



Safety Data Sheet Surfactant F112

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Surfactant F112
Product code F112

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

Recommended Use Surfactant in oilfield applications

Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier

Schlumberger Oilfield Australia Pty Ltd
ABN: 74 002 459 225
ACN: 002 459 225
256 St. Georges Terrace, Perth WA 6000
+47 5157 7424

SDS@slb.com

1.4 Emergency Telephone Number

Emergency telephone - (24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 595 3518

2. Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification

Health hazards

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 3
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Physical Hazards Not classified

2.2 Label elements

**Signal word**

WARNING

Hazard Statements

H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P273 - Avoid release to the environment
 P280 - Wear protective gloves and eye/face protection
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P391 - Collect spillage
 P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Supplementary precautionary statements

P337 + P313 - If eye irritation persists: Get medical advice/attention
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P362 - Take off contaminated clothing and wash before reuse

Contains

Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-

Dicoco dimethyl quaternary ammonium chloride

Propan-2-ol

2.3 Other hazards

Not classified as PBT/vPvB by current EU criteria

Inhalation of vapors in high concentration may cause irritation of respiratory system

Australian statement of hazardous/dangerous nature

Classified as Hazardous according to the criteria of NOHSC.
 HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3. Composition/information on Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	EC No	CAS No	Weight-%
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	500-077-5	31726-34-8	10-<20
Dicoco dimethyl quaternary ammonium chloride	263-087-6	61789-77-3	0.5-<1.0
Propan-2-ol	200-661-7	67-63-0	0.1-<0.25

Comments

The product contains other ingredients which do not contribute to the overall classification.

4. First Aid Measures**4.1 First aid measures**

Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Ingestion	If swallowed, call a poison control center or doctor immediately. Do NOT induce vomiting. If conscious, drink plenty of water.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation persists.
Eye Contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Get immediate medical attention.

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

General advice The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

Symptoms

Inhalation	Please see Section 11. Toxicological Information for further information.
Ingestion	Please see Section 11. Toxicological Information for further information.
Skin contact	Please see Section 11. Toxicological Information for further information.
Eye contact	Please see Section 11. Toxicological Information for further information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

5. Fire-Fighting Measures**5.1 Extinguishing media****Suitable extinguishing media**

Extinguish with carbon dioxide, dry chemical, foam or waterspray.

Extinguishing media which must not be used for safety reasons

None known.

5.2. Special hazards arising from the substance or mixture**Unusual fire and explosion hazards**

None known.

Hazardous combustion products

Thermal decomposition can lead to release of irritating gases and vapors Carbon oxides (COx), Nitrogen oxides (NOx).

5.3 Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Special Fire-Fighting Procedures

Containers close to fire should be removed immediately or cooled with water.

Hazchem code ADG

3Z

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. See also section 8.

6.2 Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

Environmental exposure controls

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13). After cleaning, flush away traces with water.

6.4 Reference to other sections

See section 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin or on clothing. Avoid spills and splashing during use.

Hygiene Measures

Use good work and personal hygiene practices to avoid exposure. When using do not smoke, eat or drink. Wash hands before eating, drinking or smoking Remove contaminated clothing

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place Avoid contact with:
Strong oxidizing agents

Storage class Chemical storage.

Packaging materials Use specially constructed containers only.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Component Information

