

Sirius Red / Fast Green Staining Kit

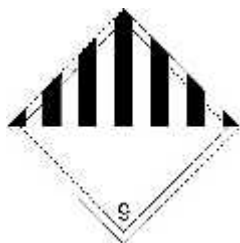
This document contains Safety Data Sheets for the each of the two components included in the Sirius Red / Fast Green Staining Kit. When shipped together as a kit, the following shipping declaration may be used:

UN Number: 3316

Proper Shipping Name: Chemical kit

Packing Group: II

Class: 9



Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 regulations

Printing date: April 12, 2017

Revision: April 12, 2017

1 Identification

- **Product identifier**
- **Trade name:** Dye Solution, Sirius Red/Fast Green Staining Kit
- **Product code:** 90461
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** For Research Use Only – Not Human or Therapeutic Use
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Chondrex, Inc.
16928 Woodinville-Redmond Rd NE Suite B-101
Woodinville, WA 98072
USA
425-702-6365
support@chondrex.com
- **Emergency telephone number:**
ChemTel LLC
800-255-3924 (North America)
(+1) 813-248-0585 (International)



2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified as hazardous according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** None.
- **Hazard pictograms:** None.
- **Signal word:** None.
- **Hazard statements:** None.
- **Precautionary statements:** None.
- **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures

Components:

88-89-1	2,4,6-trinitrophenol	1-2%
	 Expl. 1.1, H201	
	 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	

Additional information:

For the wording of the listed Hazard Statements refer to section 16.

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

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4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Wash with soap and water.
If skin irritation is experienced, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
Gastric or intestinal disorders when ingested.
- **Indication of any immediate medical attention and special treatment needed:**
Contains trinitrophenol / picric acid.
Do not administer preparations of the adrenalin-ephedrine-group.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** None.
- **Special hazards arising from the substance or mixture**
Product is explosive if allowed to dry out.
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
For large spills, wear protective clothing.
- **Environmental precautions**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Methods and material for containment and cleaning up**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Do not allow to dry out
Dispose of the collected material according to regulations.

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· 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:**

Open and handle receptacle with care.

Do not allow to dry out

· Information about protection against explosions and fires: Product is explosive if allowed to dry out.**· Conditions for safe storage, including any incompatibilities****· Storage****· Requirements to be met by storerooms and receptacles:**

Avoid storage near extreme heat, ignition sources or open flame.

· Information about storage in one common storage facility: Store away from foodstuffs.**· Specific end use(s)** No relevant information available.**8 Exposure controls/personal protection****· Control parameters****· Components with limit values that require monitoring at the workplace:****88-89-1 2,4,6-trinitrophenol**

PEL (USA)	Long-term value: 0.1 mg/m ³ Skin
REL (USA)	Short-term value: 0.3 mg/m ³ Long-term value: 0.1 mg/m ³ Skin
TLV (USA)	Long-term value: 0.1 mg/m ³
EL (Canada)	Long-term value: 0.1 mg/m ³ S
EV (Canada)	Short-term value: 0.3 mg/m ³ Long-term value: 0.1 mg/m ³ Skin
LMPE (Mexico)	Long-term value: 0.1 mg/m ³

· 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.

· Engineering controls: No relevant information available.**· Breathing equipment:** Not required under normal conditions of use.

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· Protection of hands:



Protective gloves

· Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment** No special requirements.
- **Risk management measures** No special requirements.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Liquid

Color: Green

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Melting point/Melting range:** Not determined.

· **Boiling point/Boiling range:** ~100 °C (~212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

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

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· **Oxidizing properties:** Non-oxidizing.

· **Vapor pressure:** Not determined.

· Density:

Relative density: Not determined.

Vapor density: Not determined.

Evaporation rate: Not determined.

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- **Solubility in / Miscibility with Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Other information** No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
Do not allow to dry out
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Product is explosive if allowed to dry out.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products** Possible in traces.

11 Toxicological information

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

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

ATE (Acute Toxicity Estimates)

Oral	LD50	>10000 mg/kg
Dermal	LD50	>10000 mg/kg
Inhalative	LC50/4h	>100 mg/l

- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.

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

None of the ingredients are listed.

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

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

None of the ingredients are listed.

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- **Probable route(s) of exposure:**
 - Ingestion.
 - Inhalation.
 - Eye contact.
 - Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):** From product as supplied: None.
- **Repeated dose toxicity:** No relevant information available.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**

Acidify product to pH 2 by the addition of 2 mL of concentrated hydrochloric acid. Add granular tin (30 mesh, 1 g) and allow the mixture to stand at room temperature. The solution will darken gradually as the picric acid is reduced. After 14 days, no picric acid remains. This method can be used to dispose of 45 gallon drums (180 L) of dilute solutions of picric acid.

