



SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	MEDIUM REDUCER
Product Code	R-102
Recommended Use	SOLVENT - MEDIUM DRY 65°F - 75°F
Restrictions	FOR PROFESSIONAL USE ONLY
Manufacturer/Importer/Supplier/Distributor information	
Company name	Liquid Concepts
Address	200 Cornerstone Rd. Alexander, AR 72002
Telephone	501.455.5500
Website	www.liquidconcepts.com
Emergency phone number	EMERGENCY 24 Hrs. 800-424-9300 ChemTrec

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	: Category 2
Skin irritation	: Category 2
Eye irritation	: Category 2A
Germ cell mutagenicity	: Category 1B
Carcinogenicity	: Category 2
Reproductive toxicity	: Category 2
Specific target organ toxicity - single exposure	: Category 3 (Central nervous system)
Specific target organ toxicity - repeated exposure (Inhalation)	: Category 2 (Auditory system, Eyes)
Aspiration hazard	: Category 1

GHS Label element

Hazard pictograms



Signal word

: Danger

Hazard statements

: H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 + H320 Causes skin and eye irritation.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary statements

: **Prevention:**
P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Carcinogenicity:

IARC

Group 2B: Possibly carcinogenic to humans

64742-49-0 Naphtha (pet), hydrotreated It

64742-89-8 Solvent naphtha (pet), It aliph.

ACGIH

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

OSHA

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

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.

Emergency Overview

Appearance	liquid
Colour	colourless, clear
Odour	characteristic
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
108-65-6	Glycol ether PM acetate	20 - 30
78-93-3	Methyl ethyl ketone	30 - 50
108-88-3	Toluene	10 - 20
64742-49-0	Naphtha (pet), hydrotreated It	0 - 20
64742-89-8	Solvent naphtha (pet), It aliph.	0 - 20
68410-97-9	Distillates, pet, It dist hydrotreat process,	0 - 20

	low-boil	
123-86-4	n-Butyl acetate	10 - 20
142-82-5	Heptane	0.1 - 1

Special Notes: : Functionally equivalent petroleum streams may be found in this preparation at varying concentrations.

SECTION 4. FIRST AID MEASURES

- General advice : Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- 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.
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Hazardous combustion products	: Carbon oxides
Specific extinguishing methods	: Use a water spray to cool fully closed containers.
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. For safety reasons in case of fire, cans should be stored separately in closed containments.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for fire-fighting if necessary.

NFPA Flammable and Combustible Liquids Classification:

Flammable Liquid Class IB

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
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	: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes.
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For personal protection see section 8.
 Smoking, eating and drinking should be prohibited in the application area.
 Take precautionary measures against static discharges.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Open drum carefully as content may be under pressure.
 Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking.
 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
78-93-3	Methyl ethyl ketone	TWA	200 ppm	ACGIH
		STEL	300 ppm	ACGIH
		TWA	200 ppm 590 mg/m ³	NIOSH REL
		ST	300 ppm 885 mg/m ³	NIOSH REL
		TWA	200 ppm 590 mg/m ³	OSHA Z-1
		TWA	200 ppm 590 mg/m ³	OSHA P0
		STEL	300 ppm 885 mg/m ³	OSHA P0
		108-65-6	Glycol ether PM acetate	TWA
108-88-3	Toluene	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m ³	NIOSH REL
		ST	150 ppm 560 mg/m ³	NIOSH REL
		TWA	200 ppm	OSHA Z-2

		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm 375 mg/m ³	OSHA P0
		STEL	150 ppm 560 mg/m ³	OSHA P0
64742-49-0	Naphtha (pet), hydrotreated lt	TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
		TWA	400 ppm 1,600 mg/m ³	OSHA P0
64742-89-8	Solvent naphtha (pet), lt aliph.	TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
		TWA	400 ppm 1,600 mg/m ³	OSHA P0
123-86-4	n-Butyl acetate	TWA	150 ppm	ACGIH
		STEL	200 ppm	ACGIH
		ST	200 ppm 950 mg/m ³	NIOSH REL
		TWA	150 ppm 710 mg/m ³	NIOSH REL
		TWA	150 ppm 710 mg/m ³	OSHA Z-1
		TWA	150 ppm 710 mg/m ³	OSHA P0
		STEL	200 ppm 950 mg/m ³	OSHA P0
142-82-5	Heptane	TWA	85 ppm 350 mg/m ³	NIOSH REL
		C	440 ppm 1,800 mg/m ³	NIOSH REL
		TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
		TWA	400 ppm 1,600 mg/m ³	OSHA P0
		STEL	500 ppm 2,000 mg/m ³	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methyl ethyl ketone	78-93-3	MEK	In urine	End of shift (As soon as possible after exposure)	2 mg/l	ACGIH BEI

