HALLIBURTON

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

BARAKLEAN® DUAL

Revision Date: 15-Sep-2015 Revision Number: 29

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

1.1. Product Identifier

Product Name BARAKLEAN® DUAL

Internal ID Code HM006480

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

Recommended Use Solvent Cleaning Solution

Sector of use Refer to the Annex for a listing of uses.

1.3. Details of the supplier of the safety data sheet

Halliburton Manufacturing Services, Ltd. Halliburton House, Howemoss Crescent

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

| REGULATION (EC) NO 1212/2000 | |
|-------------------------------------|---------------------|
| Acute Inhalation Toxicity - Vapors | Category 4 - (H332) |
| Skin Corrosion / irritation | Category 2 - (H315) |
| Serious Eye Damage / Eye Irritation | Category 1 - (H318) |

2.2. Label Elements

Hazard Pictograms



Signal Word Danger

Hazard Statements

H315 - Causes skin irritation

H318 - Causes serious eye damage

H332 - Harmful if inhaled

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

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

P312 - Call a POISON CENTER or doctor/physician if you feel unwell

Contains

SubstancesCAS NumberEthylene glycol monobutyl ether111-76-2Alcohols, C9-11, ethoxylated68439-46-3

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. |
|---------------------------------|-------------------|---------------|------------------|---|-------------------|
| Ethylene glycol monobutyl ether | 203-905-0 | 111-76-2 | 30 - 60% | Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) | 01-2119475108-36 |
| Alcohols, C9-11, ethoxylated | Not applicable | 68439-46-3 | 10 - 30% | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412) | No data available |

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 In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Seek immediate medical attention/advice. Suitable emergency eye wash facility

should be immediately available

Skin In case of contact, immediately flush skin with plenty of soap and water for at

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least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

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

attention.

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

Harmful if inhaled. Causes serious eye damage. Causes skin irritation.

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

Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases. Fight fire from a safe distance and from a protected location.

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

Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. 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. 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

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool well ventilated area. Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 24 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

| | CAS Number | FII | UK | Netherlands | France |
|------------|------------|-----|----|---------------|--------|
| Substances | CAS Number | | UN | INCLIEUTATIOS | France |

| Ethylene glycol monobutyl ether | 111-76-2 | Not applicable | TWA: 25 ppm TWA: 123 mg/m ³ STEL: 50 ppm STEL: 246 mg/m ³ | TWA: 100 mg/m ³ STEL: 246 mg/m ³ | 2 ppm |
|---------------------------------|------------|----------------|--|---|----------------|
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Not applicable | Not applicable | Not applicable | Not applicable |

| Substances | CAS Number | Germany | Spain | Portugal | Finland |
|---------------------------------|------------|------------------------------|--|---|---|
| Ethylene glycol monobutyl ether | 111-76-2 | TWA: 10 ppm TWA: 49 mg/m³ | TWA: 20 ppm TWA: 98 mg/m³ 50 ppm STEL [VLA-EC]; 245 mg/m³ | TWA: 20 ppm TWA: 98 mg/m³ STEL: 50 ppm STEL: 246 mg/m³ | TWA: 20 ppm TWA: 98 mg/m³ STEL: 50 ppm STEL: 250 mg/m³ |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Not applicable | STEL [VLA-EC] Not applicable | Not applicable | Not applicable |

| Substances | CAS Number | Austria | Ireland | Switzerland | Norway |
|---------------------------------|------------|---|---|--|--|
| Ethylene glycol monobutyl ether | 111-76-2 | TWA: 20 ppm TWA: 98 mg/m³ STEL" 40 ppm STEL" 200 mg/m³ | 20 ppm TWA; 98 mg/m³ TWA 50 ppm STEL; 246 mg/m³ STEL | TWA: 10 ppm TWA: 49 mg/m³ STEL: 20 ppm STEL: 98 mg/m³ | TWA: 10 ppm TWA: 50 mg/m³ STEL: 20 ppm STEL: 75 mg/m³ |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Not applicable | Not applicable | Not applicable | Not applicable |

