

SAFETY DATA SHEET

SEM-1205

according to Regulation (EC) No. 453/2010

Revision Date: 17-Jan-2018
Preparation Date 17-Jan-2018

Revision Number: 3
Internal ID Code HM008456

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

1.1. Product Identifier

Product Name SEM-1205
Internal ID Code HM008456

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

Recommended Use	Surfactant
Sector of uses	Refer to the Annex for a listing of uses.
Product category(ies)	Not applicable
Process categories	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Article categories	Not applicable
Environmental release category(ies)	ERC1 - Manufacture of substances
Sector of uses	SU2a - Mining, (without offshore industries) SU2b - Offshore industries SU3 - Industrial uses
Process categories	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

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
+44 1224 776888

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

Global Incident Response Access Code: 334305

Contract Number: 14012

Emergency telephone - §45 - (EC)1272/2008	
Turkey	Ulusal Zehir Danisma Merkezi (UZEM) :114 Acil Saglik Hizmetleri : 112
Europe	112
Bulgaria	Bulgarian poison centre: +359 2 915-44-09 or +359 2 915-43-46
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	00357 22 88 7171
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

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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
Portugal	CIAV - Centro de Informação Antivenenos (Portuguese Poison Centre): +351 213 303 271
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/Irritation	Category 1 - H318
Chronic Aquatic Toxicity	Category 3 - H412

2.2. Label Elements

Hazard Pictograms



Signal Word:

Danger

Hazard Statements:

H315 - Causes skin irritation

H318 - Causes serious eye damage

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements:

P273 - Avoid release to the environment

P280 - Wear protective gloves/eye protection/face protection

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

P332 + P313 - If skin irritation occurs: Get medical advice/attention

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

P310 - Immediately call a POISON CENTER or doctor/physician

Contains

Substances

Fatty alcohol C8-10, ethoxylated, sulfated,
mono-isopropanolamine salt
Alcohols, C8-10, ethoxylated

CAS Number

1812871-14-9

71060-57-6

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

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Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH Reg. No
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	-	1812871-14-9	60 - 100%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Chronic 3 (H412)	No data available
Alcohols, C8-10, ethoxylated		71060-57-6	1 - 5%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)	No data available

The specific chemical identity of the composition has been withheld as proprietary. The exact percentage (concentration) of the composition has been withheld as proprietary.

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, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
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

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 in a fire

Decomposition in fire may produce harmful gases.

5.3. Advice for firefighters

Special protective equipment for firefighters

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. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

See Section 8 for additional information

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6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

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. Do NOT spread spilled product with water.

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

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

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store away from acids. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 18 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
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Not applicable	Not applicable	Not applicable	Not applicable
Alcohols, C8-10, ethoxylated	71060-57-6	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Not applicable	Not applicable	Not applicable	Not applicable
Alcohols, C8-10, ethoxylated	71060-57-6	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Not applicable	Not applicable	Not applicable	Not applicable
Alcohols, C8-10, ethoxylated	71060-57-6	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Not applicable	Not applicable	Not applicable	Not applicable
Alcohols, C8-10, ethoxylated	71060-57-6	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Fatty alcohol C8-10, ethoxylated, sulfated,	1812871-14-9	Not applicable	Not applicable	Not applicable	Not applicable

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mono-isopropanolamine salt					
Alcohols, C8-10, ethoxylated	71060-57-6	Not applicable	Not applicable	Not applicable	Not applicable

Derived No Effect Level (DNEL)
Worker

General Population

Predicted No Effect Concentration (PNEC)

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. Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

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): (>= 0.4 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. Manufacturer's directions for use should be observed because of great diversity of types. Butyl rubber gloves. Nitrile gloves.

Skin Protection

Full protective chemical resistant clothing.

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: Characteristic

Odor Threshold: No information available

Property

Values

Remarks/ - Method

pH:

7 (1%)

Freezing Point / Range

< -20 °C

Melting Point / Range

No data available

Boiling Point / Range

No data available

Flash Point

> 100 °C

Flammability (solid, gas)

No data available

Upper flammability limit

No data available

Lower flammability limit

No data available

Evaporation rate

No data available

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Vapor Pressure	.75 mmHg (25C)
Vapor Density	No data available
Specific Gravity	1.07
Water Solubility	Soluble in water
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

UV light exposure. Avoid contact with sunlight.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Toxic fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Inhalation	May cause mild respiratory irritation.
Eye Contact	Causes serious eye damage
Skin Contact	Causes skin irritation.
Ingestion	Irritation of the mouth, throat, and stomach.