Chemical Name	Arabic	Australia	Egypt
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Not determined	Not determined	Not determined
Dicoco dimethyl quaternary ammonium chloride	Not determined	Not determined	Not determined
Propan-2-ol	500 ppm STEL 1230 mg/m ³ STEL 400 ppm TWA 983 mg/m ³ TWA	500ppmSTEL 1230mg/m ³ STEL 400ppmTWA 983mg/m ³ TWA	500 ppm STEL 1230 mg/m ³ STEL 400 ppm TWA 983 mg/m ³ TWA
Chemical Name	India	Indonesian	Japan
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Not determined	Not determined	Not determined
Dicoco dimethyl quaternary ammonium chloride	Not determined	Not determined	Not determined
Propan-2-ol	Not determined	400 ppm TWA 983 mg/m ³ TWA 500 ppm STEL 1230 mg/m ³ STEL	200 ppm ACL
Chemical Name	Kazakhstan	Kuwait	New Zealand
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Not determined	Not determined	Not determined
Dicoco dimethyl quaternary ammonium chloride	Not determined	Not determined	Not determined
Propan-2-ol	10 mg/m ³ MAC	1225 mg/m ³ STEL 500 ppm STEL	500 ppm STEL 1230 mg/m ³ STEL 400 ppm TWA 983 mg/m ³ TWA
Chemical Name	Malaysia	Philippines	Russia
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Not determined	Not determined	Not determined
Dicoco dimethyl quaternary ammonium chloride	Not determined	Not determined	Not determined
Propan-2-ol	400 ppm TWA 983 mg/m ³ TWA	400 ppm TWA 980 mg/m ³ TWA	50 mg/m ³ STEL 10 mg/m ³ TWA
Chemical Name	Thailand	Vietnam	Turkey
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Not determined	Not determined	Not determined
Dicoco dimethyl quaternary ammonium chloride	Not determined	Not determined	Not determined
Propan-2-ol	400 ppm TWA	Not determined	Not determined

8.2 Exposure controls

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering Controls

Ensure adequate ventilation Mechanical ventilation or local exhaust ventilation is required.

Personal protective equipment

Eye protection

Use eye protection according to EN 166, designed to protect against liquid splashes Tightly

Hand protection	fitting safety goggles Impervious gloves made of: Nitrile or Butyl Break through time >480 minutes Glove thickness 0.5 mm
Respiratory protection	Be aware that liquid may penetrate the gloves. Frequent change is advisable. No personal respiratory protective equipment normally required In case of insufficient ventilation wear suitable respiratory equipment Use respirator with organic vapor/acid gas protection (E, yellow) At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.
Skin and body protection	Wear appropriate personal protective clothing to prevent skin contact Eye wash and emergency shower must be available at the work place.
Hygiene Measures	Wash hands before breaks and immediately after handling the product



8.2.3 Environmental exposure controls

Environmental exposure	Use appropriate containment to avoid environmental contamination See section 6 for more information
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9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Aqueous solution
Odor	Alcohol
Color	Clear Yellow
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	9-11	
pH @ dilution	No information available	Not applicable
Melting / freezing point	5 °C / 41 °F	
Boiling point/range	~ 100 °C / 212 °F	
Flash point	> 93.3 °C / > 199.4 °F	PMCC
Evaporation rate (BuAc =1)	No information available	
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit	Not applicable	
Lower flammability limit	Not applicable	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	0.99 - 1.03 g/cm ³	@ 20 °C
Bulk density	No information available	
Relative density	~ 1.0	@ 20°C.
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	5-50 mPa s	@ 16 °C
log Pow	No information available	

Explosive properties No information available
Oxidizing properties No information available

9.2 Other information

Pour point No information available
Molecular weight No information available
VOC content(%) < 1
Density No information available

Comments

The data listed above are typical physical and chemical properties and should not be construed as product specification.

10. Stability and Reactivity

10.1 Reactivity

No specific reactivity hazards associated with this product.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions**Hazardous polymerization**

Hazardous polymerization does not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological Information

11.1 Information on toxicological effects**Acute toxicity**

Inhalation Inhalation of vapors in high concentration may cause irritation of respiratory system.
Eye contact Causes serious eye irritation.
Skin contact Causes skin irritation.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Unknown acute toxicity Not applicable.

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
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Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	LD50: 1250 mg/kg, rat, (based on data from similar substance)	LD50: > 2000 mg/kg, rat, (based on data from similar component)	No data available
Dicoco dimethyl quaternary ammonium chloride	= 960 mg/kg (Rat)	LD50 > 2930 mg/kg, rabbit	No data available
Propan-2-ol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h

Sensitization	This product does not contain any components suspected to be sensitizing.
Mutagenic effects	This product does not contain any known or suspected mutagens.
Carcinogenicity	This product does not contain any known or suspected carcinogens.
Reproductive toxicity	This product does not contain any known or suspected reproductive hazards.
Routes of exposure	Eye contact. Skin contact. Inhalation.
Routes of entry	Eye contact. Skin contact.
Specific target organ toxicity - Single exposure	Not classified
Specific target organ toxicity - Repeated exposure	Not classified.
Aspiration hazard	Not applicable.
Other information	Key literature references and sources for data. See Section 16 for more information.