| Substances | CAS Number | Italy | Poland | Hungary | Czech Republic |
|---------------------------------|------------|---|--|----------------------------------|----------------------------|
| Ethylene glycol monobutyl ether | 111-76-2 | TWA: 20 ppm TWA: 98 mg/m³ STEL: 50 ppm STEL: 246 mg/m³ | TWA: 98 mg/m ³ STEL: 200 mg/m ³ | TWA: 98 mg/m³ STEL: 246 mg/m³ | TWA: 100 mg/m ³ |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Not applicable | Not applicable | Not applicable | Not applicable |

| Substances | CAS Number | Denmark | Romania | Croatia | Cyprus |
|---------------------------------|------------|------------------------------|---|---|---|
| Ethylene glycol monobutyl ether | 111-76-2 | TWA: 20 ppm TWA: 98 mg/m³ | TWA: 30 ppm TWA: 150 mg/m³ STEL: 50 ppm STEL: 250 mg/m³ STEL: 246 mg/m³ | TWA: 20 ppm TWA: 98 mg/m³ STEL: 50 ppm STEL: 246 mg/m³ | TWA: 20 ppm TWA: 98 mg/m³ STEL: 50 ppm STEL: 246 mg/m³ |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Not applicable | Not applicable | Not applicable | Not applicable |

Derived No Effect Level (DNEL)

Worker

| TTOTICE | | | | | | | | | |
|-----------------|----------------------|-----------------------|----------------|-----------------------|------------|---------------|----------------|----------------|---------------|
| Substances | Long-term | Acute / short | Long-term | Acute / short | Long-term | Acute / short | Long-term | Acute / short | Hazards for |
| | exposure - | term | exposure - | term | exposure - | term | exposure - | term | the eyes - |
| | systemic | exposure - | local effects, | exposure - | systemic | exposure - | local effects, | exposure - | local effects |
| | effects, | systemic | Inhalation | local effects, | effects, | systemic | Dermal | local effects, | |
| | Inhalation | effects, | | Inhalation | Dermal | effects, | | Dermal | |
| | | Inhalation | | | | Dermal | | | |
| Ethylene glycol | 98 mg/m ³ | 663 mg/m ³ | Not available | 246 mg/m ³ | , , | 3 3 | Not available | Not available | Not available |
| monobutyl ether | | | | | bw/day | bw/day | | | |

General Population

| Substances | Long-term | Acute / | Long-term | Acute / | Long-term | Acute / | Long-term | Acute / | Long-term | Acute / | Hazards |
|-----------------|----------------------|-----------------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|-----------|
| | exposure - | short term | exposure - | short term | exposure - | short term | exposure - | short term | exposure - | short term | for the |
| | systemic | exposure - | local | exposure - | systemic | exposure - | local | exposure - | systemic | exposure - | eyes - |
| | effects, | systemic | effects, | local | effects, | systemic | effects, | local | effects, | local | local |
| | Inhalation | effects, | Inhalation | effects, | Dermal | effects, | Dermal | effects, | Oral | effects, | effects |
| | | Inhalation | | Inhalation | | Dermal | | Dermal | | Oral | |
| Ethylene glycol | 49 mg/m ³ | 426 mg/m ³ | Not | 123 mg/m ³ | 38 mg/kg | 44.5 | Not | Not | 3.2 mg/kg | 13.4 | Not |
| monobutyl ether | | | available | | bw/day | mg/kg | available | available | bw/day | mg/kg | available |
| | | | | | | bw/day | | | | bw/day | |

Predicted No Effect Concentration (PNEC)

| Substances | Freshwater | Marine water | | | Sediment (freshwater) | | Air | Secondary poisoning |
|---------------------------------|------------|--------------|----------|----------|--------------------------|------------|---------------|-------------------------|
| | | | | plant | Ì | water) | | ľ |
| Ethylene glycol monobutyl ether | 8.8 mg/L | 0.88 kg/L | 9.1 mg/L | 463 mg/L | 34.6 mg/kg | 3.46 mg/kg | Not available | 0.02 g/kg food |

8.2. Exposure controls

Engineering Controls

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

good cross ventilation.

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.

When the potential exists for heated vapors or fumes of this product to be created, use a respirator with an organic-vapor filter or a supplied-air respirator as needed for adequate

protection.

Hand Protection Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct

contact (recommended: protection index 6, corresponding to > 480 minutes permeation

time as per EN 374): Butyl rubber gloves. (>= 0.7 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed

then the gloves should be replaced.

