.  
Avoid contact with skin, eyes and clothing  
Avoid breathing fumes.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool, dry place.  
Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **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.

(Contd. on page 5)

## Safety Data Sheet (SDS)

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

Issue date 07/22/2018

Reviewed on 07/22/2018

**Trade Name: New ethanol product**

• **Control parameters:**

• **Components with occupational exposure limits:**

<b>64-17-5 Ethanol</b>	
PEL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm
<b>142-82-5 Heptane</b>	
PEL	Long-term value: 2000 mg/m <sup>3</sup> , 500 ppm
REL	Long-term value: 350 mg/m <sup>3</sup> , 85 ppm Ceiling limit value: 1800* mg/m <sup>3</sup> , 440* ppm *15-min
TLV	Short-term value: 2050 mg/m <sup>3</sup> , 500 ppm Long-term value: 1640 mg/m <sup>3</sup> , 400 ppm

• **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:**



NIOSH/OSHA or EN approved respiratory protection is recommended for use in airborne concentrations exceeding exposure limits.

• **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.

(Contd. on page 6)

## Safety Data Sheet (SDS)

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

Reviewed on 07/22/2018

**Trade Name: New ethanol product**

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**



Protective work clothing

### \* 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:**

Liquid

**Color:**

Clear

· **Odour:**

Alcoholic

· **Odor threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

**Melting point/Melting range:**

-91 °C (-131.8 °F)

**Boiling point/Boiling range:**

>80 °C (>176 °F)

· **Flash point:**

<17 °C (<62.6 °F)

· **Flammability (solid, gaseous):**

Not applicable.

· **Ignition temperature:**

>246 °C (>474.8 °F)

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Product is not self-igniting.

· **Danger of explosion:**

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

**Lower:**

1 Vol %

**Upper:**

19 Vol %

· **Vapor pressure @ 20 °C (68 °F):**

>45 mmHg

· **Density @ 20 °C (68 °F):**

0.797-0.791 g/cm<sup>3</sup> (6.6009 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.

(Contd. on page 7)



Issue date 07/22/2018

## Safety Data Sheet (SDS)

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

Reviewed on 07/22/2018

**Trade Name: New ethanol product**

- **Viscosity:**
- Dynamic:** Not determined.
- Kinematic:** Not determined.
- **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:** Direct sunlight. Extremely high or low temperatures, open flame, ignition sources.
- **Incompatible materials:**  
Oxidizing agents, metals, halogens, isocyanates, inorganic salts, inorganic hydrides, organic materials, hydrazine, acid anhydrides, bases, acids.
- **Hazardous decomposition products:** Carbon oxides

### \* 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

64-17-5 Ethanol		
Oral	LD50	7,060 mg/kg (Rat) Remarks: Lungs, Thorax, or Respiration: Other changes. Carcinogenicity - Mouse - Oral Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease. Central nervous system depression, narcosis, Damage to the heart., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Heart - Irregularities - Based on Human Evidence Central nervous system - Breathing difficulties - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence
Inhalative	LC50/4 h	20,000 mg/l (Rat)
	LC50/96 hours	12,900-15,300 mg/l (Trout)
142-82-5 Heptane		
Inhalative	LC50/4 h	103,000 mg/l (Rat)

- **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

(Contd. on page 8)



Issue date 07/22/2018

## Safety Data Sheet (SDS)

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

Reviewed on 07/22/2018

**Trade Name: New ethanol product**

• **Carcinogenic categories:**

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

The IARC (the International Agency for Research on Cancer) concluded that ethanol found alcoholic beverages to be Group 1 - Carcinogenic to humans. All other instances it is not consider carcinogenic.

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

64-17-5 Ethanol	1
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• **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:**

**64-17-5 Ethanol**

EC50 34,900 mg/l (Daphnia)

**142-82-5 Heptane**

EC50 1.5 mg/l (Daphnia)

• **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:** Toxic for fish

• **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.

Poisonous for fish and plankton in water bodies.

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:**

Observe all federal, state and local environmental regulations when disposing of this material.

