

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

MOC-A

Revision Date: 15-Sep-2015

Revision Number: 14

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

1.1. Product Identifier

Product Name MOC-A
Internal ID Code HM001083

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

Recommended Use Surfactant

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 2 - H315
Serious Eye Damage / Eye Irritation	Category 1 - H318
Germ Cell Mutagenicity	Category 1 - H340
Carcinogenicity	Category 1B - H350
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H336
Chronic Aquatic Toxicity	Chronic 3 - H412
Flammable liquids.	Category 2 - H225

2.2. Label Elements**Hazard Pictograms****Signal Word****Danger****Hazard Statements**

H225 - Highly flammable liquid and vapor
 H315 - Causes skin irritation
 H318 - Causes serious eye damage
 H336 - May cause drowsiness or dizziness
 H340 - May cause genetic defects
 H350 - May cause cancer
 H412 - Harmful to aquatic life with long lasting effects

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

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 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
 P308 + P313 - IF exposed or concerned: Get medical attention/advice

Contains**Substances**

Calcium dodecylbenzene sulfonic acid
 Naphthalene
 Light aromatic solvent
 1,2,4 Trimethylbenzene
 Butyl alcohol
 Isopropanol

CAS Number

26264-06-2
 91-20-3
 64742-95-6
 95-63-6
 71-36-3
 67-63-0

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.
Calcium dodecylbenzene sulfonic acid	247-557-8	26264-06-2	30 - 60%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Chronic 3 (H412)	No data available
Naphthalene	202-049-5	91-20-3	1 - 5%	Acute Tox. 4 (H302) Carc. 2 (H351) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Flam. Sol. 2 (H228)	No data available
Light aromatic solvent	265-199-0	64742-95-6	5 - 10%	Skin Irrit. 2 (H315) Muta. 1 (H340) Carc. 1B (H350) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Chronic 3 (H412) Flam. Liq. 3 (H226)	No data available

1,2,4 Trimethylbenzene	202-436-9	95-63-6	1 - 5%	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) STOT RE 1 (H372) Aquatic Chronic 2 (H411) Flam. Liq. 3 (H226)	No data available
Butyl alcohol	200-751-6	71-36-3	5 - 10%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Flam. Liq. 3 (H226)	No data available
Isopropanol	200-661-7	67-63-0	10 - 30%	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	01-2119457558-25

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 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

May cause headache, dizziness, and other central nervous system effects. Causes skin irritation. Causes severe eye irritation which may damage tissue. Carcinogen. May cause damage to internal organs. May cause heritable genetic damage.

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

May be ignited by heat, sparks or flames. Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases.

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. Remove ignition sources and work with non-sparking tools. 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**

Remove sources of ignition. Ensure adequate ventilation. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. 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 away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 36 months.

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

No information available

Other Guidelines

No information available

SECTION 8: Exposure Controls/Personal Protection**8.1. Control parameters****Exposure Limits**

Substances	CAS Number	EU	UK	Netherlands	France
Calcium dodecylbenzene sulfonic acid	26264-06-2	Not applicable	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	Not applicable	10 ppm	TWA: 50 mg/m ³ STEL: 80 mg/m ³	10 ppm
Light aromatic solvent	64742-95-6	Not applicable	Not applicable	Not applicable	Not applicable
1,2,4 Trimethylbenzene	95-63-6	Not applicable	25 ppm	TWA: 100 mg/m ³ STEL: 200 mg/m ³	20 ppm
Butyl alcohol	71-36-3	Not applicable	STEL: 50 ppm STEL: 154 mg/m ³	15 ppm	STEL: 50 ppm STEL: 150 mg/m ³
Isopropanol	67-63-0	Not applicable	TWA: 400 ppm TWA: 999 mg/m ³ STEL: 500 ppm STEL: 1250 mg/m ³	Not applicable	STEL: 400 ppm STEL: 980 mg/m ³

