

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

EZ-FLO II

Revision Date: 16-Sep-2015

Revision Number: 28

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name EZ-FLO II
Internal ID Code HM006711

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Flow Enhancer
Sector of use Refer to the Annex for a listing of uses.

1.3. Details of the supplier of the safety data sheet

Halliburton Energy Services
Halliburton House, Howemoss Place
Kirkhill Industrial Estate
Dyce
Aberdeen, AB21 0GN
United Kingdom

www.halliburton.com

For further information, please contact

E-Mail address: fdunexchem@halliburton.com

1.4. Emergency telephone number

+44 8 08 189 0979 / 1-760-476-3961

Emergency telephone - §45 - (EC)1272/2008	
Europe	112
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	+210 7793777
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO):+ 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin Corrosion / irritation	Category 1 A - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H335
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373

2.2. Label Elements

Hazard Pictograms**Signal Word****Danger****Hazard Statements**

H314 - Causes severe skin burns and eye damage

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/eye protection/face protection

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor/physician

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Contains**Substances**

Acetic acid

Ethylene glycol

CAS Number

64-19-7

107-21-1

2.3. Other Hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on Ingredients**3.2. Mixtures**

Mixture

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Acetic acid	200-580-7	64-19-7	30 - 60%	Skin Corr. 1A (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Flam. Liq. 3 (H226)	01-2119475328-30
Ethylene glycol	203-473-3	107-21-1	5 - 10%	Acute Tox. 4 (H302) STOT RE 1 (H372)	01-2119456816-28

For the full text of the H-phrases mentioned in this Section, see Section 16**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation**

If inhaled, move victim to fresh air and seek medical attention.

Eyes

Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.

Skin

In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.

Ingestion

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

4.2. Most Important symptoms and effects, both acute and delayed

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause respiratory irritation. May cause damage to internal organs.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically

SECTION 5: Firefighting Measures

5.1. Extinguishing media**Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

5.2. Special hazards arising from the substance or mixture**Special Exposure Hazards**

Decomposition in fire may produce harmful gases. Do not allow runoff to enter waterways.

5.3. Advice for firefighters**Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove sources of ignition. Ensure adequate ventilation. Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid creating and breathing dust. Evacuate all persons from the area.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas. Consult local authorities.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Neutralize to pH of 6-8. Scoop up and remove.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling

Remove sources of ignition. Ensure adequate ventilation. Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment. Ground and bond containers when transferring from one container to another.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store away from alkalis. Keep from heat, sparks, and open flames. Keep container closed when not in use. Store in a cool well ventilated area. Store locked up. Product has a shelf life of 12 months.

7.3. Specific End Use(s)**Exposure Scenario**

Please refer to the attached Annex for a listing of exposure scenarios.

Other Guidelines

No information available

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters**Exposure Limits**

Substances	CAS Number	EU	UK	Netherlands	France
Acetic acid	64-19-7	10 ppm	Not applicable	Not applicable	10 ppm
Ethylene glycol	107-21-1	Not applicable	TWA: 10 mg/m ³ TWA: 20 ppm	TWA: 52 mg/m ³ TWA: 10 mg/m ³	20 ppm

			TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³ STEL: 30 mg/m ³	STEL: 104 mg/m ³	
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Substances	CAS Number	Germany	Spain	Portugal	Finland
Acetic acid	64-19-7	TWA: 10 ppm TWA: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ 15 ppm STEL [VLA-EC]; 37 mg/m ³ STEL [VLA-EC]	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm	TWA: 5 ppm TWA: 13 mg/m ³ STEL: 10 ppm STEL: 25 mg/m ³
Ethylene glycol	107-21-1	TWA: 10 ppm TWA: 26 mg/m ³	TWA: 20 ppm TWA: 52 mg/m ³ 40 ppm STEL [VLA-EC]; 104 mg/m ³ STEL [VLA-EC]	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³	TWA: 20 ppm TWA: 50 mg/m ³ STEL: 40 ppm STEL: 100 mg/m ³