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. Rubber boots

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: Liquid Color: Clear

Odor: Characteristic Odor Threshold: No information available

<u>Property</u> <u>Values</u>

Remarks/ - Method

pH: 4 (10% Solution)

Freezing Point/Range -70 °C

Melting Point/Range No data available

 Boiling Point/Range
 168 - 173 °C / 334.4 - 343.4 °F

 Flash Point
 68 °C / 154 °F Closed cup

Flammability (solid, gas)
upper flammability limit
lower flammability limit
Evaporation rate
Vapor Pressure
Vapor Density
No data available
0.968 mmHg
No data available

Specific Gravity 0.97

Water Solubility

Solubility in other solvents

Partition coefficient: n-octanol/water

Autoignition Temperature

Decomposition Temperature

Viscosity

No data available

Explosive PropertiesNo information availableOxidizing PropertiesNo 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.

10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

Inhalation Harmful if inhaled. May cause 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 ContactCauses skin irritation. May be absorbed through the skin and produce effects similar to

those caused by inhalation and/or ingestion.

Ingestion May be harmful if swallowed. Irritation of the mouth, throat, and stomach. May cause

abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are

chronic health hazards.

Toxicology data for the components

| Substances | CAS Number | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------------------------|---------------|---|---|--|
| Ethylene glycol monobutyl ether | 111-76-2 | 470 mg/kg (Rat) 1414 mg/kg (Guinea pig) 1746 mg/kg (Rat) 320 mg/kg (Rabbit) 530 mg/kg (Rat) 560 mg/kg (Rat) 3000 mg/kg (Rat) 2400 mg/kg (Rat) | 220 mg/kg (Rabbit) 2270 mg/kg (Rat) 200 mg/kg (Guinea pig) >2000 mg/kg (Rabbit) 841 mg/kg (Rabbit) 435 mg/kg (Rabbit) >2000 mg/kg (Guinea pig) >2000 mg/kg (Rat) 100 mg/kg (Rabbit) 207 mg/kg (Guinea pig) 400-500 mg/kg (Rabbit) | 450 mg/L (Rat) 4h 2.174 mg/L (Rat) 4h 2.21 mg/L (Rat) 4h 450-486 mg/L (Rat) 4h 925 mg/L (Rat) 4h >633 mg/L (Guinea pig) 1h |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | 1400 mg/kg (Rat) 1378 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | No toxicity at saturation (similar substances) |

| | CAS Number | Skin corrosion/irritation |
|---------------------------------|---------------|---|
| Ethylene glycol monobutyl ether | 111-76-2 | Causes moderate skin irritation. (Rabbit) |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | May cause moderate skin irritation. (Rabbit) (similar substances) |

| | CAS Number | Eye damage/irritation |
|---------------------------------|---------------|---|
| Ethylene glycol monobutyl ether | 111-76-2 | Causes moderate eye irritation. (Rabbit) |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Causes serious eye damage (Rabbit) (similar substances) |

| | CAS Number | Skin Sensitization |
|---------------------------------|---------------|---|
| Ethylene glycol monobutyl ether | 111-76-2 | Did not cause sensitization on laboratory animals (guinea pig) |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Did not cause sensitization on laboratory animals (guinea pig) (similar substances) |

| | CAS Number | Respiratory Sensitization |
|---------------------------------|---------------|---------------------------|
| Ethylene glycol monobutyl ether | 111-76-2 | No information available |

| Alcohols, C9-11, | 68439-46-3 | No information available |
|------------------|------------|--------------------------|
| ethoxylated | | |

| Substances | CAS Number | Mutagenic Effects |
|---------------------------------|---------------|--|
| Ethylene glycol monobutyl ether | 111-76-2 | In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects |
| Alcohols, C9-11, ethoxylated | | In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances) |

| Substances | CAS Number | Carcinogenic Effects |
|---------------------------------|---------------|--|
| Ethylene glycol monobutyl ether | 111-76-2 | Not regarded as carcinogenic. |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Did not show carcinogenic effects in animal experiments (similar substances) |

| Substances | CAS Number | Reproductive toxicity |
|---------------------------------|---------------|---|
| Ethylene glycol monobutyl ether | 1 | Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Animal testing did not show any effects on fertility. (similar substances) |