Substances	CAS Number	Germany	Spain	Portugal	Finland
Calcium dodecylbenzene sulfonic acid	26264-06-2	Not applicable	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	10 ppm	TWA: 10 ppm TWA: 53 mg/m ³ 15 ppm STEL [VLA-EC]; 80 mg/m ³ STEL [VLA-EC]	TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm	TWA: 1 ppm TWA: 5 mg/m ³ STEL: 2 ppm STEL: 10 mg/m ³
Light aromatic solvent	64742-95-6	50 ppm	Not applicable	Not applicable	Not applicable
1,2,4 Trimethylbenzene	95-63-6	TWA: 20 ppm TWA: 100 mg/m ³	TWA: 20 ppm TWA: 100 mg/m ³	TWA: 20 ppm TWA: 100 mg/m ³	TWA: 20 ppm TWA: 100 mg/m ³
Butyl alcohol	71-36-3	TWA: 100 ppm TWA: 310 mg/m ³	TWA: 20 ppm TWA: 61 mg/m ³ 50 ppm STEL [VLA-EC]; 154 mg/m ³ STEL [VLA-EC]	TWA: 20 ppm	TWA: 50 ppm TWA: 150 mg/m ³ STEL: 75 ppm STEL: 230 mg/m ³
Isopropanol	67-63-0	TWA: 200 ppm TWA: 500 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ 400 ppm STEL [VLA-EC]; 1000 mg/m ³ STEL [VLA-EC]	TWA: 200 ppm STEL: 400 ppm	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 620 mg/m ³

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Calcium dodecylbenzene sulfonic acid	26264-06-2	Not applicable	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	TWA: 10 ppm	10 ppm TWA; 50	TWA: 10 ppm	TWA: 10 ppm

		TWA: 50 mg/m ³	mg/m ³ TWA 15 ppm STEL; 75 mg/m ³ STEL	TWA: 50 mg/m ³	TWA: 50 mg/m ³ STEL: 20 ppm STEL: 75 mg/m ³
Light aromatic solvent 1,2,4 Trimethylbenzene	64742-95-6 95-63-6	Not applicable	Not applicable	Not applicable	Not applicable
		TWA: 20 ppm TWA: 100 mg/m ³ STEL" 30 ppm STEL" 150 mg/m ³	20 ppm TWA; 100 mg/m ³ TWA 60 ppm STEL (calculated); 300 mg/m ³ STEL (calculated)	Not applicable	TWA: 20 ppm TWA: 100 mg/m ³ STEL: 30 ppm STEL: 150 mg/m ³
Butyl alcohol	71-36-3	TWA: 50 ppm TWA: 150 mg/m ³ STEL" 200 ppm STEL" 600 mg/m ³	20 ppm TWA 60 ppm STEL (calculated)	TWA: 50 ppm TWA: 150 mg/m ³ STEL: 50 ppm STEL: 150 mg/m ³	Not applicable
Isopropanol	67-63-0	TWA: 200 ppm TWA: 500 mg/m ³ STEL" 800 ppm STEL" 2000 mg/m ³	200 ppm TWA 400 ppm STEL	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 400 ppm STEL: 1000 mg/m ³	TWA: 100 ppm TWA: 245 mg/m ³ STEL: 150 ppm STEL: 306.25 mg/m ³

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Calcium dodecylbenzene sulfonic acid	26264-06-2	Not applicable	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	Not applicable	TWA: 20 mg/m ³ STEL: 50 mg/m ³	TWA: 50 mg/m ³	TWA: 50 mg/m ³
Light aromatic solvent 1,2,4 Trimethylbenzene	64742-95-6 95-63-6	Not applicable	Not applicable	Not applicable	Not applicable
		TWA: 20 ppm TWA: 100 mg/m ³	TWA: 100 mg/m ³ STEL: 170 mg/m ³	TWA: 100 mg/m ³	TWA: 100 mg/m ³
Butyl alcohol	71-36-3	Not applicable	TWA: 50 mg/m ³ STEL: 150 mg/m ³	TWA: 45 mg/m ³ STEL: 90 mg/m ³	TWA: 300 mg/m ³
Isopropanol	67-63-0	Not applicable	TWA: 900 mg/m ³ STEL: 1200 mg/m ³	TWA: 500 mg/m ³ STEL: 2000 mg/m ³	TWA: 500 mg/m ³

