Safety Data Sheet
1400 ih1

1. Identification

Product name	:	1400 ih1
Material uses	:	Petrochemical industry: Fuel additive.
Internal code	:	IFS0196
System code	:	IFS0196
Date of issue/Date of revision	:	6/15/2021
Date of previous issue	:	9/12/2018
Version	:	1.01
Supplier	:	Innospec Canada Limited 1500, 850- 2nd Street S.W. Calgary, Alberta T2P 0R8
Information contact	:	1-800-441-9547
e-mail address of person responsible for this SDS	:	sdsinfo@innospecinc.com
NON-emergency enquiries	:	corporatecommunications@innospecinc.com

Emergency telephone number

In USA, Canada and North America, 24 hour / 7 day emergency information for our product is provided by the CHEMTREC® Emergency Call Center based in the USA

Country information	:	**Emergency telephone number**
USA, Canada, Puerto Rico, Virgin Islands	:	+1 800 424 9300
In case of difficulties, or for ships at sea	:	+1 703 527 3887

In Europe, Middle East, Africa, Asia Pacific and South America 24 hour / 7 day emergency response for our products is provided by the NCEC CARECHEM 24 global network

The main regional centres are listed here in Section 1.
Other local contact numbers for specific language support in Asia Pacific are listed in Section 16

Country information	:	**Emergency telephone number**	**Location**
South America (all countries)	:	+1 215 207 0061	Philadelphia USA
Brazil	:	+55 11 3197 5891	Brazil
Mexico	:	+52 555 004 8763	Mexico
Europe (all countries) Middle East, Africa (French, Portuguese, English)	:	+44 (0) 1235 239 670	London, UK
Middle East, Africa (Arabic, French, English , Portuguese, Farsi)	:	+44 (0) 1235 239 671	London, UK
Asia Pacific (all countries except China)	:	+65 3158 1074	Singapore

1. Identification

China : 400 120 6011 Beijing China

Section 2. Hazards identification

Classification of the substance or mixture :

FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 12.9%
Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 15.6%
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 19.7%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :

H226 - Flammable liquid and vapor.
H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H351 - Suspected of causing cancer.
H361 - Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention :

P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash thoroughly after handling.

Response :

P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Section 2. Hazards identification

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Decomposes violently when heated above 100°C.

Hazards not otherwise classified : None known.

Target organs : Contains material which causes damage to the following organs: blood, kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.
Contains material which may cause damage to the following organs: lungs, the nervous system, cardiovascular system, ears.

See toxicological information (Section 11)

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
2-ethylhexyl nitrate	30 - 60	27247-96-7
Xylene	15 - 30	1330-20-7
ethylbenzene	5 - 9.99	100-41-4
2-(2-methoxyethoxy)ethanol	1 - 4.99	111-77-3
Solvent naphtha (petroleum), light arom.	1 - 4.99	64742-95-6
1,2,4-trimethylbenzene	1 - 4.99	95-63-6
naphthalene	0.1 - <1	91-20-3
2-ethylhexanoic acid	0.1 - <1	149-57-5
cumene	0.1 - <1	98-82-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Section 4. First aid measures

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Remove dentures if any. Wash out mouth with water. Stop if the exposed person feels sick as vomiting may be dangerous. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled.

Skin contact : Harmful in contact with skin. Causes skin irritation.

Ingestion : Harmful if swallowed. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. Decomposes violently when heated above 100°C.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance. Cool containing vessels with flooding quantities of water until well after fire is out.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remarks : Decomposes violently when heated above 100°C.

Flash point : Closed cup: 42.222°C (108°F)

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Remarks : Consult: Innospec RS PB 09-50 / RS PB 09-51 / ATC 2EHN Best Practices Manual 2016 (Document 79) Keep away from heat.

