

# SAFETY DATA SHEET

#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier Other means of identification Product code

Recommended use

## FAST URETHANE REDUCER

ADV 112-5 Solvent

#### Manufacturer/Importer/Supplier/Distributor information

Company name Address	INTERNATIONAL AUTOBODY MARKETING GROUP 1505 NORTH HAYDEN RD, SUITE 111 SCOTTSDALE, AZ 85257 UNITED STATES
Website	www.advantagerefinish.com
Telephone	1-87-REFINISH 480.451.4451

Emergency phone number 800-424-9300 ChemTrec EMERGENCY 24 Hrs.

## 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 tox- icity - single exposure	Category 3 (Central nervous system)
Specific target organ tox- icity - repeated exposure (Inhalation)	Category 2 (Auditory system, Eyes)
Aspiration hazard	Category 1

## **GHS Label element**

Hazard pictograms	
Signal word	Danger
Hazard statements	<ul> <li>H225 Highly flammable liquid and vapour.</li> <li>H304 May be fatal if swallowed and enters airways.</li> <li>H315 Causes skin irritation.</li> <li>H319 Causes serious eye irritation.</li> <li>H336 May cause drowsiness or dizziness.</li> <li>H340 May cause genetic defects.</li> <li>H351 Suspected of causing cancer.</li> <li>H361 Suspected of damaging fertility or the unborn child.</li> <li>H373 May cause damage to organs (Auditory system Eyes) through prolonged or repeated exposure if inhaled.</li> </ul>
Precautionary statements	<ul> <li>Prevention:</li> <li>P201 Obtain special instructions before use.</li> <li>P202 Do not handle until all safety precautions have been read and understood.</li> <li>P210 Keep away from heat, hot surfaces, sparks, op flames and other ignition sources. No smoking.</li> <li>P233 Keep container tightly closed.</li> <li>P240 Ground/bond container and receiving equipme P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.</li> <li>P242 Use only non-sparking tools.</li> <li>P243 Take precautionary measures against static discharge.</li> <li>P260 Do not breathe dust/ fume/ gas/ mist/ vapours spray.</li> <li>P264 Wash skin thoroughly after handling.</li> <li>P271 Use only outdoors or in a well-ventilated area.</li> <li>P280 Wear protective gloves/ eye protection/ face protection.</li> <li>P281 Use personal protective equipment as required <b>Response:</b></li> <li>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.</li> <li>P303 + P361 + P353 IF ON SKIN (or hair): Remove, Take off immediately all contaminated clothing. Rins skin with water/ shower.</li> <li>P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable f breathing. Call a POISON CENTER or doctor/ physici</li> <li>you feel unwell.</li> </ul>

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. P362 Take off contaminated clothing and wash before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. Storage: P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. 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 lt
	64742-89-8	Solvent naphtha (pet), lt aliph.
ACGIH	No component of this products of this products of the product of the product of the potential carcinogen by ACC	2
OSHA	No component of this produ than or equal to 0.1% is ide potential carcinogen by OS	2
NTP		uct present at levels greater entified as a known or antici-
Emergency Overview		
Appearance	liquid	

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

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

## Hazardous components

CAS-No.	Chemical Name	Concentration (%)
67-64-1	Acetone	30 - 50
108-88-3	Toluene	20 - 30
64742-49-0	Naphtha (pet), hydrotreated It	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
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	Move out of dangerous area. Show this safety data sheet to the doctor in attend- ance. 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. 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 per- son. If symptoms persist, call a physician. 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.
Hazardous combustion products	No hazardous combustion products are known
Specific extinguishing methods	Use a water spray to cool fully closed containers.
Further information	Collect contaminated fire extinguishing water sepa- rately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing wa- ter must be disposed of in accordance with local regu- lations. For safety reasons in case of fire, cans should be stored separately in closed containments.
Special protective equip- ment 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,	Use personal protective equipment.
protective equipment and	Ensure adequate ventilation.

emergency procedures	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 precau- tions	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 con- tainer for disposal according to local / national regula- tions (see section 13).