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Acetic acid	64-19-7	TWA: 10 ppm TWA: 25 mg/m ³ STEL" 20 ppm STEL" 50 mg/m ³	10 ppm TWA; 25 mg/m ³ TWA 15 ppm STEL; 37 mg/m ³ STEL	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 20 ppm STEL: 50 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 20 ppm STEL: 37.5 mg/m ³
Ethylene glycol	107-21-1	TWA: 10 ppm TWA: 26 mg/m ³ STEL" 20 ppm STEL" 52 mg/m ³	10 mg/m ³ TWA (particulate); 20 ppm TWA (vapour); 52 mg/m ³ TWA (vapour) 40 ppm STEL; 104 mg/m ³ STEL	TWA: 10 ppm TWA: 26 mg/m ³ STEL: 20 ppm STEL: 52 mg/m ³	TWA: 10 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³ STEL: 104 mg/m ³ STEL: 40 ppm

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Acetic acid	64-19-7	10 ppm	TWA: 15 mg/m ³ STEL: 30 mg/m ³	TWA: 25 mg/m ³ STEL: 25 mg/m ³	TWA: 25 mg/m ³
Ethylene glycol	107-21-1	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³	TWA: 15 mg/m ³ STEL: 50 mg/m ³	TWA: 52 mg/m ³ STEL: 104 mg/m ³	TWA: 50 mg/m ³

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Acetic acid	64-19-7	TWA: 10 ppm TWA: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³
Ethylene glycol	107-21-1	TWA: 10 ppm TWA: 26 mg/m ³ TWA: 10 mg/m ³	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³

Derived No Effect Level (DNEL)**Worker**

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Hazards for the eyes - local effects
Acetic acid	Not available	Not available	25 mg/m ³	25 mg/m ³	Not available	Not available	Not available	Not available	Not available
Ethylene glycol	Not available	Not available	35 mg/m ³	Not available	106 mg/kg bw/day	Not available	Not available	Not available	Not available

General Population

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Long-term exposure - systemic effects, Oral	Acute / short term exposure - local effects, Oral	Hazards for the eyes - local effects
Acetic acid	Not available	Not available	25 mg/m ³	25 mg/m ³	Not available	Not available	Not available	Not available	Not available	Not available	Not available
Ethylene glycol	Not available	Not available	7 mg/m ³	Not available	53 mg/kg bw/day	Not available	Not available	Not available	Not available	Not available	Not available

Predicted No Effect Concentration (PNEC)

Substances	Freshwater	Marine water	Intermittent release	Sewage treatment	Sediment (freshwater)	Sediment (marine)	Air	Soil	Secondary poisoning
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				plant		water)			
Acetic acid	3.06 mg/l	0.306 mg/l	30.58 mg/l	85 mg/l	11.4 mg/kg	1.14 mg/kg	Not available	0.478 mg/kg	Not available
Ethylene glycol	10 mg/L	1 mg/L	10 mg/L	199.5 mg/L	37 mg/kg sediment dw	3.7 mg/kg sediment dw	Not available	1.53 mg/kg soil dw	Not available

8.2. Exposure controls**Engineering Controls**

Local exhaust ventilation should be used in areas without good cross ventilation. Use in a well ventilated area.

Personal protective equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Organic vapor/acid gas respirator with a dust/mist filter.

Hand Protection

Impervious rubber gloves.

Skin Protection

Rubber apron.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

Environmental Exposure Controls Do not allow material to contaminate ground water system

SECTION 9: Physical and Chemical Properties
9.1. Information on basic physical and chemical properties

Physical State: Powder

Color: White

Odor: Vinegar

Odor Threshold: No information available

PropertyValues

Remarks/ - Method

pH:

< 1

Freezing Point/Range

No data available

Melting Point/Range

No data available

Boiling Point/Range

No data available

Flash Point

61 °C / 141 °F PMCC

Flammability (solid, gas)

No data available

upper flammability limit

No data available

lower flammability limit

No data available

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

1.4

Water Solubility

Partly soluble

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

Viscosity

No data available

Explosive Properties

No information available

Oxidizing Properties

No information available

9.2. Other information

VOC Content (%)

No data available

SECTION 10: Stability and Reactivity
10.1. Reactivity

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions

Will Not Occur

10.4. Conditions to Avoid

Keep away from heat, sparks and flame.

