

# SAFETY DATA SHEET

(Australia)  
According to the criteria of NOHSC:2011(2003)

Version: 1

Revision date: 18 March 2011

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Name:** Foaming Agent F104

**Product Code:** F104

**Company Identification:** Schlumberger Oilfield Australia Pty Ltd  
ABN: 74 002 459 225  
ACN: 002 459 225  
256 St. Georges Terrace, Perth WA 6000

**Emergency Telephone Number:** 1-800-039-008 (24hr)

**Use of the Substance/Preparation:** Surfactant in oilfield applications.

## 2. HAZARDS IDENTIFICATION

**Indication of danger:** Xn - Harmful.

**Most important hazards**

**R-phrases(s):** Flammable. Irritating to eyes.

**Risk Combination Phrases** Also harmful by inhalation, in contact with skin and if swallowed

**S-phrases(s):** S16 - Keep away from sources of ignition - No smoking. S46 - If swallowed, seek medical advice immediately and show this container or label.

**Safety Combination Phrases:** S24/25 - Avoid contact with skin and eyes.

**Environmental hazard:** None known

**Main physical hazards:** Flammable Liquid.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	EC-No.	Weight %- Range	Classification
Ester salt		Listed	30 - 60	Xi;R36
2-butoxyethanol	111-76-2	203-905-0	10 - 30	Xn:R20/21/22 Xi;R36/38
Ethanol	64-17-5	200-578-6	10 - 30	F;R11

For the full text of the R phrases mentioned in this Section, see Section 16

## 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air in case of accidental inhalation of vapours. Seek medical attention if irritation occurs. If you feel unwell, seek medical advice (show the label where possible).
<b>Skin contact:</b>	Take off contaminated clothing and shoes immediately. After contact with skin, wash immediately with plenty of soap and water for at least 15 minutes.
<b>Eye contact:</b>	Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.
<b>Ingestion:</b>	Do NOT induce vomiting. If delayed, consider giving activated charcoal in water, or 2 glasses milk or water. Seek medical attention at once.
<b>Notes to physician:</b>	none.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Water Fog, Alcohol Foam, CO2, Dry Chemical.
<b>Extinguishing media which must not be used for safety reasons:</b>	None known.
<b>Special protective equipment for firefighters:</b>	Wear protective fire fighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas. Vapours are heavier than air and may spread along floors.
<b>Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:</b>	Thermal decomposition can lead to release of irritating gases and vapours. Vapors may travel along the ground and ignite when an ignition source is contacted.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Do not get on skin or clothing. Wash thoroughly after handling. Wear suitable protective equipment.
<b>Environmental precautions:</b>	Keep out of waterways. Prevent entry into sewage.
<b>Methods for cleaning up:</b>	Contain with dikes. Use explosion proof equipment to recover. Remove all sources of ignition. Soak up residual on inert absorbant (sand). Put in steel or plastic drum approved for flammables.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	
<b>Technical measures/Precautions:</b>	Keep away from heat, sparks, and flame. Ensure adequate ventilation.

**Safe handling advice:**

Wear suitable protective equipment. Avoid contact with skin and eyes. Keep airborne concentrations below exposure limits. Keep away from heat, sparks, and flame.

**Storage:**

**Technical measures/Storage conditions:**

Store in well ventilated area out of direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a covered secondary containment chemical storage area. Keep away from open flames, hot surfaces and sources of ignition.

**Packaging requirements:**

Coated (epoxy phenolic) steel drum or high density polyethylene (HDPE) can.

**Incompatible products:**

Oxidizing agents, Strong bases, Bases

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering measures to reduce exposure:**

Keep airborne concentrations below exposure limits

**Respiratory protection:**

Use respirator with inorganic vapor/acid gas protection (E, yellow).

**Hand protection:**

Impervious gloves Rubber

**Eye protection:**

Tightly fitting safety goggles. For spills and emergencies, also wear face shield.

**Skin and body protection:**

Solvent-resistant apron.

**Environmental exposure controls**

**Exposure limit(s)**

Component	Australia - Occupational Exposure Standards - TWAs	Australia - Occupational Exposure Standards - STELs
Ester salt	None	None
2-butoxyethanol	20 ppm 96.9 mg/m <sup>3</sup>	50 ppm 242 mg/m <sup>3</sup>
Ethanol	1000 ppm 1880 mg/m <sup>3</sup>	None

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**General Information**

**Form:**

Liquid

**Odour:**

Alcohols

**Colour:**

Clear, Amber

**Important Health, Safety and Environmental Information**

**pH:**

7

**Boiling point/range:**

89 °C

<b>Flash point:</b>	29 °C
<b>Method:</b>	ASTM D56
<b>Explosive properties:</b>	
<b>Explosion data - sensitivity to mechanical impact:</b>	None
<b>Explosion data - sensitivity to static discharge:</b>	To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded
<b>Flammability Limits in Air:</b>	
<b>lower:</b>	not determined.
<b>upper:</b>	not determined.
<b>Oxidizing properties:</b>	None
<b>Relative density:</b>	1.02 (@ 25°C)
<b>Solubility:</b>	
<b>Water solubility:</b>	Soluble
<b>Fat solubility:</b>	No information available.
<b>Partition coefficient (n-octanol/water):</b>	See also section 12
<b>Viscosity:</b>	22 mPa.s (@ 25 °C)
<b>Vapour density:</b>	not determined.
<b>Vapour pressure:</b>	< 0.7 kPa (@ 25°C)
<b>Evaporation rate:</b>	not determined.
<b>Other information</b>	
<b>Melting point/range:</b>	-40 °C