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Calcium dodecylbenzene sulfonic acid	26264-06-2	Not applicable	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	TWA: 10 ppm TWA: 50 mg/m ³ TWA: 0.2 mg/m ³	TWA: 9.5 ppm TWA: 50 mg/m ³	TWA: 10 ppm TWA: 50 mg/m ³	TWA: 10 ppm TWA: 50 mg/m ³
Light aromatic solvent 1,2,4 Trimethylbenzene	64742-95-6 95-63-6	Not applicable	Not applicable	Not applicable	Not applicable
		TWA: 20 ppm TWA: 100 mg/m ³	TWA: 20 ppm TWA: 100 mg/m ³	TWA: 20 ppm TWA: 100 mg/m ³	TWA: 20 ppm TWA: 100 mg/m ³
Butyl alcohol	71-36-3	Not applicable	TWA: 33 ppm TWA: 100 mg/m ³ STEL: 66 ppm STEL: 200 mg/m ³	STEL: 50 ppm STEL: 154 mg/m ³	Not applicable
Isopropanol	67-63-0	TWA: 200 ppm TWA: 490 mg/m ³	TWA: 81 ppm TWA: 200 mg/m ³ STEL: 203 ppm STEL: 500 mg/m ³	TWA: 400 ppm TWA: 999 mg/m ³ STEL: 500 ppm STEL: 1250 mg/m ³	Not applicable

Derived No Effect Level (DNEL)

No information available.

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
Isopropanol	500 mg/m ³	Not available	Not available	Not available	888 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
Isopropanol	89 mg/m ³	Not available	Not available	Not available	319 mg/kg bw/day	Not available	Not available	Not available	26 mg/kg bw/day	Not available	Not available

Predicted No Effect Concentration (PNEC)

No information available.

Substances	Freshwater	Marine water	Intermittent release	Sewage treatment plant	Sediment (freshwater)	Sediment (marine water)	Air	Soil	Secondary poisoning
Isopropanol	140.9 mg/L	140.9 mg/L	140.9 mg/L	2251 mg/L	552 mg/kg sediment dw	552 mg/kg sediment dw	Not available	28 mg/kg soil dw	160 mg/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

Organic vapor respirator.

In high concentrations, supplied air respirator or a self-contained breathing apparatus.

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: Liquid

Color: Yellow

Odor: Alcohol

Odor Threshold: No information available

PropertyValues

Remarks/ - Method

pH:

7

Freezing Point/Range

No data available

Melting Point/Range

No data available

Boiling Point/Range

No data available

Flash Point

22 °C / 73 °F PMCC

Flammability (solid, gas)

No data available

upper flammability limit

12%

lower flammability limit

2%

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

0.958

Water Solubility

Emulsifies

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.

10.6. Hazardous Decomposition Products

Oxides of sulfur. Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological Information**11.1. Information on Toxicological Effects****Acute Toxicity****Inhalation**

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 Contact

Causes skin irritation.

Ingestion

May cause abdominal pain, vomiting, nausea, and diarrhea. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.

Chronic Effects/Carcinogenicity

Repeated overexposure may cause liver and kidney effects.

The International Agency for Research on Cancer (IARC) has evaluated naphthalene and determined it to be a possible carcinogen to humans (Group 2B, based on sufficient evidence in experimental animals and inadequate evidence in humans). This product contains a suspected carcinogen.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium dodecylbenzene sulfonic acid	26264-06-2	1300 mg/kg (Rat) 1300 mg/kg (Monkey)	No data available	No data available
Naphthalene	91-20-3	490 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	No data available
Light aromatic solvent	64742-95-6	8400 mg/kg (Rat) >5000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	5.2 mg/L (Rat) 4h 3400 ppm (Rat) 4h >8.53 mg/L (Rat) 4h
1,2,4 Trimethylbenzene	95-63-6	3400 mg/kg (Rat) 8970 mg/kg (Rat)	3160 mg/kg (Rabbit) > 3440 mg/kg (Rat)	18 mg/L (Rat) 4h
Butyl alcohol	71-36-3	790 mg/kg (Rat)	3400 mg/kg (Rabbit)	> 17.6 mg/L (Rat) 4h
Isopropanol	67-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12,800 mg/kg (Rat) 12,870 mg/kg (Rabbit) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h > 10,000 mg/L (Rat) 6h

Substances	CAS Number	Skin corrosion/irritation
Calcium dodecylbenzene sulfonic acid	26264-06-2	Irritating to skin. (similar substances)
Naphthalene	91-20-3	Non-irritating to the skin (Rabbit)
Light aromatic solvent	64742-95-6	Causes moderate skin irritation. (Rabbit)
1,2,4 Trimethylbenzene	95-63-6	Irritating to skin. (Rabbit)
Butyl alcohol	71-36-3	Causes moderate skin irritation.
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Eye damage/irritation
Calcium dodecylbenzene sulfonic acid	26264-06-2	Causes severe eye irritation which may damage tissue. (similar substances)
Naphthalene	91-20-3	May cause mechanical irritation to eye. (human)
Light aromatic solvent	64742-95-6	Non-irritating to rabbit's eye
1,2,4 Trimethylbenzene	95-63-6	Irritating to eyes. (Rabbit)
Butyl alcohol	71-36-3	Causes severe eye irritation.
Isopropanol	67-63-0	Causes moderate eye irritation. (Rabbit)