10.5. Incompatible Materials

Strong oxidizers. Aldehydes. Strong alkalis.

10.6. Hazardous Decomposition Products

Aldehydes. Carbon monoxide and carbon dioxide. Acids.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

Inhalation

Causes severe respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact

Causes serious eye damage.

Skin Contact

Causes severe burns.

Ingestion

Causes burns of the mouth, throat and stomach. May cause kidney damage. May affect the heart and cardiovascular system. May cause central nervous system effects.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure may cause kidney damage.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetic acid	64-19-7	3310 mg/kg (Rat) 600 mg/kg (Rabbit) 4960 mg/kg (Mouse)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4h
Ethylene glycol	107-21-1	4000 mg/kg (Rat) 7712 mg/kg (Rat) > 10000 mg/kg (Rat) 1670 mg/kg (Cat) 1400 – 1600 mg/kg (Human)	9530 µL/kg (Rabbit) > 3500 mg/kg (Mouse)	> 2.5 mg/L (Rat) 6h (saturated concentration)

Substances	CAS Number	Skin corrosion/irritation
Acetic acid	64-19-7	Corrosive to skin
Ethylene glycol	107-21-1	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Eye damage/irritation
Acetic acid	64-19-7	Corrosive to eyes
Ethylene glycol	107-21-1	Non-irritating to the eye (Rabbit)

Substances	CAS Number	Skin Sensitization
Acetic acid	64-19-7	Not regarded as a sensitizer.
Ethylene glycol	107-21-1	Did not cause sensitization on laboratory animals (guinea pig) Patch test on human volunteers did not demonstrate sensitization properties

Substances	CAS Number	Respiratory Sensitization
Acetic acid	64-19-7	No information available
Ethylene glycol	107-21-1	No information available

Substances	CAS Number	Mutagenic Effects
Acetic acid	64-19-7	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects
Ethylene glycol	107-21-1	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Acetic acid	64-19-7	Did not show carcinogenic effects in animal experiments
Ethylene glycol	107-21-1	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Acetic acid	64-19-7	Did not show teratogenic effects in animal experiments. Animal testing did not show any effects on fertility.
Ethylene glycol	107-21-1	Fetotoxic and teratogenic effects observed in experimental animals at concentrations that did not

		produce maternal toxicity.
Substances	CAS Number	STOT - single exposure
Acetic acid	64-19-7	May cause respiratory irritation.
Ethylene glycol	107-21-1	No significant toxicity observed in animal studies at concentration requiring classification.
Substances	CAS Number	STOT - repeated exposure
Acetic acid	64-19-7	Not applicable due to corrosivity of the substance.
Ethylene glycol	107-21-1	Causes damage to organs through prolonged or repeated exposure: (Kidney)
Substances	CAS Number	Aspiration hazard
Acetic acid	64-19-7	Not applicable
Ethylene glycol	107-21-1	No information available

SECTION 12: Ecological Information

12.1. Toxicity Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Acetic acid	64-19-7	EC50 90 mg/L (Microcystis aeruginosa) EC50 (72h) > 1000 mg/L (>300.82 mg/L – acetate ion) (Skeletonema costatum)	LC50 79 mg/L (Pimephales promelas) LC50 75 mg/L (Pimephales promelas) LC50 (96h) > 1000 mg/L (>300.82 mg/L – acetate ion) (Oncorhynchus mykiss)	NOEC (16h) 1150 mg/L (Pseudomonas putida)	EC50 47 mg/L (Daphnia magna) LC50 32 mg/L (Artemia salina) EC50 (48h) > 1000 mg/L (>300.82 mg/L – acetate ion) (Daphnia magna) NOEC (21d) 31.4 - 37.9 mg/L (Daphnia magna) (reproduction)
Ethylene glycol	107-21-1	EC50 6500 - 13000 mg/L (Pseudokirchneriella subcapitata) TGK (8d) > 10000 mg/L (Scenedesmus quadricauda)	LC50 41000 mg/L (Oncorhynchus mykiss) LC50 (96h) 72860 mg/L (Pimephales promelas) NOEC (7d) 15380 mg/L (mortality) (Pimephales promelas)	TTC (16h) > 10000 mg/L (Pseudomonas putida) EC20 (30 m) > 1995 mg/L (activated sludge, domestic) (similar substance)	EC50 46300 mg/L (Daphnia magna) EC50 (48h) >100 mg/L (Daphnia magna) NOEC (7d) 8590 mg/L (reproduction) (Ceriodaphnia dubia)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Acetic acid	64-19-7	Readily biodegradable (99% @ 7d)
Ethylene glycol	107-21-1	Readily biodegradable (100% @ 10d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Acetic acid	64-19-7	-0.17 BCF = 3.16 (Calculated)
Ethylene glycol	107-21-1	-1.36

