



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	FLOTTEC F140 FROTHER
CHEMICAL FAMILY:	Mixed alcohols, heavy aldehydes, esters
SYNONYMS:	None
MOLECULAR FORMULA:	Mixture
MOLECULAR WEIGHT:	Mixture
MANUFACTURER:	Kemtec Mineral Processing Pty Ltd • 131/15 Hall St • Port Melbourne VIC • Australia
PRODUCT INFORMATION:	Tel: +613 9646 3833 • Fax: +61 9646 3933
EMERGENCY PHONE:	CHEMTREC • North America: +1.800.424.9300 • International: +1.703.527.3887
ISSUE DATE:	October 31, 2012

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS No.	% (w/w)	OSHA (PEL)	ACGIH (TLV)	Carcinogen
2-Ethylhexanol	104-76-7	< 2	Not established	Not established	-
Butanol	71-36-3	< 2	100 ppm (TWA)	20 ppm (TWA)	
Complex oxygenated/ hydrocarbon / 2 ethyl hexanol tails mixture		70 – 100	Not established	Not established	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR

Color: Light to dark straw
 Appearance: Liquid
 Odor: Mixed alcohols and aldehydes

STATEMENT OF HAZARD

WARNING! CAUSES EYE BURNS AND SKIN IRRITATION
 COMBUSTIBLE LIQUID AND VAPOR

POTENTIAL HEALTH EFFECTS

EFFECTS / ROUTES OF EXPOSURE

The estimated acute oral (rat) LD₅₀, acute dermal (rabbit) LD₅₀ and 4-hour inhalation (rat) LC₅₀ values for this material are >2500 mg/kg, >2000 mg/kg and >2.0 mg/L, respectively. Overexposure to vapors may cause irritation of the respiratory tract and eyes and may cause central nervous system effects. Direct contact with this material may cause moderate eye and skin irritation. Refer to Section 11 for toxicology information on the regulated components of this product.

4. FIRST AID MEASURES

INGESTION:	Material is not expected to be harmful by ingestion. No specific first aid measures are required.
SKIN CONTACT:	Remove contaminated clothing without delay. Flush skin thoroughly with water. Do not reuse clothing without laundering.
EYES CONTACT:	Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms
INHALATION:	Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

5. FIREFIGHTING MEASURES

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Extinguishing Media

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

Protective Equipment

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/personal Protection).

Special Hazards

Keep containers cool by spraying with water if exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

METHODS FOR CLEAN UP

Remove source of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

ENVIRONMENTAL PRECAUTIONS

Not available

7. HANDLING AND STORAGE

HANDLING

Precautionary Measures

Do not get in eyes, on skin, on clothing. Keep away from heat and flame. Wash thoroughly after handling.

Special Handling Statements

None known

STORAGE

Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material's flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed. In the Americas, National Fire Protection Association (NFPA) 30: Flammable and Combustible Liquids Code, is a widely used Standard. NFPA establishes storage conditions of the following classes of Materials: Class I Flammable Liquids, Flashpoint <37.8°C. Class II Combustible Liquids, 37.8°C < Flashpoint < 60°C. Class IIIa Combustible Liquids, 60°C < Flashpoint < 93°C. Class IIIb Combustible Liquids, Flashpoint > 93°C.

Storage Temperature: Room Temperature

Reason: Integrity

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

PERSONAL PROTECTIVE EQUIPMENT

EYES: Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

SKIN: Avoid skin contact. Wear impermeable gloves and suitable protective clothing.

RESPIRATORY PROTECTION: Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

ADDITIONAL ADVICE

Food, beverage and tobacco products should not be carried, stored or consumed where this material is used. Before eating, drinking, or smoking, wash face and hands with soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Light to dark straw, liquid, mixed alcohols and aldehydes
BOILING POINT:	Not available
MELTING POINT:	Not available
VAPOR PRESSURE:	0.30 psia
SPECIFIC GRAVITY:	0.90 @ 25°C
VAPOR DENSITY:	> 1 (air = 1)
% VOLATILE (BY WT.):	Not Available
pH:	5.0
SATURATION IN AIR (% by Vol):	Not Available
EVAPORATION RATE:	Not Available
SOLUBILITY IN WATER:	Not Available
VOLATILE ORGANIC CONTENT:	Not Available
FLASH POINT:	> 145°F (> 63°C) PMCC
FLAMMABLE LIMITS IN AIR % BY VOLUME:	Not Available
AUTOIGNITION TEMPERATURE:	Not Available
DECOMPOSITION TEMPERATURE:	Not Available
PARTIAL COEFFICIENT (n-octanol/water):	Not Available
ODOR TRESHOLD:	See Section 2 for exposure limits

10. STABILITY AND REACTIVITY

STABILITY:	Stable
CONDITIONS TO AVOID:	Keep away from heat, spark, flame
POLYMERIZATION:	Will not occur
CONDITIONS TO AVOID:	None known
INCOMPATIBLE MATERIALS:	Strong oxidizers, heat, spark and flames
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide; oxides of nitrogen; oxides of sulfur (includes sulfur di and tri oxides)

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under SECTION 3: HAZARDS IDENTIFICATION

Toxicological information on the regulated components of this product is as follows:

2-Ethylhexanol has an acute oral (rat) LD₅₀ and acute dermal (rabbit) LD₅₀ values of 2 g/kg each. The 6-hour inhalation LC₅₀ (rat) is >4,000 ppm (31.92 mg/L/4h). 2-Ethylhexanol is a severe eye and moderate skin irritant. Inhalation overexposure to 2-ethylhexanol may produce central nervous system depression and irritation of the eyes and respiratory tract. Chronic overexposure to 2-ethylhexanol may cause liver damage, pulmonary edema, or renal damage with glycosuria. In a teratology study in rats 3 ml/kg applied to the skin during the most critical part of gestation produced evidence of maternal toxicity, but no evidence of injury to the offspring. In a separate study, fetal toxicity and an increased incidence of birth defects were noted when pregnant rats were administered 2 ml/kg by stomach tube during gestation.