To determine when the picric acid is completely reacted, samples of the solution are analyzed by thin-layer chromatography on silica gel, eluting with methanol:toluene:glacial acetic acid, 8:45:4. Picric acid has an R_f value of about 0.3, and the bright yellow spot is easily visible. The detection limit can be increased by developing the plate in iodine vapor.

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The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- **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, IMDG, IATA | Not regulated. |
| · UN proper shipping name | |
| · DOT, ADR, IMDG, IATA | Not regulated. |
| · Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Not regulated. |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Not regulated. |
| · Environmental hazards | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

88-89-1 2,4,6-trinitrophenol

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

All ingredients are listed.

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• **Proposition 65 (California)**

• **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.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

• **Canadian Domestic Substances List (DSL):**

All ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Date of preparation / last revision** April 12, 2017 / -

• **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

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

OSHA: Occupational Safety & Health

Expl. 1.1: Explosives – Division 1.1

Acute Tox. 3: Acute toxicity – Category 3

• **Sources**

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Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

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acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 regulations


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Revision: April 12, 2017

1 Identification

- **Product identifier**
- **Trade name:** Extraction Buffer, Sirius Red/Fast Green Staining Kit
- **Product code:** 90462
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** For Research Use Only – Not Human or Therapeutic Use
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Chondrex, Inc.
16928 Woodinville-Redmond Rd NE Suite B-101
Woodinville, WA 98072
USA
425-702-6365
support@chondrex.com
- **Emergency telephone number:**
ChemTel LLC
800-255-3924 (North America)
(+1) 813-248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.
Eye Irrit. 2B H320 Causes eye irritation.
STOT SE 1 H370 Causes damage to the central nervous system and optic nerve.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS02 GHS06 GHS08
- **Signal word:** Danger
- **Hazard statements:**
H225 Highly flammable liquid and vapor.
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H320 Causes eye irritation.
H370 Causes damage to the central nervous system and optic nerve.
- **Precautionary statements:**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.

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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.
P260	Do not breathe mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
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.
P312	Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
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.

• **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

• **Chemical characterization: Mixtures**

• **Components:**

67-56-1	methanol	 Flam. Liq. 2, H225  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331  STOT SE 1, H370  Eye Irrit. 2B, H320	40-60%
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• **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

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:**

Supply fresh air or oxygen; call for doctor.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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

· **After skin contact:**

Immediately remove any clothing soiled by the product.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

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

Headache

Dizziness

Breathing difficulty

Coughing

Blindness

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

Disorientation

Unconsciousness

· **Danger:**

Danger of impaired breathing.

Danger of convulsion.

Danger of disturbed cardiac rhythm.

Vapors have narcotic effect.

Danger through skin absorption.

Causes damage to the central nervous system and optic nerve.

Toxic if swallowed, in contact with skin or if inhaled.

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

Contains methanol. Consult literature for specific antidotes.

Medical supervision for at least 48 hours.

Monitor circulation, possible shock treatment.

If necessary oxygen respiration treatment.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

Alcohol resistant foam

Carbon dioxide

Fire-extinguishing powder

Water fog / haze

Water spray

· **For safety reasons unsuitable extinguishing agents:** None.

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

Highly flammable liquid and vapor.

Formation of toxic gases is possible during heating or in case of fire.

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- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:**
 - Eliminate all ignition sources if safe to do so.
 - Cool endangered containers with water fog.
 - Use large quantities of foam as it is partially destroyed by the product.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Use respiratory protective device against the effects of fumes/dust/aerosol.
 - Wear protective equipment. Keep unprotected persons away.
 - Ensure adequate ventilation.
 - Keep away from ignition sources.
 - Protect from heat.
 - Isolate area and prevent access.
- **Environmental precautions**
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Methods and material for containment and cleaning up**
 - Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
 - Send for recovery or disposal in suitable receptacles.
- **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:**
 - Avoid splashes or spray in enclosed areas.
 - Avoid breathing mist, vapors, or spray.
 - Use only in well ventilated areas.
 - Avoid contact with the eyes and skin.
 - Keep out of reach of children.
- **Information about protection against explosions and fires:**
 - Highly flammable liquid and vapor.
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
 - Keep respiratory protective device available.
 - Flammable gas-air mixtures may be formed in empty containers/receptacles.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
 - Store in a cool location.
 - Provide ventilation for receptacles.
 - Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from oxidizing agents.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