12.4. Mobility in soil

Substances	CAS Number	Mobility
Acetic acid	64-19-7	No information available
Ethylene glycol	107-21-1	No information available

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

Substances	PBT and vPvB assessment
Acetic acid	Not PBT/vPvB

Ethylene glycol	Not PBT/vPvB
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12.6. Other adverse effects**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal Considerations
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13.1. Waste treatment methods**Disposal Method**

Disposal should be made in accordance with federal, state, and local regulations. Substance should NOT be deposited into a sewage facility.

Contaminated Packaging

Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

SECTION 14: Transport Information
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IMDG/IMO

UN Number: UN3244
UN Proper Shipping Name: Solids Containing Corrosive Liquid, N.O.S. (Contains Acetic Acid)
Transport Hazard Class(es): 8
Packing Group: II
Environmental Hazards: Not applicable

RID

UN Number: UN3244
UN Proper Shipping Name: Solids Containing Corrosive Liquid, N.O.S. (Contains Acetic Acid)
Transport Hazard Class(es): 8
Packing Group: II
Environmental Hazards: Not applicable

ADR

UN Number: UN3244
UN Proper Shipping Name: Solids Containing Corrosive Liquid, N.O.S. (Contains Acetic Acid)
Transport Hazard Class(es): 8
Packing Group: II
Environmental Hazards: Not applicable

IATA/ICAO

UN Number: UN3244
UN Proper Shipping Name: Solids Containing Corrosive Liquid, N.O.S. (Contains Acetic Acid)
Transport Hazard Class(es): 8
Packing Group: II
Environmental Hazards: Not applicable

14.1. UN Number: UN3244

14.2. UN Proper Shipping Name: Solids Containing Corrosive Liquid, N.O.S. (Contains Acetic Acid)

14.3. Transport Hazard Class(es): 8

14.4. Packing Group: II

14.5. Environmental Hazards: Not applicable

14.6. Special Precautions for User: None

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**International Inventories**

EINECS Inventory	This product, and all its components, complies with EINECS
US TSCA Inventory	All components listed on inventory or are exempt.
Canadian DSL Inventory	All components listed on inventory or are exempt.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering WGK 1: Low hazard to waters.
Classes (WGK)

15.2. Chemical Safety Assessment

Yes

SECTION 16: Other Information**Full text of H-Statements referred to under sections 2 and 3**

H226 - Flammable liquid and vapor

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H372 - Causes damage to organs through prolonged or repeated exposure

H373 - May cause damage to organs through prolonged or repeated exposure

Key or legend to abbreviations and acronyms

bw – body weight

CAS – Chemical Abstracts Service

CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures

EC – European Commission

EC10 – Effective Concentration 10%

EC50 – Effective Concentration 50%

EEC – European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL0 – Lethal Loading 0%

LL50 – Lethal Loading 50%

MARPOL – International Convention for the Prevention of Pollution from Ships

mg/kg – milligram/kilogram

mg/L – milligram/liter

NIOSH – National Institute for Occupational Safety and Health

NOEC – No Observed Effect Concentration

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PBT – Persistent Bioaccumulative and Toxic

PC – Chemical Product category

PEL – Permissible Exposure Limit

ppm – parts per million

PROC – Process category

REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL – Short Term Exposure Limit

SU – Sector of Use category

Key literature references and sources for data

www.ChemADVISOR.com/

NZ CCID

Revision Date: 16-Sep-2015**Revision Note**

SDS sections updated: 1

This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010

Disclaimer Statement

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End of Safety Data Sheet