Substances	CAS Number	Skin Sensitization
Calcium dodecylbenzene sulfonic acid	26264-06-2	Did not cause sensitization on laboratory animals Patch test on human volunteers did not demonstrate irritating properties (similar substances)
Naphthalene	91-20-3	Did not cause sensitization on laboratory animals (guinea pig)
Light aromatic solvent	64742-95-6	Did not cause sensitization on laboratory animals (guinea pig)
1,2,4 Trimethylbenzene	95-63-6	Did not cause sensitization on laboratory animals (guinea pig)
Butyl alcohol	71-36-3	Not confirmed to cause skin or respiratory sensitization.
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Calcium dodecylbenzene sulfonic acid	26264-06-2	No information available
Naphthalene	91-20-3	No information available
Light aromatic solvent	64742-95-6	No information available
1,2,4 Trimethylbenzene	95-63-6	No information available
Butyl alcohol	71-36-3	No information available
Isopropanol	67-63-0	No information available

Substances	CAS Number	Mutagenic Effects
Calcium dodecylbenzene sulfonic acid	26264-06-2	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Naphthalene	91-20-3	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Light aromatic solvent	64742-95-6	Some in vivo tests have shown mutagenic effects. In vitro tests have shown mutagenic effects
1,2,4 Trimethylbenzene	95-63-6	In vivo tests did not show mutagenic effects.
Butyl alcohol	71-36-3	In vitro tests did not show mutagenic effects
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Calcium dodecylbenzene sulfonic acid	26264-06-2	Did not show carcinogenic effects in animal experiments (similar substances)
Naphthalene	91-20-3	Substances which should be regarded as if they are carcinogenic to man
Light aromatic solvent	64742-95-6	Contains a known or suspected carcinogen
1,2,4 Trimethylbenzene	95-63-6	No information available.
Butyl alcohol	71-36-3	No information available.
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Calcium dodecylbenzene sulfonic acid	26264-06-2	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Naphthalene	91-20-3	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Light aromatic solvent	64742-95-6	No data of sufficient quality are available.
1,2,4 Trimethylbenzene	95-63-6	No significant toxicity observed in animal studies at concentration requiring classification.
Butyl alcohol	71-36-3	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - single exposure
Calcium dodecylbenzene sulfonic acid	26264-06-2	No information available
Naphthalene	91-20-3	No data of sufficient quality are available.
Light aromatic solvent	64742-95-6	May cause headache, dizziness, and other central nervous system effects.
1,2,4 Trimethylbenzene	95-63-6	May cause respiratory irritation.
Butyl alcohol	71-36-3	May cause respiratory irritation.
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.

Substances	CAS Number	STOT - repeated exposure
Calcium dodecylbenzene sulfonic acid	26264-06-2	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Naphthalene	91-20-3	No significant toxicity observed in animal studies at concentration requiring classification.
Light aromatic solvent	64742-95-6	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
1,2,4 Trimethylbenzene	95-63-6	Causes damage to organs through prolonged or repeated exposure if inhaled: (Central nervous system) (Hematopoietic System)
Butyl alcohol	71-36-3	No significant toxicity observed in animal studies at concentration requiring classification.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Calcium dodecylbenzene sulfonic acid	26264-06-2	No information available
Naphthalene	91-20-3	No information available
Light aromatic solvent	64742-95-6	May be fatal if swallowed and enters airways
1,2,4 Trimethylbenzene	95-63-6	Risk of serious damage to the lungs (by aspiration)
Butyl alcohol	71-36-3	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing,

		wheezing, coughing up blood and pneumonia, which can be fatal.
Isopropanol	67-63-0	Not applicable