67-56-1 methanol

PEL (USA)	Long-term value: 260 mg/m ³ , 200 ppm
REL (USA)	Short-term value: 325 mg/m ³ , 250 ppm
	Long-term value: 260 mg/m ³ , 200 ppm
	Skin
TLV (USA)	Short-term value: 328 mg/m ³ , 250 ppm
	Long-term value: 262 mg/m ³ , 200 ppm
	Skin; BEI
EL (Canada)	Short-term value: 250 ppm
	Long-term value: 200 ppm
	Skin
EV (Canada)	Short-term value: 325 mg/m ³ , 250 ppm
	Long-term value: 260 mg/m ³ , 200 ppm
	Skin
LMPE (Mexico)	Short-term value: 250 ppm
	Long-term value: 200 ppm
	PIEL, IBE

- **Ingredients with biological limit values:**

67-56-1 methanol

BEI (USA)	15 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Methanol (background, nonspecific)

- **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.

(Cont'd. on page 6)

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Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

• **Engineering controls:** No relevant information available.

• **Breathing equipment:**

Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

• **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

• **Eye protection:**



Safety glasses

• **Body protection:** Protective work clothing

• **Limitation and supervision of exposure into the environment**

No relevant information available.

• **Risk management measures** See Section 7 for additional information.

9 Physical and chemical properties

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

• **Appearance:**

Form: Liquid

Color: Clear

• **Odor:** Alcohol-like

• **Odor threshold:** Not determined.

• **pH-value:** Not determined.

• **Melting point/Melting range:** Not determined.

• **Boiling point/Boiling range:** >35 °C (>95 °F)

• **Flash point:** <23 °C (<73 °F)

• **Flammability (solid, gaseous):** Not applicable.

• **Auto-ignition temperature:** Not determined.

• **Decomposition temperature:** Not determined.

• **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

• **Explosion limits**

Lower: Not determined.

Upper: Not determined.

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- | | |
|---|------------------------------------|
| · Oxidizing properties: | Not determined. |
| · Vapor pressure: | Not determined. |
| · Density: | |
| Relative density: | <1 |
| Vapor density: | Not determined. |
| Evaporation rate: | Not determined. |
| · Solubility in / Miscibility with Water: | Soluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Other information | No relevant information available. |

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
Keep away from heat and direct sunlight.
Avoid open flame, ignition sources, contact with incompatible substances.
- **Possibility of hazardous reactions**
Highly flammable liquid and vapor.
Reacts violently with oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
Used empty containers may contain product gases which form explosive mixtures with air.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** Oxidizing agents
- **Hazardous decomposition products** Carbon monoxide and carbon dioxide

11 Toxicological information

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

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

ATE (Acute Toxicity Estimates)

Oral	LD50	150-250 mg/kg
Irritation of eyes	LD50	500-800 mg/kg
Inhalative	LC50/4h	4-8 mg/l

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- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.

IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

NTP (National Toxicology Program):

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

Probable route(s) of exposure:

Ingestion.
Inhalation.
Eye contact.
Skin contact.

Acute effects (acute toxicity, irritation and corrosivity):

Toxic if swallowed, in contact with skin or if inhaled.
Causes eye irritation.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Causes damage to the central nervous system and optic nerve.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** Biodegradable.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

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13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- **Uncleaned packagings**

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

14 Transport information

- **UN-Number**

- DOT, ADR, IMDG, IATA

UN1230

- **UN proper shipping name**

- DOT, IATA

Methanol, solution

- ADR, IMDG

METHANOL, SOLUTION

- **Transport hazard class(es)**

- DOT



- Class

3 Flammable liquids

- Label

3

- ADR



- Class

3 (FT1) Flammable liquids

- Label

3+6.1

- IMDG



- Class

3 Flammable liquids

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· Label	3/6.1
· IATA	
 	
· Class	3 Flammable liquids
· Label	3 (6.1)
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	336
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
	Excepted Quantities (EQ) EQ Code: E2 Maximum net quantity per inner packaging: 30 mL Maximum net quantity per outer packaging: 500 mL
· DOT	
	Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.
· ADR	
	Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.
· IMDG	
	Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.

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· IATA



Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L each / 1 L net.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

67-56-1 methanol

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· Proposition 65 (California)

· 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:

67-56-1 methanol

· Carcinogenic categories

· EPA (Environmental Protection Agency):

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

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

None of the ingredients are listed.

· Canadian Domestic Substances List (DSL):

All ingredients are listed.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Date of preparation / last revision** April 12, 2017 / -

• **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

• **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

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Safety Data Sheets, Individual Manufacturers

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