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling	<ul> <li>Avoid formation of aerosol.</li> <li>Do not breathe vapours/dust.</li> <li>Avoid exposure - obtain special instructions before use.</li> <li>Avoid contact with skin and eyes.</li> <li>For personal protection see section 8.</li> <li>Smoking, eating and drinking should be prohibited in the application area.</li> <li>Take precautionary measures against static discharges.</li> <li>Provide sufficient air exchange and/or exhaust in work rooms.</li> <li>Container may be opened only under exhaust ventilation hood.</li> <li>Open drum carefully as content may be under pressure.</li> <li>Dispose of rinse water in accordance with local and national regulations.</li> </ul>
Conditions for safe stor- age	No smoking. Keep container tightly closed in a dry and well- ventilated place. Containers which are opened must be carefully re- sealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must com- ply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS-No.	Components	Value type	Control parame-	Basis
		(Form of	ters / Permissi-	
		exposure)	ble concentra-	
			tion	
67-64-1	Acetone	TWA	500 ppm	ACGIH
		STEL	750 ppm	ACGIH
		AWT	250 ppm	NIOSH REL
			590 mg/m3	
		AWT	1,000 ppm	OSHA Z-1
			2,400 mg/m3	
		AWT	750 ppm	OSHA PO
			1,800 mg/m3	
		STEL	1,000 ppm	OSHA PO
			2,400 mg/m3	
108-88-3	Toluene	AWT	20 ppm	ACGIH
		AWT	100 ppm	NIOSH REL
			375 mg/m3	
		ST	150 ppm	NIOSH REL
			560 mg/m3	
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm	OSHA PO
			375 mg/m3	
		STEL	150 ppm	OSHA PO
			560 mg/m3	
64742-49-0	Naphtha (pet), hydrotreat-	TWA	500 ppm	OSHA Z-1
	ed It		2,000 mg/m3	
		TWA	400 ppm	OSHA PO
			1,600 mg/m3	
64742-89-8	Solvent naphtha (pet), lt	AWT	500 ppm	OSHA Z-1
	aliph.		2,000 mg/m3	
		AWT	400 ppm	OSHA PO
			1,600 mg/m3	
123-86-4	n-Butyl acetate	TWA	150 ppm	ACGIH
		STEL	200 ppm	ACGIH
		ST	200 ppm	NIOSH REL
			950 mg/m3	
		AWT	150 ppm	NIOSH REL
			710 mg/m3	
		AWT	150 ppm	OSHA Z-1
			710 mg/m3	
		AWT	150 ppm	OSHA PO
			710 mg/m3	

## **Components with workplace control parameters**

		STEL	200 ppm 950 mg/m3	OSHA PO
142-82-5	Heptane	TWA	85 ppm 350 mg/m3	NIOSH REL
		С	440 ppm 1,800 mg/m3	NIOSH REL
		TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA PO
		STEL	500 ppm 2,000 mg/m3	OSHA PO

## Biological occupational exposure limits

Components	CAS-No.	Control	Biological	Sam-	Permissi-	Basis
		parame-	specimen	pling	ble con-	
		ters		time	centration	
Acetone	67-64-1	Acetone	Urine	End of	50 mg/l	ACGIH
				shift		BEI
				(As		
				soon as		
				possible		
				after		
				expo-		
				sure		
				ceases)		
Toluene	108-88-	Toluene	In blood	Prior to	0.02 mg/l	ACGIH
	3			last		BEI
				shift of		
				work-		
				week		
		Toluene	Urine	End of	0.03 mg/l	ACGIH
				shift		BEI
				(As		
				soon as		
				possible		
				after		
				expo-		
				sure		
				ceases)		
		o-Cresol	Urine	End of	0.3 mg/g	ACGIH
				shift	Creatinine	BEI
				(As		
				soon as		
				possible		
				after		
				expo-		
				sure		
				ceases)		

## 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 dis- cussed 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 pro- cessing 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	clear, colourless
Odour	characteristic
Odour Threshold	No data available
рН	No data available
Freezing Point	No data available
Boiling Point (Boiling point/boiling range)	56 - 140 °C (133 - 284 °F) (1013 hPa) Calculated Phase Transition Liquid/Gas
Flash point	< -18 °C (-0.40 °F)
Evaporation rate	Ethyl Ethor
Flammability (solid, gas)	Ethyl Ether No data available