Toluene	108-88-3	Toluene	In blood	ceases) Prior to last shift of work-week	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
In the case of vapour formation use a respirator with an approved filter.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

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	: colourless, clear
Odour	: characteristic
Odour Threshold	: No data available
pH	: No data available
Freezing Point	: No data available
Boiling Point (Boiling point/boiling range)	: 79.59 - 79.6 °C (175.26 - 175.3 °F) Calculated Phase Transition Liquid/Gas
Flash point	: -12.78 - -7.78 °C (9.00 - 18.00 °F)
Evaporation rate	: 1 Ethyl Ether
Flammability (solid, gas)	: No data available
Burning rate	: No data available
Upper explosion limit	: 10 %(V) Calculated Explosive Limit
Lower explosion limit	: 1.27 %(V) Calculated Explosive Limit
Vapour pressure	: 91 - 200.02 mmHg @ 20 °C (68 °F) Calculated Vapor Pressure
Relative vapour density	: > 1(Air = 1.0)
Relative density	: 0.825 - 0.859 @ 25 °C (77 °F)
Density	: 7.0232 - 7.0899 lb/gal @ 20 - 25 °C (68 - 77 °F) 0.842 - 0.85 g/cm ³ @ 20 - 25 °C (68 - 77 °F)
Bulk density	: No data available
Water solubility	: No data available
Solubility in other solvents	: No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Thermal decomposition : No data available

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 : Product will not undergo hazardous polymerization. Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.
Exposure to air.
Exposure to moisture.
Extremes of temperature and direct sunlight.

Incompatible materials : alkalis
Amines
Copper alloys
nitrates
organic absorbents such as sawdust, peat moss, ground corn cobs, etc.
Oxygen
Strong oxidizing agents
Strong reducing agents
Chlorine
Chloroform
Halogenated compounds
Strong acids and strong bases
hydrogen peroxide
isocyanates
strong mineral acids
halogens
metal salts

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Components:

108-65-6:

Acute oral toxicity : LD50 (rat): 8,532 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

78-93-3:

Acute oral toxicity : LD50 (rat): 2,737 mg/kg

Acute inhalation toxicity : LC50 (mouse): 320 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 (rabbit): 6,480 mg/kg

108-88-3:

Acute oral toxicity : LD50 (rat, male): > 5,580 mg/kg

Acute inhalation toxicity : LC50 (rat, male and female): 28.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (rabbit): > 5,000 mg/kg

64742-49-0:

Acute oral toxicity : LD50 (rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

64742-89-8:

Acute oral toxicity : LD50 (rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401

	GLP: yes
Acute inhalation toxicity	: Remarks: No data available
Acute dermal toxicity	: LD50 (rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes
68410-97-9:	
Acute oral toxicity	: LD50 (rat): > 5,000 mg/kg
Acute inhalation toxicity	: Remarks: No data available
Acute dermal toxicity	: LD50 (rabbit): > 2,000 mg/kg
123-86-4:	
Acute oral toxicity	: LD50 (rat): > 5,000 mg/kg Method: OECD Test Guideline 423 GLP: no
Acute inhalation toxicity	: LC50 (rat, male and female): > 21 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 GLP: yes
Acute dermal toxicity	: LD50 (rabbit, male and female): > 5,000 mg/kg Method: OECD Test Guideline 402 GLP: yes
142-82-5:	
Acute oral toxicity	: LD50 (rat, male and female): 5,000 mg/kg Method: OECD Test Guideline 401 Symptoms: Salivation GLP: yes Remarks: Information given is based on data obtained from similar substances.
Acute inhalation toxicity	: LC50 (rat, male and female): 73.5 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
Acute dermal toxicity	: LD50 (rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: Information given is based on data obtained from similar substances.