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Storage Temperature: Ambient.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
2-ethylhexyl nitrate	**Innospec Inc. (Canada, 1/2013). Absorbed through skin.** TWA: 1 ppm 8 hours. STEL: 1 ppm 15 minutes.
xylene	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 100 ppm, 0 times per shift, 8 hours. 15 min OEL: 651 mg/m³, 0 times per shift, 15 minutes. 15 min OEL: 150 ppm, 0 times per shift, 15 minutes. 8 hrs OEL: 434 mg/m³, 0 times per shift, 8 hours. **CA British Columbia Provincial (Canada, 1/2020).** TWA: 100 ppm, 0 times per shift, 8 hours. STEL: 150 ppm, 0 times per shift, 15 minutes. **CA Quebec Provincial (Canada, 7/2019).** TWAEV: 100 ppm, 0 times per shift, 8 hours. TWAEV: 434 mg/m³, 0 times per shift, 8 hours. STEV: 150 ppm, 0 times per shift, 15 minutes. STEV: 651 mg/m³, 0 times per shift, 15 minutes. **CA Ontario Provincial (Canada, 6/2019).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
naphthalene	**CA Alberta Provincial (Canada, 6/2018). Absorbed through skin.** 15 min OEL: 15 ppm, 0 times per shift, 15 minutes. 8 hrs OEL: 10 ppm, 0 times per shift, 8 hours. 8 hrs OEL: 52 mg/m³, 0 times per shift, 8 hours. 15 min OEL: 79 mg/m³, 0 times per shift, 15 minutes. **CA British Columbia Provincial (Canada, 1/2020). Absorbed through skin.** TWA: 10 ppm, 0 times per shift, 8 hours. **CA Ontario Provincial (Canada, 6/2019). Absorbed through skin.** TWA: 10 ppm, 0 times per shift, 8 hours. **CA Quebec Provincial (Canada, 7/2019).** TWAEV: 10 ppm, 0 times per shift, 8 hours. TWAEV: 52 mg/m³, 0 times per shift, 8 hours. STEV: 15 ppm, 0 times per shift, 15 minutes. STEV: 79 mg/m³, 0 times per shift, 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.** STEL: 15 ppm 15 minutes. TWA: 10 ppm 8 hours.
2-ethylhexanoic acid	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 5 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 10 mg/m³ 15 minutes. Form: Inhalable fraction and vapour TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction and vapour **CA Ontario Provincial (Canada, 6/2019).** TWA: 5 mg/m³, 0 times per shift, 8 hours. Form: Inhalable fraction and vapour. **CA British Columbia Provincial (Canada, 1/2020).** TWA: 5 mg/m³, 0 times per shift, 8 hours. Form: Inhalable vapour

Section 8. Exposure controls/personal protection

	and aerosol

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Yellow. translucent

Odor : Aromatic.

Odor threshold : Not available.

pH : Not available.

Section 9. Physical and chemical properties

Melting point : Not available.

Boiling point : Lowest known value: 136.05°C (276.9°F) (ethylbenzene). Weighted average: 147.71°C (297.9°F)

Boiling Range : Not available.

Flash point : Closed cup: 42.222°C (108°F)

Evaporation rate : Highest known value: <1 (2-ethylhexyl nitrate) Weighted average: 0.79compared with butyl acetate

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Greatest known range: Lower: 1.6% Upper: 18.1% (diethylene glycol monomethyl ether)

Vapor pressure : Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.36 kPa (2.7 mm Hg) (at 20°C)

Vapor density : Highest known value: 4.47 (Air = 1) (Solvent naphtha (petroleum), light arom.). Weighted average: 2.39 (Air = 1)

Relative density : 0.93 [ASTM D 4052]

Density : 7.742 lbs/gal

Solubility : Insoluble in the following materials: cold water, hot water.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Lowest known value: 176°C (348.8°F) (2-ethylhexyl nitrate).

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): 0.04 cm^2/s (4 cSt)

Aerosol product

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : Decomposes violently when heated above 100°C. This mixture contains materials which are unstable under the following conditions: heat Incompatible with fluorine.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Test	Species	Result	Dose
2-ethylhexyl nitrate	-	Rat	LCLo Inhalation Vapor	>4.6 mg/l
	-	Rabbit	LD50 Dermal	>4820 mg/kg
	-	Rat	LD50 Oral	>9640 mg/kg
xylene	-	Rabbit	LD50 Dermal	4320 mg/kg
	-	Rat	LD50 Oral	4300 mg/kg
ethylbenzene	-	Mouse	LC50 Inhalation Vapor	35500 mg/m³
	-	Rabbit	LC50 Inhalation Vapor	4000 ppm
	-	Rabbit	LD50 Dermal	>5000 mg/kg
Solvent naphtha (petroleum), light arom.	-	Rat	LD50 Oral	8400 mg/kg
naphthalene	-	Rat	LC50 Inhalation Vapor	>340 mg/m³
	-	Rabbit	LD50 Dermal	>2000 mg/kg
	-	Rat	LD50 Oral	490 mg/kg
2-ethylhexanoic acid	-	Rabbit	LD50 Dermal	>2000 mg/kg
	-	Rat	LD50 Oral	3640 mg/kg
cumene	-	Rat	LC50 Inhalation Vapor	39000 mg/m³
	-	Rat	LD50 Oral	1400 mg/kg

Conclusion/Summary : Not available.