| | CAS Number | STOT - single exposure |
|---------------------------------|---------------|--|
| Ethylene glycol monobutyl ether | 111-76-2 | No data of sufficient quality are available. |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | No data of sufficient quality are available. |

| Substances | CAS Number | STOT - repeated exposure |
|---------------------------|---------------|--|
| Ethylene glycol monobutyl | 111-76-2 | No data of sufficient quality are available. |
| ether | | |
| Alcohols, C9-11, | 68439-46-3 | No data of sufficient quality are available. |
| ethoxylated | | |

| Substances | CAS Number | Aspiration hazard |
|---------------------------------|---------------|---|
| Ethylene glycol monobutyl ether | 111-76-2 | No adverse health effects are expected from swallowing. |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | 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 |
|------------------------------------|---------------|--|--|---|--|
| Ethylene glycol monobutyl ether | 111-76-2 | EC50 839.56 mg/L (Skeletonema costatum) EbC50 (72h) 911 mg/L EC50 > 500 mg/L (Scenedesmus subspicatus) NOEC (72h) 88 mg/L (biomass)(Pseudokirchn erella subcapitata) | maximus, juvenile) LC50 (96h) 1474 mg/L (Oncorhynchus mykiss) NOEC (21d) > 100mg/L (Danio rerio) | | No information available |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | EC50(96h): 0.26 mg/L (Selenastrum capriconutum) | LC50(96h): 5.7 mg/L (Oncorhynchus mykiss) NOEC(30d): 0.28 mg/L (Pimephales promelas) (similar substance) | EC50(3h): 140 mg/L (Activated sludge, domestic) | EC50(48h): 2.5 mg/L (Daphnia magna) NOEC(21d): 1.75 mg/L (Daphnia magna) (similar substance) |

12.2. Persistence and degradability

| Substances | CAS Number | Persistence and Degradability |
|---------------------------------|------------|---|
| Ethylene glycol monobutyl ether | 111-76-2 | Readily biodegradable (75-88% @ 28d) |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | Readily biodegradable (72 - 89% @ 28d) (similar |
| | | substances) |

12.3. Bioaccumulative potential

| Substances | CAS Number | Log Pow | |
|---------------------------------|------------|--------------------------|--|
| Ethylene glycol monobutyl ether | 111-76-2 | 0.81 | |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | No information available | |

12.4. Mobility in soil

| Substances | CAS Number | Mobility |
|---------------------------------|------------|--------------------------|
| Ethylene glycol monobutyl ether | 111-76-2 | No information available |
| Alcohols, C9-11, ethoxylated | 68439-46-3 | 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 | | |
|---------------------------------|-------------------------|--|--|
| Ethylene glycol monobutyl ether | Not PBT/vPvB | | |
| Alcohols, C9-11, ethoxylated | Not PBT/vPvB | | |

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Disposal Method

Contaminated Packaging

Disposal should be made in accordance with federal, state, and local regulations.

Follow all applicable national or local regulations.

SECTION 14: Transport Information

IMDG/IMO

UN Number:
UN Proper Shipping Name:
Transport Hazard Class(es):
Packing Group:
Not applicable
Not applicable
Not applicable
Not applicable

RID

UN Number:
UN Proper Shipping Name:
Transport Hazard Class(es):
Packing Group:
Not applicable
Environmental Hazards:
Not applicable
Not applicable

ADR

UN Number:
UN Proper Shipping Name:
Transport Hazard Class(es):
Packing Group:
Not applicable
Environmental Hazards:
Not applicable
Not applicable

IATA/ICAO

UN Number:
UN Proper Shipping Name:
Transport Hazard Class(es):
Packing Group:
Not applicable
Environmental Hazards:
Not applicable
Not applicable

14.1. UN Number: Not restricted

14.2. UN Proper Shipping Name: Not restricted

14.3. Transport Hazard Class(es): Not applicable

14.4. Packing Group: Not applicable

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.
All components listed on inventory or are exempt.
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/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering

Classes (WGK)

WGK 1: Low hazard to waters.

15.2. Chemical Safety Assessment

Yes

SECTION 16: Other Information

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H315 - Causes skin irritation

H318 - Causes serious eve damage

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H400 - Very toxic to aquatic life

H412 - Harmful to aquatic life with long lasting effects

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/ OSHA ECHA C&L NZ CCID

Revision Date: 15-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