TERMIX® 5910

Version	Revision Date:	SDS Number:	Date of last issue: 09/29/2016
1.2	09/26/2017	400001004144	Date of first issue: 10/21/2015

SECTION 1. IDENTIFICATION

Product name : TERMIX® 5910

Manufacturer or supplier's details

Company name of supplier : Huntsman International LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America (USA)
Telephone : TechInfo: (281) 719-7780

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Agrochemical

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Dermal) : Category 4

Serious eye damage : Category 1

Carcinogenicity : Category 2

Acute aquatic toxicity : Category 2

Chronic aquatic toxicity : Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H312 Harmful in contact with skin.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H401 Toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read

and understood.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Formaldehyde, polymer with methyloxirane and 4-nonylphenol	37523-33-4	30 - 60
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	13 - 30
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	7 - 13
propylene carbonate	108-32-7	7 - 13
Solvent naphtha (petroleum), light arom.	64742-95-6	7 - 13
Alcohols, C11-14-iso-, C13-rich	68526-86-3	3 - 7
naphthalene	91-20-3	0.1 - 1

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact	:	Take victim immediately to hospital. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known
Specific extinguishing methods	:	No data is available on the product itself.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. In case of inadequate ventilation wear respiratory protection.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
naphthalene	91-20-3	TWA	10 ppm 50 mg/m3	OSHA Z-1
		TWA	10 ppm	ACGIH

Personal protective equipment

Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hand protection
Remarks : Impervious gloves
The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	amber
Odour	:	hydrocarbon-like
Odour Threshold	:	No data is available on the product itself.
pH	:	5.8
Melting point	:	-28.89 °C
Boiling point	:	88 °C
Flash point	:	> 148 °C Method: closed cup
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.

Flammability (liquids)	:	No data is available on the product itself.
Upper explosion limit / Upper flammability limit	:	No data is available on the product itself.
Lower explosion limit / Lower flammability limit	:	No data is available on the product itself.
Vapour pressure	:	0.214613 hPa (40 °C) 0.142631 hPa (35 °C) 0.95976 hPa (60 °C)
Relative vapour density	:	No data is available on the product itself.
Relative density	:	0.99
Density	:	No data is available on the product itself.
Solubility(ies)		
Water solubility	:	No data is available on the product itself.
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.
Thermal decomposition	:	No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.
Viscosity		
Viscosity, kinematic	:	78 mm2/s (40 °C)
Explosive properties	:	No data is available on the product itself.
Oxidizing properties	:	No data is available on the product itself.
Particle size	:	No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Hazardous decomposition products	:	Carbon dioxide (CO_2) Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product : LD50 (Rat): 2,000 - 5,000 mg/kg

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Acute inhalation toxicity : LC50 (Rat): > 1600 mg/m3
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Alcohols, C11-14-iso-, C13-rich**:**
Acute inhalation toxicity : LC50 (Rat, male and female): > 12.2 mg/l
Exposure time: 6 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

naphthalene**:**
Acute inhalation toxicity : LC50 (Rat, male and female): > 0.4 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity - Product : LD50 (Rabbit): 1,000 - 2,000 mg/kg

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation

Components:

Formaldehyde, polymer with methyloxirane and 4-nonylphenol**:**
Assessment: Mild skin irritant
Result: Mild skin irritation

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: Normally reversible injuries

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Species: Rat
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: Normally reversible injuries
GLP: yes

propylene carbonate**:**
Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation

Alcohols, C11-14-iso-, C13-rich**:**
Species: Rabbit
Method: OECD Test Guideline 404
Result: Mild skin irritant

naphthalene**:**
Species: Rabbit
Method: OECD Test Guideline 404
Remarks: slight irritation

Serious eye damage/eye irritation

Components:

Formaldehyde, polymer with methyloxirane and 4-nonylphenol**:**
Result: Eye irritation
Assessment: Irritating to eyes.