SECTION 12: Ecological Information

12.1. Toxicity

Ecotoxicity Effects

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Calcium dodecylbenzene sulfonic acid	26264-06-2	No information available	LC50 (96h) > 10.8 mg/L (Oncorhynchus mykiss) LC50 (48h) 4.2 mg/L (Cyprinus carpio) LC50 (96h) 7.133 mg/L (Oncorhynchus kisutch) (similar substance) NOEC (72d) 0.23 mg/L (Salmo gairdneri) (similar substance) NOEC (90d) 0.25mg/L (Tilapia mossambica)	No information available	EC50 (48h) 6.3 mg/L (Daphnia magna) (similar substance) EC50 (48h) 7.5 mg/L (Daphnia magna) (similar substance) NOEC (21d) 1.18 mg/L (Daphnia magna) (similar substance)
Naphthalene	91-20-3	EC50 (72h) 0.4 mg/L (Skeletonema costatum)	LC50 (96h) 1.6 mg/L (Oncorhynchus mykiss) NOEC (40d) 0.37 mg/L (Coho salmon fry)	IC50 (24h) 29 mg/L (Nitrosomonas)	EC50 (48h) 2.16 mg/L (Daphnia magna) NOEC (125d) 0.59 mg/L (Daphnia pulex)
Light aromatic solvent	64742-95-6	EL50 (72h) 3.1 mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 1.03 mg/L (Oncorhynchus mykiss)	No information available	EC50 (48h) 1.2 mg/L (Daphnia magna)
1,2,4 Trimethylbenzene	95-63-6	No information available	LC50 7.19-8.28 mg/L (Pimephales promelas) LC50 7.72 mg/L (Pimephales promelas)	No information available	EC50 6.14 mg/L (Daphnia magna) LC50 (48h) 3.6 mg/L (Daphnia magna) LC50 (96h) 2.16 mg/L (Mysidopsis bahia) ChV 0.367 mg/L (Daphnia sp.)
Butyl alcohol	71-36-3	EC50 (96h) 225 mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 1376 mg/L (Pimephales promelas)	No information available	EC50 (48h) 1328 mg/L (Daphnia magna) NOEC (21d) 4.1 mg/L (Daphnia magna) EC50 (21d) 18 mg/L (Daphnia magna)
Isopropanol	67-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (Scenedesmus quadricauda)	LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata)	TT (16h) 1050 mg/L (Pseudomonas putida)	EC50 (48h) 13,299 mg/L (Daphnia magna) EC50 (24h) > 10,000 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Calcium dodecylbenzene sulfonic acid	26264-06-2	No information available
Naphthalene	91-20-3	Readily biodegradable (100% @ 7d)
Light aromatic solvent	64742-95-6	(77.05% @ 28d)
1,2,4 Trimethylbenzene	95-63-6	Readily biodegradable
Butyl alcohol	71-36-3	Biodegradable. (92% @ 20d)
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Calcium dodecylbenzene sulfonic acid	26264-06-2	No information available
Naphthalene	91-20-3	3.30
Light aromatic solvent	64742-95-6	3.20 - 3.63 BCF = 119 - 142
1,2,4 Trimethylbenzene	95-63-6	3.42
Butyl alcohol	71-36-3	1
Isopropanol	67-63-0	0.05

12.4. Mobility in soil

Substances	CAS Number	Mobility
Calcium dodecylbenzene sulfonic acid	26264-06-2	No information available
Naphthalene	91-20-3	No information available
Light aromatic solvent	64742-95-6	KOC = 372 - 617
1,2,4 Trimethylbenzene	95-63-6	No information available
Butyl alcohol	71-36-3	KOC = 72
Isopropanol	67-63-0	KOC = 1.5

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
Naphthalene	Not PBT/vPvB
Light aromatic solvent	Not PBT/vPvB
1,2,4 Trimethylbenzene	Not PBT/vPvB
Butyl alcohol	Not PBT/vPvB
Isopropanol	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**

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

Contaminated Packaging

Follow all applicable national or local regulations.

SECTION 14: Transport Information**IMDG/IMO**

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Butanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Not applicable

RID

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Butanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Not applicable

ADR

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Butanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Not applicable

IATA/ICAO

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Butanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Not applicable

14.1. UN Number: UN1993

14.2. UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Butanol)

14.3. Transport Hazard Class(es): 3**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 Classes (WGK) WGK 2: Hazard to waters.

Substances	CAS Number	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization
Light aromatic solvent	64742-95-6	Use restricted. See item 28. Use restricted. See item 29.	Not applicable

15.2. Chemical Safety Assessment

No information available

SECTION 16: Other Information

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

H225 - Highly flammable liquid and vapor
H226 - Flammable liquid and vapor
H228 - Flammable solid
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H351 - Suspected of causing cancer
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
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/

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

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End of Safety Data Sheet