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions..
<b>Conditions to avoid:</b>	Keep away from heat and sources of ignition.
<b>Materials to avoid:</b>	Oxidizing agents, Strong acids, Bases
<b>Hazardous decomposition products:</b>	When heated strongly or burned, oxides of carbon, sulfur oxides, nitrogen oxides, ammonia and harmful organic fumes are released.
<b>Hazardous polymerization:</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Local effects

<b>Skin:</b>	Harmful if absorbed through the skin; may cause illness.
<b>Eyes:</b>	Irritant. May cause pain, redness, discomfort.
<b>Inhalation:</b>	May be mildly irritating. Harmful if inhaled; may cause illness.
<b>Ingestion:</b>	Harmful if swallowed; large amounts may cause illness.
<b>Sensitization - skin:</b>	Not known to cause allergic reaction.
<b>Sensitization - lung:</b>	Not known to cause allergic reaction

### Chronic Health Hazard

<b>Carcinogenic effects:</b>	None known.
<b>Mutagenic effects:</b>	Not known to cause heritable genetic damage.
<b>Teratogenic effects:</b>	Not known to cause birth defects or have a deleterious effect on a developing fetus.
<b>Reproductive toxicity:</b>	Not known to adversely affect reproductive functions and organs.
<b>Target organ effects:</b>	Blood. Kidney. Central nervous system. Liver.
<b>Other information:</b>	Can cause headache, narcosis May cause nausea

<b>Component</b>	<b>LD50 / LC50</b>
<i>2-butoxyethanol</i>	- = 470 mg/kg (Oral LD50; Rat) = 2.21 mg/L (Inhalation LC50; Rat) 4 h = 2270 mg/kg (Dermal LD50; Rat) = 450 ppm (Inhalation LC50; Rat) 4 h

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Aquatic toxicity:** See component information below.

### COMPONENT INFORMATION

#### *Ester salt*

**Bioaccumulation:** No information available  
**Persistence and degradability:** No information available

#### *2-butoxyethanol*

**Bioaccumulation:** Does not bioaccumulate  
**Persistence and degradability:** Biodegradable  
**Crustacean toxicity:** 48h LC50= 530 mg/l (*Acartia tonsa*)  
**Freshwater Fish Species Data**  
 1490 mg/L LC50 (*Lepomis macrochirus*) = 96 h  
 2950 mg/L LC50 (*Lepomis macrochirus*) = 96 h  
 = 1698 - 1940 mg/L (LC50; *Daphnia magna*)  
 = 1720 mg/L (EC50; water flea)

#### **Water Flea Data**

#### *Ethanol*

**Bioaccumulation:** log Pow = -0.3  
**Persistence and degradability:** Readily biodegradable  
**Freshwater Fish Species Data**  
 LC50 96 h (*Oncorhynchus mykiss*) = 12.0-16.0 ml/L  
 LC50 96 h (*Pimephales promelas*) = >100 mg/L  
 LC50 96 h (*Pimephales promelas*) = 13400-15100 mg/L  
**Water Flea Data**  
 LC50 48 h (*Daphnia magna*) = 9268 mg/L  
 EC50 24 h (*Daphnia magna*) = 10800 mg/L  
**Other information:** Listed on PLONOR list of OSPAR

## 13. DISPOSAL CONSIDERATIONS

**Waste from residues / unused products:** Dispose of as special waste in compliance with local and national regulations

**Contaminated packaging:** Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal

## 14. TRANSPORT INFORMATION

**UN number:** UN 1993  
**Shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)

### ADR/RID

**Class:** 3  
**Classification Code:** F1  
**Packing Group:** III  
**ADR/RID-Labels:** 3  
**Hazard ID:** 30

### IMDG/IMO

**Class or Div.:** 3  
**Label(s):** 3  
**Packing Group:** III  
**EmS:** F-E, S-E

### ICAO/IATA

**Class or Div.:** 3  
**Label(s):** 3  
**Packing group:** III  
**Packing instruction (passenger aircraft):** 355 **Max Net Qty/Pkg:** 60 L  
**Packing instruction (cargo aircraft):** 366 **Max Net Qty/Pkg:** 220 L

## 15. REGULATORY INFORMATION

In accordance with the criteria of NOHSC

**Indication of danger:**

- Xn - Harmful

Xn



**R-phrase(s):**

- R10 - Flammable.
- R36 - Irritating to eyes.
- R20/21/22 - Also harmful by inhalation, in contact with skin and if swallowed

**S-phrase(s):**

- S16 - Keep away from sources of ignition - No smoking.
- S46 - If swallowed, seek medical advice immediately and show this container or label.
- S24/25 - Avoid contact with skin and eyes.

**International Inventories**

**Australia (AICS):**

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

<h2>16. OTHER INFORMATION</h2>
--------------------------------

**Text of R phrases mentioned in Section 3**

- R11 - Highly flammable.
- R36/38 - Irritating to eyes and skin.
- R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.

**Prepared by:**

Chemical Regulatory Compliance

The information and recommendations contained herein are based upon tests believed to be reliable. However, Schlumberger does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. Schlumberger assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

**End of Safety Data Sheet**