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Burning rate	No data available
Upper explosion limit	12.8 %(V) Calculated Explosive Limit
Lower explosion limit	1.27 %(V) Calculated Explosive Limit
Vapour pressure	231 mmHg @ 25 °C (77 °F) Calculated Vapor Pressure
Relative vapour density	> 1(Air = 1.0)
Relative density	0.801 @ 20 °C (68 °F)
Density	0.801 g/cm3 @ 20 °C (68 °F)
Bulk density	No data available
Water solubility	No data available
Solubility in other sol- vents	No data available
Partition coefficient: n- octanol/water	No data available
Auto-ignition temperature	No data available
Thermal decomposition	No data available
Regulatory VOC (lbs/gal):	6.67
Regulatory VOC (g/l) :	801.30
Actual VOC (lbs/gal) :	3.38
Actual VOC (g/l) :	405.30

## 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	Keep away from heat, flame, sparks and other ignition sources. Extremes of temperature and direct sunlight.
Incompatible materials	Acids alkalis

Amines Ammonia halogens nitrates organic absorbents such as sawdust, peat moss, ground corn cobs, etc. Peroxides Reducing agents Strong oxidizing agents Bases metal salts

## SECTION 11. TOXICOLOGICAL INFORMATION

## **Acute toxicity**

**Product:** 

Acute oral toxicity	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
<u>Components:</u> 67-64-1:	
Acute oral toxicity	LD50 (rat): 5,800 mg/kg
Acute inhalation toxicity	LC50 (rat): 76.0 mg/l Exposure time: 4 h
Acute dermal toxicity	LD50 : > 7,426 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
<b>64742-89-8:</b> 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:**

#### 67-64-1:

Species: rabbit Exposure time: 24 h Method: In vivo Result: Mild 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:

**67-64-1:** 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:

**67-64-1:** Test Type: Maximization test Species: guinea pig 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

<u>Components:</u> 67-64-1:

Genotoxicity in vitro

Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: Without metabolic activation Method: OECD Test Guideline 476 Result: negative

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

Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative

Genotoxicity in vivo	Test Type: In vivo micronucleus test
	Test species: mouse

	Application Route: Oral Exposure time: 13 wk Dose: 5,000, 10,000, 20,000 ppm Result: negative
Germ cell mutagenicit <b>y</b> - Assessment	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
<b>108-88-3:</b> Genotoxicity in vitro	Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: with and without metabolic acti- vation 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.
<b>64742-49-0:</b> Germ cell mutagenicity- Assessment	Mutagenicity classification not possible from current data
<b>64742-89-8:</b> Germ cell mutagenicity- Assessment	Mutagenicity classification not possible from current data
<b>68410-97-9:</b> 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 mu- tagenicity tests in mammals
<b>123-86-4:</b> 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
Genotoxicit <b>y</b> in <b>viv</b> o	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.
<b>142-82-5:</b> 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 acti- vation Method: OECD Test Guideline 471 Result: negative
Germ cell mutagenicity- Assessment	Did not show mutagenic effects in animal experi- ments.
Carcinogenicity	

## Components:

**67-64-1:** Species: mouse, (female) Application Route: Dermal Exposure time: 365 d (90%) or 424 d (100%) Dose: 0.1ml 90(71mg) or 100% (79mg) Frequency of Treatment: 3 times per wk NOAEL: 79

Result: did not display carcinogenic properties

Carcinogenicity - Assessment Carcinogenicity classification not possible from current data.

### 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 - As-Not classifiable as a human carcinogen. sessment

#### 64742-49-0:

Carcinogenicity - Assessment

Not classifiable as a human carcinogen.

#### 64742-89-8:

sessment

Carcinogenicity - As- 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

sessment

Carcinogenicity - As- : Possible human carcinogen

123-86-4:

Remarks: This information is not available.

Carcinogenicity - As- : No evidence of carcinogenicity in animal studies. sessment

## 142-82-5:

Remarks: This information is not available.