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Species: Rabbit
Result: Corrosive
Method: OECD Test Guideline 405

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Species: Rabbit
Result: Irreversible effects on the eye
Assessment: Severe eye irritation
Method: OECD Test Guideline 405

propylene carbonate**:**
Species: Rabbit
Result: Eye irritation
Assessment: Irritating to eyes.
Method: OPPTS 870.2400

Alcohols, C11-14-iso-, C13-rich**:**
Species: Rabbit
Result: Irritation to eyes, reversing within 7 days
Assessment: No eye irritation
Method: OECD Test Guideline 405

naphthalene**:**
Species: Rabbit
Method: OECD Test Guideline 405
Remarks: slight irritation

Respiratory or skin sensitisation

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Exposure routes: Skin
Species: Humans
Result: Does not cause skin sensitisation.

Exposure routes: Skin
Species: Guinea pig
Method: Directive 67/548/EEC, Annex V, B.6.
Result: Does not cause skin sensitisation.

propylene carbonate**:**
Exposure routes: Skin
Species: Humans
Result: Does not cause skin sensitisation.

Solvent naphtha (petroleum), light arom.**:**
Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Alcohols, C11-14-iso-, C13-rich**:**
Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

naphthalene**:**
Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Assessment: No data available

Germ cell mutagenicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Genotoxicity in vitro : Concentration: .5 - 100 ug/plate
Metabolic activation: with and without metabolic activation
Result: negative

Concentration: .025 - 5 µg/L
Metabolic activation: with and without metabolic activation
Result: negative

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Genotoxicity in vitro : Concentration: 5 - 50 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Concentration: .5 - 100 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Concentration: .0001 - .1 µg/L
Metabolic activation: Metabolic activation
Method: OECD Test Guideline 482
Result: negative

Concentration: 2000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

propylene carbonate**:**

Genotoxicity in vitro : Concentration: 5000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Metabolic activation: negative
Method: OECD Test Guideline 482
Result: negative

Solvent naphtha (petroleum), light arom.**:**

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 479
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Alcohols, C11-14-iso-, C13-rich**:**

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476

Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

naphthalene:
Genotoxicity in vitro : Concentration: 30 µg/L
Metabolic activation: Metabolic activation
Method: OECD Test Guideline 473
Result: positive

Concentration: 40 µg/L
Metabolic activation: negative
Method: OECD Test Guideline 476
Result: negative

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Genotoxicity in vivo : Cell type: Germ + somatic
Application Route: Intraperitoneal injection
Dose: 50 mg/kg
Result: negative

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Genotoxicity in vivo : Application Route: Intraperitoneal injection
Dose: 100 mg/kg
Method: OECD Test Guideline 474
Result: negative

propylene carbonate:
Genotoxicity in vivo : Application Route: Intraperitoneal injection
Dose: 1666 mg/kg
Method: OECD Test Guideline 474
Result: negative

Solvent naphtha (petroleum), light arom.:
Genotoxicity in vivo : Application Route: Inhalation
Exposure time: 5 d
Method: OECD Test Guideline 475
Result: negative

naphthalene:
Genotoxicity in vivo : Cell type: Somatic
Application Route: Oral
Exposure time: 1 d
Dose: 1600 mg/kg
Method: OECD Test Guideline 486
Result: negative

Application Route: Intraperitoneal injection
Dose: 5000 mg/kg
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Species: Rat, (male and female)
Application Route: Oral
Exposure time: 24 month(s)
Dose: 500 mg/kg
Result: negative

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Species: Rat, (male and female)
Application Route: Oral
Exposure time: 24 month(s)
Dose: 500 mg/kg
Result: negative

propylene carbonate**:**
Species: Mouse, (male)
Application Route: Dermal
Exposure time: 104 weeks
Dose: 1500 - 2000 mg/kg
Frequency of Treatment: 2 daily
Method: OECD Test Guideline 451
Result: negative

naphthalene**:**
Species: Rat, (male and female)
Application Route: Inhalation
Exposure time: 105 weeks
Dose: 10 ppm
Frequency of Treatment: 6 daily
Result: positive
Target Organs: Nasal inner lining