Potential chronic health effects

Not available.

Irritation/Corrosion

Product/ingredient name	Test	Species	Result	
2-ethylhexyl nitrate	OECD 437 Bovine Corneal Opacity and Permeability Test	Mammal - species unspecified	Eyes - Mild irritant	-
	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Mild irritant	-
xylene	-	Rabbit	Eyes - Severe irritant	-
	-	Rat	Skin - Mild irritant	-
	-	Rabbit	Skin - Moderate irritant	-
ethylbenzene	-	Rabbit	Eyes - Severe irritant	-
	-	Rabbit	Skin - Mild irritant	-
diethylene glycol monomethyl ether	-	Rabbit	Eyes - Mild irritant	-
	-	Rabbit	Eyes - Moderate irritant	-
Solvent naphtha (petroleum), light arom.	-	Rabbit	Eyes - Mild irritant	-
2-ethylhexanoic acid	-	Rabbit	Skin - Mild irritant	-
cumene	-	Rabbit	Eyes - Mild irritant	-
	-	Rabbit	Eyes - Mild irritant	-
	-	Rabbit	Skin - Mild irritant	-
	-	Rabbit	Skin - Moderate irritant	-

Sensitization

Section 11. Toxicological information

Product/ingredient name	Test	Species	Result
2-ethylhexyl nitrate	OECD 406 Skin Sensitization	Guinea pig	Not sensitizing -

Mutagenicity

Product/ingredient name	Test	Experiment	Result
2-ethylhexyl nitrate	OECD 473 *In vitro* Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Human	Negative

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
ethylbenzene	-	2B	-
naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.
cumene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Product/ingredient name	Test	Species	Result	Dose
2-ethylhexyl nitrate	OECD 421 Reproduction/ Developmental Toxicity Screening Test	Rat - Male, Female	NOAEL	Oral: 20 mg/kg Parental toxicity.
	OECD 421 Reproduction/ Developmental Toxicity Screening Test	Rat - Male, Female	NOAEL	Oral: 100 mg/kg F1
2-ethylhexanoic acid	-	Rat - Male, Female	Developmental effects Unborn child	Oral: 600 mg/kg

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 3	-	Respiratory tract irritation
1,2,4-trimethylbenzene	Category 3	-	Respiratory tract irritation
cumene	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 2	-	-

Aspiration hazard

Name	Result
Xylene	ASPIRATION HAZARD - Category 1

Section 11. Toxicological information

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled.

Skin contact : Harmful in contact with skin. Causes skin irritation.

Ingestion : Harmful if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Conclusion/Summary : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates (ATE)

Route	ATE value
Oral	1003.14 mg/kg
Dermal	1451.16 mg/kg
Inhalation (vapors)	12.76 mg/l

Interactive effects : Not available.

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-ethylhexyl nitrate	Acute EC50 1 to 10 mg/l Estimated. Nominal Concentration	Algae	72 hours
	Acute EC50 >10 mg/l Estimated.	Daphnia	48 hours
	Acute LC50 2 mg/l	Fish - Danio rerio	96 hours
Xylene	Acute LC50 3.3 mg/l	Fish	96 hours
2-(2-methoxyethoxy)ethanol	Acute LC50 7500000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
naphthalene	Acute EC50 1.96 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 2350 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 1.6 mg/l	Fish	96 hours
	Chronic NOEC 0.5 mg/l Marine water	Crustaceans - Uca pugnax - Adult	3 weeks
	Chronic NOEC 1.5 mg/l Fresh water	Fish - Oreochromis mossambicus	60 days
2-ethylhexanoic acid	EC50 85.4 mg/l	Daphnia	48 hours

Persistence and degradability

Product/ingredient name	Test	Result
2-ethylhexyl nitrate	OECD 310 Ready Biodegradability - CO_2 in Sealed Vessels (Headspace Test)	0 % - Not readily - 28 days
2-ethylhexanoic acid	-	83 % - Readily - 20 days
	301D Ready Biodegradability - Closed Bottle Test	76 % - Readily - 10 days