Carcinogenicity - As-	Carcinogenicity classification not possible from current
sessment	data.

#### **Reproductive toxicity**

**Components:** 

<b>67-64-1:</b> Effects on fertility	Species: rat, male Application Route: oral Dose: 0, 5000, 10000 mg/L Frequency of Treatment: 7 days/week General Toxicity - Parent: LOAEL: 10,000 Fertility: 10,000
Effects on foetal devel- opment	Species: rat Application Route: Inhalation Dose: 0, 440, 2200, 11000 ppm Frequency of Treatment: 7 days/week General Toxicity Maternal: NOAEC: 2,200 ppm Teratogenicity: NOAEC: 11,000 ppm Embryo-foetal toxicity.: NOAEC: 2,200 ppm Method: OECD Test Guideline 414 Result: No teratogenic potential. GLP: No data available
Reproductive toxicity - Assessment	No evidence of adverse effects on sexual function and fertility, and on development, based on animal exper- iments.
<b>108-88-3:</b> 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. Re- duced 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: inbalation (vanour)
	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 devel-	Species: rat

opment	Application Route: inhalation (vapour) Dose: 0, 250, 750, 1500, 3000 ppm Duration of Single Treatment: 10 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEC: 750 ppm Developmental Toxicity: NOAEC: 750 ppm Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations. GLP: yes
Reproductive toxicity - Assessment	Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
<b>64742-49-0:</b> Reproductive toxicity - Assessment	Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
<b>64742-89-8:</b> Reproductive toxicity - Assessment	Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
<b>68410-97-9:</b> Reproductive toxicity - Assessment	Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
<b>123-86-4:</b> 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 devel- opment	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 -	Fertility classification not possible from current data.

Assessment	Embryotoxicity classification not possible from current data.
<b>142-82-5:</b> 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. Re- duced 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 devel- opment	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:

## 67-64-1:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous	May cause drowsi-	
	system	ness or dizziness.,	
		The substance or	
		mixture is classified	
		as specific target	
		organ toxicant, sin-	
		gle exposure, cate-	

	gory 3 with narcotic effects.
--	-------------------------------

108-88-3:			
Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsi- ness or dizziness., The substance or mixture is classified as specific target organ toxicant, sin- gle exposure, cate- gory 3 with narcotic effects.	

#### 64742-49-0:

Exposure routes:	Target Organs:	Assessment:	<b>Remarks:</b>
Inhalation	Central nervous system	May cause drowsi- ness or dizziness., The substance or mixture is classified as specific target organ toxicant, sin- gle exposure, cate- gory 3 with narcotic effects.	

## 64742-89-8:No data available

#### 68410-97-9:

<b>Exposure routes:</b>	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsi- ness or dizziness., The substance or mixture is classified as specific target organ toxicant, sin- gle exposure, cate- gory 3 with narcotic effects.	

## 123-86-4:

<b>Exposure routes:</b>	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsi- ness or dizziness., The substance or	

	mixture is classified as specific target organ toxicant, sin- gle exposure, cate- gory 3 with narcotic effects.
--	--

#### 142-82-5:

<b>Exposure routes:</b>	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsi- ness or dizziness., The substance or mixture is classified as specific target organ toxicant, sin- gle exposure, cate- gory 3 with narcotic effects.	

## STOT - repeated exposure

Product:No data available

## **Components:**

67-64-1:No data available

## 108-88-3:

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

64742-49-0: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:

#### 67-64-1:

Species: mouse, male NOAEL: 20000 Application Route: Oral Exposure time: 13 wk Number of exposures: daily Dose: 1250, 2500, 5000, 10000, 20000 Method: OECD Test Guideline 408 GLP: No data available

Species: mouse, female NOAEL: 20000 LOAEL: 50000 Application Route: Oral Exposure time: 13 wk Number of exposures: daily Dose: 2500, 5000, 10000, 20000, 5000 Method: OECD Test Guideline 408 GLP: No data available

Repeated dose toxicity -Assessment Causes mild skin irritation., Causes serious eye irritation.