Components:

naphthalene**:**

Carcinogenicity - Assessment	: Suspected human carcinogens
IARC	Group 2B: Possibly carcinogenic to humans naphthalene Group 2B: Possibly carcinogenic to humans
ACGIH	Confirmed animal carcinogen with unknown relevance to humans Solvent naphtha (petroleum), light arom. naphthalene
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reasonably anticipated to be a human carcinogen

naphthalene

Reproductive toxicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Effects on fertility : Species: Rat, male and female
Application Route: Dermal
Target Organs: Heart, Liver, Lungs, Kidney, Testes
Method: OECD Test Guideline 416
Result: Animal testing did not show any effects on fertility.

Species: Rat, male and female
Application Route: Oral
Target Organs: Liver
Result: Animal testing did not show any effects on fertility.

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Species: Rat, male and female
Application Route: Oral
Target Organs: Liver
Result: negative

propylene carbonate**:**

Species: Rat
Application Route: Oral
Method: OECD Test Guideline 414
Result: negative

Solvent naphtha (petroleum), light arom.**:**

Species: Rat, male and female
Application Route: Inhalation
Result: No effects on fertility and early embryonic development were detected.

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Effects on foetal development : Species: Rat, male and female
Application Route: Dermal
Result: No teratogenic effects

Species: Rat
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level: > 250 mg/kg body weight
Result: No teratogenic effects

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Species: Rat, male and female
Application Route: Dermal
Result: No teratogenic effects

propylene carbonate**:**

Species: Rat, male and female
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level: 1,000 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects

Solvent naphtha (petroleum), light arom.**:**

Species: Rat, female
Application Route: Inhalation
General Toxicity Maternal: No observed adverse effect level: 100 ppm
Result: No teratogenic effects

Alcohols, C11-14-iso-, C13-rich**:**

Species: Rat, female
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level: 500 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects

Species: Rat, female
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level: ca. 1,000 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects

naphthalene**:**

Species: Rat, female
Application Route: Oral
General Toxicity Maternal: Lowest observed adverse effect level: < 50 mg/kg body weight
Method: OECD Test Guideline 414
Result: Teratogenic effects

Reproductive toxicity - Assessment : No data available

STOT - single exposure

Components:

Solvent naphtha (petroleum), light arom.**:**
Exposure routes: inhalation (vapour)
Target Organs: Respiratory Tract, Narcotic effects
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Species: Rat, male and female
NOAEL: 519 mg/kg/d
Application Route: Ingestion
Exposure time: 504 h
Method: Subacute toxicity

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Species: Rat, male and female
NOAEL: 110 mg/kg/d
Application Route: Ingestion
Exposure time: 2,160 h
Method: Subchronic toxicity

propylene carbonate**:**
Species: Rat, male and female
NOEC: > 5000 mg/kg, 100 mg/m3
Application Route: Ingestion
Test atmosphere: dust/mist
Exposure time: 2,232 h
Number of exposures: 6 h
Method: OECD Test Guideline 413

Solvent naphtha (petroleum), light arom.**:**
Species: Rat
LOEC: 353 - 1537 ppm
Test atmosphere: vapour
Exposure time: 13 Weeks

Alcohols, C11-14-iso-, C13-rich**:**
Species: Rat, male
NOAEL: 130 mg/kg
Application Route: Ingestion
Exposure time: 336 h
Number of exposures: 7 d
Method: Subacute toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

Components:

Solvent naphtha (petroleum), light arom.**:**
May be fatal if swallowed and enters airways.