12. Ecological Information

12.1 Toxicity

Harmful to aquatic life with long lasting effects

Toxicity to algae

See component information below.

Toxicity to fish

See component information below.

Toxicity to daphnia and other aquatic invertebrates

See component information below.

Toxicology data for the components

Chemical Name	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	LC50 96h, Brachydanio rerio (zebrafish): > 100 mg/l (test based on similar component)	EC50, 72h: > 100 mg/kg (based on similar substance)	EC50, 48h, Daphnia magna (Water flea): > 100 mg/l (based on similar product)
Dicoco dimethyl quaternary ammonium chloride	No information available	No information available	EC50, 48h, Daphnia : 0.01 mg/l
Propan-2-ol	> 1400000 µg/L LC50 Lepomis macrochirus 96 h = 11130 mg/L LC50 Pimephales promelas 96 h = 9640 mg/L LC50 Pimephales promelas 96 h	> 1000 mg/L EC50 Desmodesmus subspicatus 96 h > 1000 mg/L EC50 Desmodesmus subspicatus 72 h	= 13299 mg/L EC50 Daphnia magna 48 h

12.2 Persistence and degradability

Product is biodegradable.

Chemical Name	Persistence and degradability
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Readily biodegradable
Dicoco dimethyl quaternary ammonium chloride	No information available
Propan-2-ol	Readily biodegradable

12.3 Bioaccumulative potential

Does not bioaccumulate.

Chemical Name	Bioaccumulation
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Not likely to bioaccumulate
Dicoco dimethyl quaternary ammonium chloride	No information available
Propan-2-ol	No bioaccumulation potential

12.4 Mobility

Mobility

Soluble in water.

Chemical Name	Mobility
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	Miscible in water
Dicoco dimethyl quaternary ammonium chloride	Soluble in water
Propan-2-ol	Soluble in water

Mobility in soil

No information available.

Chemical Name	Mobility in soil
Poly(oxy-1,2-ethanediyl), alphahexyl-omega-hydroxy-	No information available
Dicoco dimethyl quaternary ammonium chloride	No information available
Propan-2-ol	No information available

12.5 Results of PBT and vPvB assessment

Not classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects.

None known.

12.7 Other information

Key literature references and sources for data. See Section 16 for more information.

13. Disposal considerations

13.1 Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport information

14.1. UN number

Not regulated

14.2. UN proper shipping name

The product is not covered by international regulation on the transport of dangerous goods

14.3 Hazard class(es)

ADR/RID/ADN/ADG Hazard class Not regulated

IMDG/ANTAQ Hazard class Not regulated

ICAO/ANAC Hazard class/division Not regulated

14.4 Packing group

ADR/RID/ADN/ADG Packing group Not regulated

IMDG/ANTAQ Packing group Not regulated

ICAO/ANAC Packing group Not regulated

14.5 Environmental hazard

No

14.6 Special precautions

Not applicable

Hazchem code ADG 3Z

14.7 Transport in bulk according to Annex I/II of MARPOL 73/78 and the IBC Code

Please contact SDS@slb.com for info regarding transport in Bulk.

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)].

National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004) 3rd Edition].

National Occupational Health and Safety Commission's Exposure Standards for Atmospheric Contaminants in the occupational Environment [NOHSC:1003 (1995)].

Safe Work Australia.

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

ADG Code – Australian Dangerous Goods Code

International inventories

USA (TSCA)	Complies
Canada (DSL)	Complies
Philippines (PICCS)	Does not comply
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

16. Other Information

Prepared by	Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Ingrid Helland
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Version	3
This SDS has been revised in the following section(s)	2, 12, 14, 16 There have been changes with regard to classification.

Key literature references and sources for data

www.ChemADVISOR.com

Supplier

National Chemical Inventories

National regulatory information

National occupational exposure limits

HMIS classification

Health	2
Flammability	1
Physical hazard	0
PPE	X

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