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Components:

108-65-6:

Species: rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

78-93-3:

Species: rabbit

Exposure time: 24 h

Result: No skin irritation

108-88-3:

Species: rabbit

Exposure time: 4 h

Result: Irritating to skin.

64742-49-0:

Species: rabbit

Result: Irritating to skin.

64742-89-8:

Species: rabbit

Exposure time: 4 h

Result: Irritating to skin.

68410-97-9:

Species: rabbit

Result: Irritating to skin.

123-86-4:

Species: rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: no

142-82-5:

Species: rabbit

Exposure time: 24 h

Method: OECD Test Guideline 404

Result: Irritating to skin.

GLP: yes

Remarks: Based on a similar product formulation.

Serious eye damage/eye irritation

Product:

Remarks: Irritating to eyes.

Components:

108-65-6:

Species: rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

78-93-3:

Species: rabbit

Result: Irritating to eyes.

Exposure time: 24 h

108-88-3:

Species: rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline 405

64742-49-0:

Species: rabbit

Result: Irritating to eyes.

64742-89-8:

Species: rabbit

Result: Irritating to eyes.

68410-97-9:

Species: rabbit

Result: Irritating to eyes.

123-86-4:

Species: rabbit

Result: No eye irritation

GLP: yes

142-82-5:

Species: rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline 405

GLP: yes

Remarks: Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation

Components:

108-65-6:

Test Type: Maximization test

Species: guinea pig
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.
GLP: no

78-93-3:

Test Type: Buehler Test
Species: guinea pig
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.

108-88-3:

Test Type: Maximisation Test (GPMT)
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.
GLP: yes

64742-49-0:

Test Type: Buehler Test
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

64742-89-8:

Test Type: Buehler Test
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

123-86-4:

Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

142-82-5:

Test Type: Maximization test
Species: guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
Remarks: Based on a similar product formulation.

Germ cell mutagenicity

Components:

108-65-6:

Genotoxicity in vitro : Test Type: DNA damage and/or repair
Test species: rat hepatocytes
Metabolic activation: Without metabolic activation
Method: OECD Test Guideline 482
Result: negative
GLP: yes

Germ cell mutagenicity- : Tests on bacterial or mammalian cell cultures did not

Assessment	show mutagenic effects.
78-93-3: Genotoxicity in vitro	: Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
	: Test Type: Mammalian cell gene mutation assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
	: Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
Genotoxicity in vivo	: Test Type: In vivo micronucleus test Test species: mouse (male and female) Dose: 1.96 mL/kg Method: OECD Test Guideline 474 Result: negative
Germ cell mutagenicity- Assessment	: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
108-88-3: Genotoxicity in vitro	: Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	: Test Type: Dominant lethal assay Test species: mouse (male) Application Route: inhalation (vapour) Exposure time: 6 h/d, 5 d/wk for 8 wks Dose: 0, 100, 400 ppm Method: OECD Test Guideline 478 Result: negative
Germ cell mutagenicity- Assessment	: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
64742-49-0: Germ cell mutagenicity- Assessment	: Mutagenicity classification not possible from current data

64742-89-8:

Germ cell mutagenicity-Assessment : Mutagenicity classification not possible from current data

68410-97-9:

Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay
Test species: mouse lymphoma cells
Result: positive

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: mouse
Method: OECD Test Guideline 474
Result: positive

Germ cell mutagenicity-Assessment : Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals

123-86-4:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test species: Chinese hamster lung fibroblasts
Metabolic activation: Without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: No data available

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: mouse (male and female)
Application Route: Oral
Dose: 500, 1000, 2000 mg/kg bw
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Test substance: Information given is based on data obtained from similar substances.

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

142-82-5:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test species: Rat liver
Metabolic activation: Without metabolic activation
Method: OECD Test Guideline 473
Result: negative

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471

Result: negative

Germ cell mutagenicity- Assessment : Did not show mutagenic effects in animal experiments.