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
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	2870 mg/kg-bw (rat) (similar substance)	>2000 mg/kg-bw (rabbit) (similar substance)	No data available
Alcohols, C8-10, ethoxylated	71060-57-6	2700 mg/kg (Rat)	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Irritating to skin. Skin, rabbit: (similar substances)
Alcohols, C8-10, ethoxylated	71060-57-6	Causes moderate skin irritation. (Rabbit) (similar substances)

Substances	CAS	Serious eye damage/irritation
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	Number	
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Causes severe eye irritation. Will damage tissue. Eye, rabbit: (similar substances)
Alcohols, C8-10, ethoxylated	71060-57-6	Causes severe eye irritation which may damage tissue. (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	(similar substances) (guinea pig) Did not cause sensitization on laboratory animals
Alcohols, C8-10, ethoxylated	71060-57-6	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	No information available
Alcohols, C8-10, ethoxylated	71060-57-6	No information available

Substances	CAS Number	Mutagenic Effects
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects. (similar substances)
Alcohols, C8-10, ethoxylated	71060-57-6	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	No information available
Alcohols, C8-10, ethoxylated	71060-57-6	Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Did not show teratogenic effects in animal experiments. (similar substances) Animal testing did not show any effects on fertility.
Alcohols, C8-10, ethoxylated	71060-57-6	No data of sufficient quality are available.

Substances	CAS Number	STOT - single exposure
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	No information available No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Alcohols, C8-10, ethoxylated	71060-57-6	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Alcohols, C8-10, ethoxylated	71060-57-6	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS	Aspiration hazard
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	Number	
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Not applicable
Alcohols, C8-10, ethoxylated	71060-57-6	Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity effects

Harmful to aquatic life with long lasting effects.

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	EC50(72 h)=14 mg/L (Desmodesmus subspicatus) EC50(72 h)=15.8 mg/L (Phaeodactylum tricornutum)	LC50(96 h)=7.7 mg/L (Danio rerio) LC50(96 h)>15.8 mg/L (Cyprinodon variegatus) NOAEC(28 d)=0.14 mg/L (Oncorhynchus mykiss)	No information available	EC50(48 h)=7.7 mg/L (Daphnia magna) LC50(48 h)=44 mg/L (Acartia tonsa) NOAEC(21 d)=0.27 mg/L (Daphnia magna)
Alcohols, C8-10, ethoxylated	71060-57-6	LC50 (96h) 0.26 mg/L (Selenastrum capricornutum) (similar substance)	LC50 (96h) 5.7 mg/L (Oncorhynchus mykiss) (similar substance) NOAEC (30d) 0.28 mg/L (Pimephales promelas) (similar substance)	No information available	EC50 (48h) 2.5 mg/L (Daphnia magna) (similar substance) NOAEC (21d) 0.77 mg/L (Daphnia magna) (similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Readily biodegradable (>78.4% @ 28d)
Alcohols, C8-10, ethoxylated	71060-57-6	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	Log POW = 1 (similar substance)
Alcohols, C8-10, ethoxylated	71060-57-6	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	1812871-14-9	No information available
Alcohols, C8-10, ethoxylated	71060-57-6	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
Fatty alcohol C8-10, ethoxylated, sulfated, mono-isopropanolamine salt	Not PBT/vPvB

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods

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	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

ADN

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group	Not applicable
Environmental Hazards:	Not applicable

ADR/RID

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group	Not applicable
Environmental Hazards:	Not applicable

IATA/ICAO

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	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 (European Inventory of Existing Chemical Substances)

This product does not comply with EINECS

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US TSCA Inventory Product contains one or more components not listed on the inventory.
Canadian Domestic Substances List (DSL) Product contains one or more components not listed on the inventory.

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

Denmark PR No.: 4100173

Norway PR No.: 608148

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

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.
Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2. Chemical safety assessment

Yes

SECTION 16: Other information

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

H315 - Causes skin irritation
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Key or legend to abbreviations and acronyms used in the safety data sheet

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

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STEL – Short Term Exposure Limit
SU – Sector of Use category

Key literature references and sources for data

www.ChemADVISOR.com/

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Revision Note

SDS sections updated:

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This safety data sheet complies with the requirements of Regulation (EC) No. 2015/830

Disclaimer Statement

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End of Safety Data Sheet