• **Uncleaned packaging**

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



## Safety Data Sheet (SDS)

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

Issue date 07/22/2018

Reviewed on 07/22/2018

**Trade Name: New ethanol product**

### \* 14 Transport Information

- **UN-Number:** UN1987
- **DOT, ADR/ADN, IMDG, IATA** UN1987
- **UN proper shipping name:** Alcohols, n.o.s. (Ethanol, Heptanes)
- **DOT** UN1987 Alcohols, n.o.s. (Ethanol, Heptanes)
- **ADR/ADN** ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), HEPTANES), MARINE POLLUTANT
- **IMDG** ALCOHOLS, N.O.S. (ETHANOL, HEPTANES)
- **IATA**
- **Transport hazard class(es):**
- **DOT**



- **Class:** 3 Flammable liquids
- **Label:** 3

• **ADR/ADN**



- **Class:** 3 (F1) Flammable liquids
- **Label:** 3

• **IMDG**



- **Class:** 3 Flammable liquids
- **Label:** 3

• **IATA**



- **Class:** 3 Flammable liquids
- **Label:** 3
- **Packing group:** II
- **DOT, ADR/ADN, IMDG, IATA** II
- **Environmental hazards:** Product contains environmentally hazardous substances: Heptane
- **Special marking (ADR/ADN):** Symbol (fish and tree)
- **Special precautions for user:** Warning: Flammable liquids
- **Danger code (Kemler):** 33

(Contd. on page 10)



Issue date 07/22/2018

## Safety Data Sheet (SDS)

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

Reviewed on 07/22/2018

### Trade Name: New ethanol product

- **EMS Number:** F-E,S-D
- **Stowage Category:** A
- **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: 5 L  
On cargo aircraft only: 60 L

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- **ADR/ADN**
- **Excepted quantities (EQ):** Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

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- **IMDG**
- **Limited quantities (LQ):** 1L
- **Excepted quantities (EQ):** Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml
- **UN "Model Regulation":** UN 1987 ALCOHOLS, N.O.S. (ETHANOL, HEPTANES), 3, II

### \*15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· **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 or exempt from listing.

· **California 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:**

64-17-5 Ethanol

· **New Jersey Right-to-Know List:**

All ingredients are listed.

· **New Jersey Special Hazardous Substance List:**

64-17-5	Ethanol	CA, MU, TE, F3
142-82-5	Heptane	F3

(Contd. on page 11)

## Safety Data Sheet (SDS)

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

Issue date 07/22/2018

Reviewed on 07/22/2018

### Trade Name: New ethanol product

<ul style="list-style-type: none"> <li>• <b>Pennsylvania Right-to-Know List:</b></li> </ul>		
All ingredients are listed.		
<ul style="list-style-type: none"> <li>• <b>Pennsylvania Special Hazardous Substance List:</b></li> </ul>		
None of the ingredients are listed.		
<ul style="list-style-type: none"> <li>• <b>Carcinogenic categories:</b></li> </ul>		
<ul style="list-style-type: none"> <li>• <b>EPA (Environmental Protection Agency):</b></li> </ul>		
142-82-5	Heptane	D
<ul style="list-style-type: none"> <li>• <b>TLV (Threshold Limit Value established by ACGIH):</b></li> </ul>		
64-17-5	Ethanol	A3
<ul style="list-style-type: none"> <li>• <b>NIOSH-Ca (National Institute for Occupational Safety and Health):</b></li> </ul>		
None of the ingredients are listed.		

- **GHS label elements**

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

- **Hazard pictograms:**



GHS02 GHS07

- **Signal word:** Danger

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

Heptane

- **Hazard statements:**

- H225 Highly flammable liquid and vapor.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

- **Precautionary statements:**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P280 Wear protective gloves.
- P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
- P330 Rinse mouth.
- P302+P352 If on skin: Wash with plenty of water.
- P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep 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.
- P332+P313 If skin irritation occurs: Get medical advice/attention.

(Contd. on page 12)



## Safety Data Sheet (SDS)

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

Issue date 07/22/2018

Reviewed on 07/22/2018

### Trade Name: New ethanol product

P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO <sub>2</sub> , powder or water spray.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

#### • **National regulations:**

None of the 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:** 07/22/2018 / 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  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health Administration  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Flam. Liq. 2: Flammable liquids – Category 2  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Asp. Tox. 1: Aspiration hazard – Category 1  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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

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