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-ethylhexyl nitrate	Fresh water 10 to 15 days, pH 4, 25°C Fresh water 7 days, pH 7, 25°C Fresh water 4 to 6 days, pH 9, 25°C	-	Not readily
Xylene	-	-	Readily
2-ethylhexanoic acid	-	-	Readily

Bioaccumulative potential

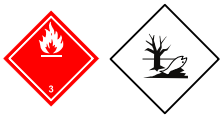
Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-ethylhexyl nitrate	5.24	1332	high
Xylene	3.12 to 3.2	8.1 to 25.9	low
2-(2-methoxyethoxy)ethanol	-1.14 to 0.93	-	low
naphthalene	3.4	36.5 to 168	low
2-ethylhexanoic acid	2.7	-	low

Section 13. Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IATA
UN number	NA1993	UN1993	UN1993
UN proper shipping name	Combustible liquid, n.o.s. (xylene, Solvent naphtha (petroleum), light arom.). Marine pollutant (2-ethylhexyl nitrate, Solvent naphtha (petroleum), light arom.) RQ (xylene, ethylbenzene)	FLAMMABLE LIQUID, N.O.S. (xylene, Solvent naphtha (petroleum), light arom.). Marine pollutant (2-ethylhexyl nitrate, Solvent naphtha (petroleum), light arom.)	Flammable liquid, n.o.s. (xylene, Solvent naphtha (petroleum), light arom.)
Transport hazard class(es)	Combustible liquid. 	3 	3 
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Section 14. Transport information

Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids, that are marine pollutants, are not regulated as hazardous materials in package sizes less than the product reportable quantity, unless transported by vessel. This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. **Reportable quantity** 450.59 lbs / 204.57 kg [58.109 gal / 219.97 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. **Limited quantity** Yes. **Packaging instruction** Exceptions: 150. Non-bulk: 203. Bulk: 241. **Quantity limitation** Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L. **Special provisions** 148, IB3, T1, TP1	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail. **Explosive Limit and Limited Quantity Index** 5 **Passenger Carrying Road or Rail Index** 60 **Special provisions** 16, 150	The environmentally hazardous substance mark may appear if required by other transportation regulations. **Quantity limitation** Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344. **Special provisions** A3

Special precautions for user : Do not heat the product.

Section 15. Regulatory information

Canada

Canadian lists

Canada inventory : All components are listed or exempted.

Canadian NPRI : The following components are listed: Xylene (all isomers); 1,2,4-trimethylbenzene; Xylene (all isomers); Light aromatic solvent naphtha; xylene (all isomers); Xylene (all isomers); 2-(2-methoxyethoxy)ethanol

CEPA Toxic substances : The following components are listed: Naphthalene; Ethanol, 2-(2-methoxyethoxy)-

International lists

National inventory

Australia inventory (AICS) : At least one component is not listed.

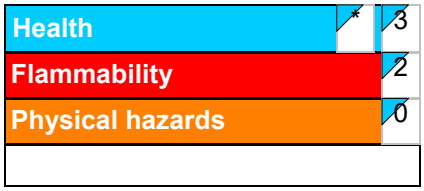
Canada inventory : All components are listed or exempted.

Section 15. Regulatory information

China inventory (IECSC)	:	At least one component is not listed.
Europe inventory	:	Not determined.
Japan inventory (ENCS)	:	**Japan inventory (ENCS)**: At least one component is not listed. **Japan inventory (ISHL)**: Not determined.
New Zealand Inventory of Chemicals (NZIoC)	:	At least one component is not listed.
Philippines inventory (PICCS)	:	At least one component is not listed.
Korea inventory (KECI)	:	At least one component is not listed.
Taiwan inventory (TCSI)	:	Not determined.
United States inventory (TSCA 8b)	:	All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Classification according to Directive 67/548/EEC [DSD] or Classification according to Directive 1999/45/EC [DPD]

Risk phrases	:	R10- Flammable. R44- Risk of explosion if heated under confinement. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R36/38- Irritating to eyes and skin. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases	:	S36/37- Wear suitable protective clothing and gloves. S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

History

Date of printing : 2021-06-15

Date of issue/Date of revision : 6/15/2021

Section 16. Other information

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Date of previous issue : 9/12/2018(YYYY-MM-DD^))

Version : 1.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Indicates information that has changed from previously issued version.

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