Carcinogenicity

Components:

108-65-6:

Species: rat, (male and female)

Application Route: inhalation (vapour)

Exposure time: 2 yr

Dose: 0, 300, 1000, 3000 ppm

Frequency of Treatment: 6 hr/d, 5 d/wk

NOAEL: No observed adverse effect level: 3,000 ppm

Method: OECD Test Guideline 453

Result: did not display carcinogenic properties

GLP: yes

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

78-93-3:

Remarks: This information is not available.

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

108-88-3:

Species: rat, (male and female)

Application Route: inhalation (vapour)

Exposure time: 103 wks

Dose: 0, 600, 1200 ppm

Frequency of Treatment: 6.5 h/d, 5 d/wk

NOAEL: No observed adverse effect level: 1,200 ppm

Method: OECD Test Guideline 453

Result: did not display carcinogenic properties

Symptoms: Erosion of nasal epithelium

GLP: yes

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

64742-49-0:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

64742-89-8:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

68410-97-9:

Species: mouse

NOAEL: 50 mg/kg bw/day

Method: OECD Test Guideline 451

Result: evidence of carcinogenic activity

Carcinogenicity - Assessment : Possible human carcinogen

123-86-4:

Remarks: This information is not available.

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

142-82-5:

Remarks: This information is not available.

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

Reproductive toxicity

Components:

108-65-6:

Effects on fertility : Species: rat
Application Route: Oral
Dose: 0, 100, 300, 1000 mg/kg
General Toxicity - Parent: NOAEL: 1,000 mg/kg bw
General Toxicity F1: NOAEL: 1,000 mg/kg bw
Method: OECD Test Guideline 422
Result: Animal testing did not show any effects on fertility.
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Effects on foetal development : Species: rat
Application Route: Inhalation
Dose: 0, 500, 2000, 4000 ppm
Duration of Single Treatment: 9 d
Frequency of Treatment: 6 hr/day
General Toxicity Maternal: NOAEL: 500 ppm
Teratogenicity: NOAEL: > 4,000 ppm
GLP: yes

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

78-93-3:

Effects on foetal development : Species: rat, female
Application Route: Inhalation
Dose: 400, 1000, 3000 ppm
Duration of Single Treatment: 18 d
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEC: 1,002 ppm
Teratogenicity: NOAEC: 1,002 ppm
Method: OECD Test Guideline 414
GLP: no

Reproductive toxicity - Assessment : Fertility classification not possible from current data. Did not show teratogenic effects in animal experiments.

108-88-3:

Effects on fertility : Test Type: Two-generation study
Species: rat, male and female
Application Route: Inhalation
Dose: 0, 100, 500, 2000 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 500 ppm
General Toxicity F1: NOAEC: 500 ppm
Fertility: NOAEC: 2,000 ppm
Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain.
Method: OECD Test Guideline 416
Result: Animal testing did not show any effects on fertility.
GLP: yes

Test Type: Fertility
Species: rat, male and female
Application Route: inhalation (vapour)
Dose: 0, 600, 1200 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 600 ppm
Symptoms: Decreased sperm count
Result: Animal testing did not show any effects on fertility.

Effects on foetal development : Species: rat
Application Route: inhalation (vapour)
Dose: 0, 250, 750, 1500, 3000 ppm
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day

	<p>General Toxicity Maternal: NOAEC: 750 ppm Developmental Toxicity: NOAEC: 750 ppm Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations. GLP: yes</p>
Reproductive toxicity - Assessment	: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
64742-49-0: Reproductive toxicity - Assessment	: Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
64742-89-8: Reproductive toxicity - Assessment	: Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
68410-97-9: Reproductive toxicity - Assessment	: Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
123-86-4: Effects on fertility	: Species: rat, male and female Application Route: Inhalation Dose: 0, 750, 1500, 2000 ppm Duration of Single Treatment: 6 h Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: 750 ppm General Toxicity F1: NOAEC: 750 ppm Fertility: NOAEC: 2,000 ppm Early Embryonic Development: NOAEC: 750 ppm Symptoms: Effect on reproduction capacity. Method: OECD Test Guideline 416 GLP: yes
Effects on foetal development	: Species: rat, male and female Application Route: vapour Dose: 500, 1500, 3000 ppm Duration of Single Treatment: 6 h Frequency of Treatment: 5 days/week GLP: yes
Reproductive toxicity - Assessment	: Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.