Butanol has an acute oral (rat) LD₅₀ and acute dermal (rabbit) LD₅₀ values of 7.9 g/kg and 3.4 g/kg respectively.

Complex oxygenate/hydrocarbon/2 ethyl hexanol mixture's toxicological properties have not been fully investigated. The acute oral (rat) LD₅₀ and dermal (rabbit) LD₅₀ values are estimated to both be > 2000 mg/kg. The acute 4-hour inhalation (rat) LC₅₀ is estimated to be >3.2 mg/L. Direct contact may cause moderate eye and skin irritation. Overexposure to vapor may cause irritation of the respiratory tract and eyes and may cause central nervous system effects.

12. ECOLOGICAL INFORMATION

No aquatic LC₅₀, BOD, or COD data available

13. DISPOSAL CONSIDERATIONS

RECOMMENDATIONS FOR THE PRODUCT: Dispose of product in accordance with local, state, and federal laws and regulations. Do not contaminate any lakes, streams, ponds, ground water or soil.

RECOMMENDATIONS FOR PACKAGING: DO NOT PRESSURIZE, CUT, WELD, BRAZE, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner, or properly disposed of.

RECOMMENDED CLEANSING AGENT: Water

14. TRANSPORTATION INFORMTION

	D.O.T. Shipping Information		IMO Shipping Information
SHIPPING NAME:	COMBUSTIBLE LIQUID, N.O.S.*		Not Applicable / Not Regulated
HAZARD CLASS	COMBUSTIBLE LIQUID*		Not Applicable
PACKING GROUP:	III*		Not Applicable
UN/ID NUMBER:	NA1993*		Not Applicable
IMDG PAGE:	Not Applicable		Not Applicable
DOT HAZARDOUS SUBSTANCE:	Not Applicable		Not Applicable
TRANSPORT LABEL REQUIRED:	None required		None required
	ICAO/IATA		Transport Canada
SHIPPING NAME:	Not Applicable		Not Applicable / Not Regulated
HAZARD CLASS:	Not Applicable		Not Applicable
SUBSIDIARY CLASS:	Not Applicable		Not Applicable
UN/ID NUMBER:	Not Applicable		Not Applicable
PACKING GROUP:	Not Applicable		Not Applicable
TRANSPORT LABEL REQUIRED:	Not Applicable		Not Applicable
PACKING INSTRUCTIONS/ MAXIMUM NET QUANTITY:	PASSENGER	Not App.	Not App.
	CARGO	Not App.	Not App.

*Note: DOT class is non-regulated for packages containing less than 120 gallons.

ADDITIONAL TRANSPORTATION INFORMATION

Technical Name (N.O.S.) Complex oxygenate, hydrocarbon mixture

15. REGULATORY INFORMATION

INVENTORY INFORMATION

United States (USA):	All components of this product are included on the TSCA Inventory in compliance with the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. This product contains a chemical substance that is subject to export notification under Section 12 (b) of the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. (This requirement applies to exports from the United States only.)
Canada:	All components of this product are on the Domestic Substances List.
European Union (EU):	Product is not included in the European Inventory of Existing Chemical Substances (EINECS). The product can be supplied in quantities less than 10 kg/year according to Council Directive 67/548/EEC and its amendments.
Australia:	All components of this product are included in the Australian Inventory of Chemical Substances (AICS).

OTHER ENVIRONMENTAL INFORMATION

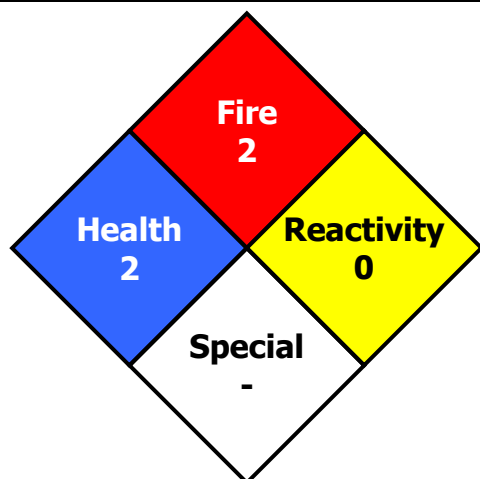
The following components may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372) Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc). See Section 13 for more information on waste classification and waste disposal of this product.

Component	CAS NO.	% (w/w)	TPQ (lbs)	RQ (lbs)	S313	TSCA 12B
Butanol	71-36-3	0 – 2	NONE	5000	YES	NO
2-Ethylhexanol	104-76-7	0.6 – 1.3	NONE	NONE	NO	NO

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA

ACUTE (Y)	CHRONIC (N)	FIRE (Y)	REACTIVE (N)	PRESSURE (N)
-----------	-------------	----------	--------------	--------------

16. OTHER INFORMATION



NFPA HAZARD RATING (National Fire Protection Association)

FIRE: Materials that must be moderately heated or exposed to relatively high ambient temperature before ignition can occur.

HEALTH: Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

REACTIVITY: Materials that in themselves are normally stable, even under fire exposure conditions.

REASON FOR REVISION: Revised format

Prepared By: F. Cappuccitti

Revised By: Cathy Yuen

IMPORTANT: The above information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warrant, expressed or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular uses.