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1.3 mg/l
Exposure time: 96 h
Test substance: Fresh water
Method: OECD Test Guideline 203

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.96 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 203

propylene carbonate**:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 1,000 mg/l
Exposure time: 96 h
Test Type: semi-static test

Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.1.
Remarks: No-observed-effect level

Solvent naphtha (petroleum), light arom.:
Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 9.22 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Alcohols, C11-14-iso-, C13-rich:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.42 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 203

naphthalene:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.6 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water
Method: OECD Test Guideline 203

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.9 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.46 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

propylene carbonate:
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202
Remarks: No-observed-effect level

Solvent naphtha (petroleum), light arom.:
Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3.2 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Alcohols, C11-14-iso-, C13-rich:
Toxicity to daphnia and other aquatic invertebrates : EL50: 0.71 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water

Method: Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids

naphthalene**:**
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.16 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to algae : ErC50 (Algae general): > 0.1 - 1 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 0.282 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

propylene carbonate**:**
Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): > 929 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

ErC50 (Desmodesmus subspicatus (green algae)): > 900 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

Solvent naphtha (petroleum), light arom.**:**
Toxicity to algae : ErL50 (Selenastrum capricornutum (green algae)): 7.9 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Alcohols, C11-14-iso-, C13-rich**:**
Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 3.2 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
M-Factor (Acute aquatic toxicity) : 1

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
M-Factor (Acute aquatic : 1

toxicity)
Alcohols, C11-14-iso-, C13-rich**:**
M-Factor (Acute aquatic toxicity) : 1

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.88 mg/l
Exposure time: 28 d
Test substance: Fresh water
Method: OECD Test Guideline 210

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to fish (Chronic toxicity) : EC20 (Pimephales promelas (fathead minnow)): 0.95 mg/l
Exposure time: 30 d
Test substance: Fresh water

Alcohols, C11-14-iso-, C13-rich**:**
Toxicity to fish (Chronic toxicity) : NOEC: Calculation method 0.047 mg/l
Exposure time: 30 d
Test substance: Fresh water

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 0.355 mg/l
Exposure time: 21 d
Test substance: Fresh water
Method: OECD Test Guideline 211

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC20 (Daphnia magna (Water flea)): 0.5 mg/l
Exposure time: 21 d
Test substance: Fresh water

Alcohols, C11-14-iso-, C13-rich**:**
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): Calculation method 0.058 mg/l
Exposure time: 16 d
Test substance: Fresh water

M-Factor (Chronic aquatic toxicity) : No data available

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to microorganisms : EC50 (Pseudomonas putida): > 10 g/l
Exposure time: 16.9 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38 412 Part 8

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**

Toxicity to microorganisms : EC50 (activated sludge): 140 mg/l
Exposure time: 3 h
Test Type: static test
Test substance: Fresh water

propylene carbonate**:**
Toxicity to microorganisms : EC50 (Pseudomonas putida): 25,619 mg/l
Exposure time: 16 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38 412 Part 8

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 336 h

Alcohols, C11-14-iso-, C13-rich**:**
Toxicity to soil dwelling organisms : EC50: 128.32 mg/kg
Exposure time: 336 h

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Plant toxicity : NOEC: >= 100 mg/kg
Exposure time: 456 h
Test substance: Natural
Method: Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Plant toxicity : NOEC: >= 100 mg/kg
Exposure time: 408 h
Method: Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test

Sediment toxicity : No data available

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Toxicity to terrestrial organisms : EC50: 360 mg/kg
Exposure time: 72 h
Test substance: Natural

Ecotoxicology Assessment

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Acute aquatic toxicity : Toxic to aquatic life.

Alcohols, C11-14-iso-, C13-rich**:**
Acute aquatic toxicity : Very toxic to aquatic life.