142-82-5:

- Effects on fertility : Test Type: Two-generation study
 Species: rat, male and female
 Application Route: vapour
 Dose: 0, 900, 3000, 9000 ppm
 Frequency of Treatment: 5 days/week
 General Toxicity - Parent: NOAEC: 3,000 ppm
 General Toxicity F1: NOAEC: 3,000 ppm
 Fertility: NOAEC: 9,000 ppm
 Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain.
 Method: OECD Test Guideline 416
 Result: No reproductive effects.
 GLP: yes
 Remarks: Information given is based on data obtained from similar substances.
- Effects on foetal development : Species: mouse
 Application Route: inhalation (vapour)
 Dose: 0, 900, 3000, 9000 ppm
 Duration of Single Treatment: 10 d
 Frequency of Treatment: 6 hr/day
 General Toxicity Maternal: NOAEC: 900 ppm
 Developmental Toxicity: NOAEC: 3,000 ppm
 Symptoms: Skeletal malformations.
 Method: OECD Test Guideline 414
 GLP: yes
 Remarks: Information given is based on data obtained from similar substances.
- Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
 Embryotoxicity classification not possible from current data.

STOT - single exposure

Product: No data available

Components:

108-65-6: No data available

78-93-3:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

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108-88-3:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

64742-49-0:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

64742-89-8:No data available

68410-97-9:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

123-86-4:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target	



		organ toxicant, single exposure, category 3 with narcotic effects.	
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142-82-5:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

STOT - repeated exposure

Product:No data available

Components:

108-65-6:No data available

78-93-3:No data available

108-88-3:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Auditory system, Eyes	May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.	

64742-49-0:No data available

64742-89-8:No data available

68410-97-9:No data available

123-86-4:No data available

142-82-5:No data available

Repeated dose toxicity

Components:

108-65-6:

Species: rat, male and female
NOAEL: > 1,000 mg/kg
Application Route: Oral
Dose: 0, 100, 300, 1000 mg/kg
Method: OECD Test Guideline 422

108-88-3:

Species: rat, male and female
NOAEL: 300
Application Route: inhalation (vapour)
Exposure time: 6, 12, or 18 mths
Number of exposures: 6 h/d, 5 d/wk
Dose: 0, 30, 100, 300 ppm
Method: OECD Test Guideline 453

Repeated dose toxicity - : Causes skin irritation.
Assessment

64742-89-8:

Species: rat, male and female
NOAEL: 1402
Application Route: inhalation (vapour)
Test atmosphere: vapour
Exposure time: 13 weeks
Number of exposures: 6 hours/day, 5 days/week
Dose: 322, 1402, 9869 mg/m³
GLP: yes
Target Organs: Kidney
Symptoms: Nasal and ocular discharge

123-86-4:

Species: rat, male and female
NOAEL: 500
Application Route: inhalation (vapour)
Exposure time: 13 wk
Number of exposures: 6 h/d, 5d/wk

Dose: 500, 1500, 3000 ppm
GLP: yes
Symptoms: oral or nasal discharge

142-82-5:

Species: rat, male
NOAEL: 12470 mg/m³
Application Route: inhalation (vapour)
Exposure time: 16 wks
Number of exposures: 12 h/d, 7 d/wk
Dose: 0, 12470 mg/3

Repeated dose toxicity - : Causes skin irritation.
Assessment

Aspiration toxicity

Components:

108-88-3:

Aspiration Toxicity - Category 1

64742-49-0:

May be fatal if swallowed and enters airways.

64742-89-8:

May be fatal if swallowed and enters airways.

68410-97-9:

May be fatal if swallowed and enters airways.