#### 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

<u>Components:</u> 67-64-1:	
Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): 6,100 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic inverte-brates	EC50 (Daphnia magna (Water flea)): 7,630 mg/l Exposure time: 48 h Test substance: Acetone
Toxicity to algae	Remarks: No data available
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 inverte-brates	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 inverte-brates	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 inverte-brates	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 inverte-brates	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 inverte-brates	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 inverte- brates (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 inverte-brates	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 degradal	bility
Components:	
67-64-1: Biodogradability	Remarks: Readily biodegradable
Biodegradability	Remarks. Reading 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 00 0	
64742-89-8: Biodegradability	Concentration: 49.2 mg/l
biodegradability	Result: Readily biodegradable.
	Biodegradation: 77 %
	Testing period: 2 d Exposure time: 28 d
	GLP: yes
123-86-4:	Disdogradation, 92 W
Biodegradability	Biodegradation: 83 % Exposure time: 28 d
	Method: OECD Test Guideline 301D
Chemical Oxygen De-	0.00169 mg/g
mand (COD)	0.00105 mg/g
BOD/COD	BOD/COD: 72 %
Theoritical Oxygen De-	0.0022 mg/g
mand (ThOD)	
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 potentia	I
<b>Components:</b> 67-64-1: Partition coefficient: n- octanol/water	log Pow: -0.24
<b>108-88-3:</b> Partition coefficient: n- octanol/water	log Pow: 2.73
<b>64742-49-0:</b> Partition coefficient: n- octanol/water	Remarks: No data available
<b>64742-89-8:</b> Partition coefficient: n- octanol/water	log Pow: 2.13 - 4.85 (25 °C)
<b>123-86-4:</b> Bioaccumulation	Species: Fish Bioconcentration factor (BCF): 15
Partition coefficient: n- octanol/water	log Pow: 1.82
<b>Mobility in soil</b> No data available	
Other adverse effects	
No data available	
Product:	
Regulation Remarks	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Sub- stances 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 in-	An environmental hazard cannot be excluded in the

formation	event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

## SECTION 13. DISPOSAL CONSIDERATIONS

<b>Disposal methods</b> 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:-18 °C(-0.40 °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 Calculated product	Components	CAS-No.	Component	Calculated product
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		RQ (lbs)	RQ (lbs)
Toluene	108-88-3	1000	4609

### SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312	Fire Hazard
Hazards	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	21.6945 %
71-43-2	Benzene	0.0421 %
100-41-4	Ethylbenzene	0.0396 %
110-54-3	Hexane	0.0035 %
67-56-1	Methanol	0.003 %
91-20-3	Naphthalene	0.0003 %
98-82-8	Cumene	0.0001 %

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 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

67-64-1	Acetone	49.3264 %
108-88-3	Toluene	21.6945 %
123-86-4	n-Butyl acetate	11.003 %
110-82-7	Cyclohexane	0.4498 %
71-43-2	Benzene	0.0421 %
100-41-4	Ethylbenzene	0.0396 %
1330-20-7	Mixed xylenes	0.0233 %
67-56-1	Methanol	0.003 %
98-82-8	Cumene	0.0001 %

## **Clean Water Act**

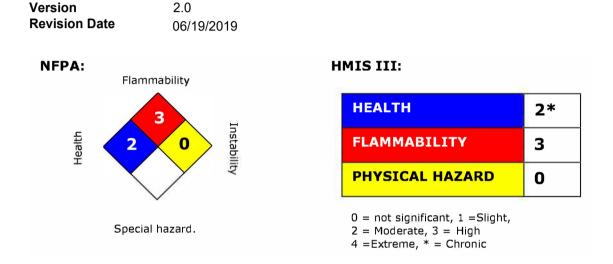
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

108-88-3	Toluene	21.6945 %
123-86-4	n-Butyl acetate	11.003 %
110-82-7	Cyclohexane	0.4498 %
71-43-2	Benzene	0.0421 %
100-41-4	Ethylbenzene	0.0396 %
1330-20-7	Mixed xylenes	0.0233 %
91-20-3	Naphthalene	0.0003 %
The following Hazardou	s Chemicals are listed ur	der the U.S. CleanWater Act, Section
311, Table 117.3:		
108-88-3	Toluene	21.6945 %
123-86-4	n-Butyl acetate	11.003 %
110-82-7	Cyclohexane	0.4498 %
71-43-2	Benzene	0.0421 %