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Solvent naphtha (petroleum), light arom.**:**
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Alcohols, C11-14-iso-, C13-rich**:**
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Persistence and degradability

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Biodegradability : Inoculum: Domestic sewage
Result: Readily biodegradable.
Biodegradation: 73 %
Exposure time: 28 d

propylene carbonate**:**
Biodegradability : Concentration: 20 mg/l
Result: Readily biodegradable.
Biodegradation: 83.5 %
Exposure time: 29 d
Method: OECD Test Guideline 301B

Solvent naphtha (petroleum), light arom.**:**
Biodegradability : Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d

Alcohols, C11-14-iso-, C13-rich**:**
Biodegradability : Inoculum: activated sludge
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 60.6 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

naphthalene**:**
Biodegradability : Inoculum: activated sludge
Result: Inherently biodegradable.
Biodegradation: 2 %

Exposure time: 28 d
Method: Inherent Biodegradability: Modified MITI Test (II)

Components:

Solvent naphtha (petroleum), light arom.:
Biochemical Oxygen Demand (BOD) : 190 mg/l

Components:

Solvent naphtha (petroleum), light arom.:
Chemical Oxygen Demand (COD) : 440 mg/l
BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Components:

Alcohols, C11-14-iso-, C13-rich:
Stability in water : Method: No information available.

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 12.7
Exposure time: 3 d
Test substance: Fresh water
Method: flow-through test
Remarks: Does not bioaccumulate.

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 310
Exposure time: 2 h
Test substance: Fresh water
Method: Bioaccumulation: Static Fish Test
Remarks: Does not bioaccumulate.

Alcohols, C11-14-iso-, C13-rich:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 45
Exposure time: 10 d
Test substance: Fresh water
Method: flow-through test

Species: Oncorhynchus mykiss (rainbow trout)
Exposure time: 14 d
Test substance: Fresh water
Method: semi-static test

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Partition coefficient: n-octanol/water : log Pow: 4.08 - 4.98

propylene carbonate**:**
Partition coefficient: n-octanol/water : log Pow: -0.5 (20 °C)

Alcohols, C11-14-iso-, C13-rich**:**
Partition coefficient: n-octanol/water : log Pow: 5.4 (25 °C)
pH: 7
Method: OECD Test Guideline 117

naphthalene**:**
Partition coefficient: n-octanol/water : log Pow: 3.4 (25 °C)
pH: 7.5
Method: OECD Test Guideline 107

Mobility in soil

Mobility : No data available

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated**:**
Distribution among environmental compartments : Koc: 13417.89 - 34437.29
Alcohols, C11-14-iso-, C13-rich**:**
Distribution among environmental compartments : Koc: 505.8
Stability in soil : No data available

Other adverse effects

Environmental fate and pathways : No data available

Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound : No data available

halogens (AOX)

Hazardous to the ozone layer

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information - Product	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Global warming potential (GWP)	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA
Not regulated as dangerous goods

IMDG
Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

DOT Classification

Not regulated as dangerous goods

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
naphthalene	91-20-3	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Carcinogenicity

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

naphthalene 91-20-3 0.794 %

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause cancer.
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
WARNING: This product can expose you to chemicals including naphthalene, ethylene oxide, methyloxirane, which is/are known to the State of California to cause cancer, and ethylene oxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

CH INV	:	The formulation contains substances listed on the Swiss Inventory, On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
ENCS	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
TCSI	:	Not in compliance with the inventory
TSCA	:	On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

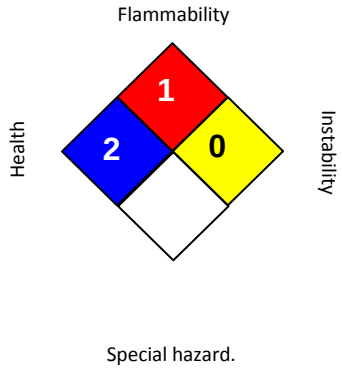
TSCA - 5(a) Significant New Use Rule List of Chemicals
No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No substances are subject to TSCA 12(b) export notification requirements.

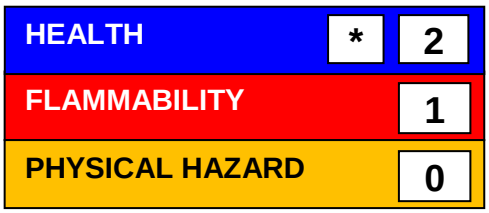
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Revision Date	:	09/26/2017
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.