142-82-5:

Aspiration Toxicity - Category 1

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

108-65-6:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 500 mg/l
Exposure time: 48 h
Test Type: Immobilization

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 1,000 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test

78-93-3:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: Immobilization

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h

108-88-3:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia): 3.78 mg/l
Exposure time: 48 h
Test Type: Renewal

Toxicity to algae : EC50 (Chlorella vulgaris (Fresh water algae)): 134 mg/l
Exposure time: 3 h
Test Type: static test

Toxicity to bacteria : IC50 (Bacteria): 84 mg/l
Exposure time: 24 h
Test Type: Static

Ecotoxicology Assessment
Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

64742-49-0:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.71 mg/l
Exposure time: 96 h

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

64742-89-8:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 8.2 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h
Test Type: Immobilization
Analytical monitoring: yes

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.7 mg/l
Exposure time: 96 h
Test Type: static test

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

68410-97-9:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 3.1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Ecotoxicology Assessment
Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

123-86-4:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 18 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 44 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 674.7 mg/l
End point: Growth rate
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 23 mg/l
Exposure time: 21 d

Toxicity to bacteria : EC 50 (*Tetrahymena pyriformis* (Ciliate)): 356 mg/l
Exposure time: 40 h
Test Type: Static

Ecotoxicology Assessment
Acute aquatic toxicity : Harmful to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

142-82-5:

Toxicity to fish : LC50 (*Carassius auratus* (goldfish)): 4 mg/l
Exposure time: 24 h
Remarks: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 1.5 mg/l
Exposure time: 48 h
Test Type: static test
Remarks: Very toxic to aquatic organisms.

Toxicity to algae : Remarks: No data available

Ecotoxicology Assessment
Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

108-65-6:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 76.4 mg/l
Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
GLP: yes

Biochemical Oxygen Demand (BOD) : 0.36 mg/l

Chemical Oxygen Demand (COD) : 1.74 mg/l

78-93-3:

Biodegradability : Concentration: 2 mg/l
Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Test substance: Methyl ethyl Ketone
GLP: yes
Remarks: Readily biodegradable

108-88-3:

Biodegradability : Inoculum: Sewage
Biodegradation: 100 %
Remarks: Readily biodegradable

64742-49-0:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 20 mg/l
Biodegradation: 74.30 %
Exposure time: 56 d
GLP: yes
Remarks: Inherently biodegradable.

64742-89-8:

Biodegradability : Concentration: 49.2 mg/l
Result: Readily biodegradable.
Biodegradation: 77 %
Testing period: 2 d
Exposure time: 28 d
GLP: yes

123-86-4:

Biodegradability : Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Chemical Oxygen Demand (COD) : 0.00169 mg/g

BOD/COD : BOD/COD: 72 %

Theoretical Oxygen Demand (ThOD) : 0.0022 mg/g

142-82-5:

Biodegradability : Primary biodegradation
Inoculum: activated sludge
Concentration: 100 mg/l
Biodegradation: 100 %
Testing period: 2 d
Exposure time: 25 d
Remarks: Readily biodegradable

Bioaccumulative potential**Components:****108-65-6:**

Partition coefficient: n-octanol/water : log Pow: 0.43

108-88-3:

Partition coefficient: n-octanol/water : log Pow: 2.73

64742-49-0:

Partition coefficient: n-octanol/water : Remarks: No data available

64742-89-8:

Partition coefficient: n-octanol/water : log Pow: 2.13 - 4.85 (25 °C)

123-86-4:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 15

Partition coefficient: n-octanol/water : log Pow: 1.82

Mobility in soil

No data available

Other adverse effects

No data available

Product:

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 : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.


SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): UN1263, PAINT RELATED MATERIAL, 3, II, Flash Point:-12.78 - -7.78 °C(9.00 - 18.00 °F)



IMDG (International Maritime Dangerous Goods): UN1263, PAINT RELATED MATERIAL, 3, II

DOT (Department of Transportation): UN1263, PAINT RELATED MATERIAL, 3, II

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Flammable liquid, Carcinogen, Moderate skin irritant, Moderate eye irritant, Teratogen, Reproductive hazard, Mutagen, Aspiration hazard

WHMIS Classification : B2: Flammable liquid
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Toluene	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
Chronic Health Hazard
Acute Health Hazard

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

108-88-3	Toluene	18.3153 %
71-43-2	Benzene	0.0336 %
100-41-4	Ethylbenzene	0.0336 %
110-54-3	Hexane	0.003 %
91-20-3	Naphthalene	0.0003 %
98-82-8	Cumene	0.000 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