•	Ethylbenzene Mixed xylenes Naphthalene ne following toxic pollutants l	0.0396 % 0.0233 % 0.0003 % listed under the U.S. Clean Water
Act Section 307 108-88-3	Toluene	21.6945 %
US State Regulations		
Massachusetts Right	To Know	
67-64-1 108-88-3 123-86-4 71-43-2		30 - 50 % 20 - 30 % 10 - 20 % 0 - 0.1 %
Pennsylvania Right T	o Know	
67-64-1 108-88-3 64742-4 64742-8 68410-9 123-86-4 110-82-7 71-43-2 100-41-4 1330-20 New Jersey Right To 67-64-1 108-88-3 64742-4 64742-8 68410-9	Acetone 3 Toluene 9-0 Naphtha (pet), hydro 9-8 Solvent naphtha (pet) 7-9 Distillates, pet, lt dist process, low-boil 4 n-Butyl acetate 7 Cyclohexane Benzene 4 Ethylbenzene -7 Mixed xylenes Know Acetone 3 Toluene 9-0 Naphtha (pet), hydro 9-8 Solvent naphtha (pet 7-9 Distillates, pet, lt dist process, low-boil	), It aliph. $0 - 20 \%$ $1 y drotreat$ $0 - 20 \%$ $10 - 20 \%$ $0 - 20 \%$ $0 - 20 \%$ $0 - 0.1 \%$ $0 - 0.1 \%$ $0 - 0.1 \%$ $0 - 0.1 \%$ $20 - 30 \%$ $20 - 30 \%$ $1 t aliph.$ $0 - 20 \%$ $0 + 20 \%$
123-86-4	4 n-Butyl acetate	10 - 20 %
California Prop 65 71-43-2 100-41-4 91-20-3 98-82-8 108-88-3 71-43-2 67-56-1	the State of California Benzene Ethylbenzene Naphthalene Cumene WARNING: This produ the State of California reproductive harm.	uct contains a chemical known to a to cause cancer. uct contains a chemical known to a to cause birth defects or other

#### The components of this product are reported in the following inventories: Switzerland. New notified substances and declared y (positive listing) preparations (The formulation contains substances listed on the Swiss Inventory) United States TSCA Inventory y (positive listing) (On TSCA Inventory) y (positive listing) Canadian Domestic Substances List (DSL) (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 n (Negative listing) Substances Inventory (Not in compliance with the inventory) Japan. ISHL - Inventory of Chemical Substances n (Negative listing) (METI) (Not in compliance with the inventory) y (positive listing) Korea. Korean Existing Chemicals Inventory (KECI) (On the inventory, or in compliance with the inventory) **Philippines Inventory of Chemicals and Chemical** y (positive listing) Substances (PICCS) (On the inventory, or in compliance with the inventory) China. Inventory of Existing Chemical Substances in y (positive listing) China (IECSC) (On the inventory, or in compliance with the inventory)





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.

## Legecy MSDS:

R0365914

Material number:

159793,

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Gov-	LD50	Lethal Dose 50%
	ernment Industrial Hygienists		
AICS	Australia, Inventory of Chem-	LOAEL	Lowest Observed Adverse Effect
	ical Substances		Level
DSL	Canada, Domestic Substanc-	NFPA	National Fire Protection Agency
	es List		
NDSL	Canada, Non-Domestic Sub-	NIOSH	National Institute for Occupational
	stances List		Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals

EC50	Effective Concentration	NOAFI	No Observable Adverse Effect Level
FC50	Effective Concentration 50%	NOFC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Admin- istration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Exist- ing Chemical Substances	PICCS	Philipines Inventory of Commercial Chemical Substances
МАК	Germany Maximum Concen- tration 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 Reau- thorization Act.
IARC	International Agency for Re- search on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemi- cal Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substanc- es	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical In- ventory	UVCB	Unknown or Variable Compositon, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials In- formation System
LC50		Lethal Conc	entration 50%