78-93-3	Methyl ethyl ketone	33.4121 %
108-88-3	Toluene	18.3153 %

123-86-4	n-Butyl acetate	10.5114 %
110-82-7	Cyclohexane	0.3847 %
71-43-2	Benzene	0.0336 %
100-41-4	Ethylbenzene	0.0336 %
1330-20-7	Mixed xylenes	0.02 %
98-82-8	Cumene	0.000 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

108-88-3	Toluene	18.3153 %
123-86-4	n-Butyl acetate	10.5114 %
110-82-7	Cyclohexane	0.3847 %
71-43-2	Benzene	0.0336 %
100-41-4	Ethylbenzene	0.0336 %
1330-20-7	Mixed xylenes	0.02 %
91-20-3	Naphthalene	0.0003 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

108-88-3	Toluene	18.3153 %
123-86-4	n-Butyl acetate	10.5114 %
110-82-7	Cyclohexane	0.3847 %
71-43-2	Benzene	0.0336 %
100-41-4	Ethylbenzene	0.0336 %
1330-20-7	Mixed xylenes	0.02 %
91-20-3	Naphthalene	0.0003 %

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

108-88-3	Toluene	18.3153 %
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US State Regulations

Massachusetts Right To Know

78-93-3	Methyl ethyl ketone	30 - 50 %
108-88-3	Toluene	10 - 20 %
123-86-4	n-Butyl acetate	10 - 20 %
71-43-2	Benzene	0 - 0.1 %

Pennsylvania Right To Know

78-93-3	Methyl ethyl ketone	30 - 50 %
108-65-6	Glycol ether PM acetate	20 - 30 %
108-88-3	Toluene	10 - 20 %
64742-49-0	Naphtha (pet), hydrotreated It	0 - 20 %
64742-89-8	Solvent naphtha (pet), It aliph.	0 - 20 %
68410-97-9	Distillates, pet, It dist hydrotreat process, low-boil	0 - 20 %
123-86-4	n-Butyl acetate	10 - 20 %
110-82-7	Cyclohexane	0.1 - 1 %
71-43-2	Benzene	0 - 0.1 %
100-41-4	Ethylbenzene	0 - 0.1 %

1330-20-7 Mixed xylenes 0 - 0.1 %

New Jersey Right To Know

78-93-3 Methyl ethyl ketone 30 - 50 %
 108-65-6 Glycol ether PM acetate 20 - 30 %
 108-88-3 Toluene 10 - 20 %
 64742-49-0 Naphtha (pet), hydrotreated lt 0 - 20 %
 64742-89-8 Solvent naphtha (pet), lt aliph. 0 - 20 %
 68410-97-9 Distillates, pet, lt dist hydrotreat
 process, low-boil 0 - 20 %
 123-86-4 n-Butyl acetate 10 - 20 %

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

71-43-2 Benzene
 100-41-4 Ethylbenzene
 91-20-3 Naphthalene
 98-82-8 Cumene
 WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
 108-88-3 Toluene
 71-43-2 Benzene

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

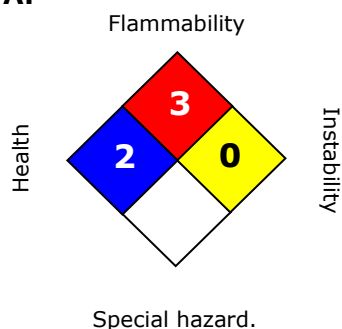
Switzerland. New notified substances and declared preparations	:	y (positive listing) (The formulation contains substances listed on the Swiss Inventory)
United States TSCA Inventory	:	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
New Zealand. Inventory of Chemical Substances	:	n (Negative listing) (Not in compliance with the inventory)

Japan. ENCS - Existing and New Chemical Substances Inventory	:	n (Negative listing) (Not in compliance with the inventory)
Japan. ISHL - Inventory of Chemical Substances (METI)	:	n (Negative listing) (Not in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)

SECTION 16. OTHER INFORMATION

VERSION 3.0
 REVISION DATE 10/20/2016

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
 2 = Moderate, 3 = High
 4 =Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Legacy MSDS:

R0307347

Material number:

147082,

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50			Lethal Concentration 50%