



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Kemtec F120 Frother
CHEMICAL FAMILY:	Alcohol
SYNONYMS:	Methyl isobutyl carbinol; Methyl amyl alcohol; 4-methyl-2-pentanol
MOLECULAR FORMULA:	C ₆ H ₁₃ OH
MOLECULAR WEIGHT:	102
MANUFACTURER:	Kemtec Mineral Processing Pty Ltd • 131/15 Hall St • Port Melbourne VIC • Australia
PRODUCT INFORMATION:	Tel: +61 3 9646 3833 • Web Site: www.Kemtec.com
EMERGENCY PHONE:	CHEMTREC • North America: +1.800.424.9300 • International: +1.703.527.3887
ISSUE DATE:	August 31, 2012

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS No.	% (w/w)	OSHA (PEL)	ACGIH (TLV)	Carcinogen
Methyl isobutyl carbinol (MIBC)	108-11-2	99.5	25 ppm (skin)	25 ppm (skin), 40 ppm STEL	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR

Color: Color:
Appearance: Appearance:
Odor: Odor:

STATEMENT OF HAZARD

WARNING! **WARNING!**

POTENTIAL HEALTH EFFECTS

EFFECTS / ROUTES OF EXPOSURE

The acute oral (rat) and acute dermal (rabbit) LD50 values for this product are 3.1 – 4.9 g/kg and 1.5 – 2.3 g/kg, respectively. Direct contact with this product can cause skin irritation. Direct contact with this product can cause eye burns. Irreversible corneal damage may occur. (See Section 11 for Toxicological Information)

4. FIRST AID MEASURES

INGESTION:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.
SKIN CONTACT:	In case of skin contact, remove contaminated clothing without delay. Wear impervious gloves. Cleanse skin thoroughly with soap and water. Do not omit cleaning hair or under fingernails if contaminated. Do not reuse clothing without laundering
EYES CONTACT:	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
INHALATION:	If inhaled, remove to fresh air. If not breathing, give artificial respiration and seek medical attention immediately. Oxygen should only be administered by trained personnel.

5. FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	102°F; (39°C), TCC
FLAMABLE LIMITS IN AIR	Lower: ~ 1.
% BY VOLUME:	Lower: ~ 5.5
AUTOIGNITION TEMP:	1081°F; (583°C)
DECOMPOSITION TEMP:	212°F; (100°C)

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Extinguishing Media

Use water, carbon dioxide or dry chemical to extinguish fires. Cool exposed equipment with water spray until well after fire is out.

Protective Equipment

Wear self-contained, positive-pressure breathing apparatus and full firefighting protective clothing. See Section 8 (Exposure Controls/Personal Protection) for special protective clothing.

Special Hazards

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Contain the spill if possible. Where exposure level is not known, wear NIOSH approved, positive pressure, self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Exposure Control (Exposure Controls/Personal Protection), wear rain suit. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush area with water.

METHODS FOR CLEAN UP

Remove sources 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

Dispose of in accordance with EPA rules and regulations.

7. HANDLING AND STORAGE

HANDLING

Precautionary Measures

Precautions should be taken to prevent electrostatic discharge. Hot water system recommended for temperature control when storage is at temperature below melting point.

Special Handling Statements

None

STORAGE

It is recommended to store product in carbon steel with effective moisture control, carbon steel coated with baked phenolic, fiberglass reinforced plastic with epoxy or polyester resin, or metallic zinc in an inorganic binder.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS

Mechanical ventilation may be necessary if working with the product in enclosed areas or at elevated temperatures. Utilize a closed system process when available. If not available, provide adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

EYES: EYES:

SKIN: SKIN:

RESPIRATORY RESPIRATORY PROTECTION:

PROTECTION:

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:	Colorless liquid
BOILING POINT:	270°F (132°C)
MELTING POINT:	-194°F (-126°C)
VAPOR PRESSURE:	5mm HG @ 21°C
SPECIFIC GRAVITY:	0.81 @ 15°C
VAPOR DENSITY:	3.5 (air = 1)
% VOLATILE (BY WT.):	100%
pH:	Not applicable
SATURATION IN AIR (% by Vol):	0.66
EVAPORATION RATE:	0.33 (Butyl acetate = 1)
SOLUBILITY IN WATER:	1.7g/100g
VOLATILE ORGANIC CONTENT:	Not available
FLASH POINT:	102°F (39°C) Tag Closed Cup
FLAMMABLE LIMITS (% BY VOL.):	Lower: ~1.2 Upper: ~8.0
AUTOIGNITION TEMPERATURE:	1081°F (583°C)
DECOMPOSITION TEMPERATURE:	212°F (100°C)
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:	Avoid contact with strong oxidizing agents, inorganic acids, and halogens
HAZARDOUS DECOMPOSITION PRODUCTS:	Not expected

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:

The acute oral (rat) and acute dermal (rabbit) LD50 values for this product are 2.6 g/kg and 3.6 g/kg, respectively. Direct contact with this product can cause skin irritation. Direct contact with this product can cause eye burns. Irreversible corneal damage may occur.

12. ECOLOGICAL INFORMATION

This material is not classified as dangerous for the environment.

This material is readily biodegradable

FISH TEST RESULTS:	Test: Acute toxicity, freshwater (OECD 203)
	Duration: 96 Hr
	Procedure: Static

Species: Rainbow Trout (*Oncorhynchus mykiss*) >100 mg/l LC50

INVERTEBRATE TEST RESULTS: **Test:** Acute Immobilization OECD 202)

Duration: 48Hr

Procedure: Static

Species: Water Flea (*Daphnia magna*) 710 mg/l EC50

DEGRADATION:

Test: Biodegradability 94%

Duration: 20 Day

BOD 5: 38-50%

COD: 2.43 mg/mg

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 Information

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

	D.O.T. Shipping Information			IMO Shipping Information
SHIPPING NAME:	METHYL ISOBUTYL CARBINOL			METHYL ISOBUTYL CARBINOL
HAZARD CLASS	3			3
PACKING GROUP:	III			III
UN/ID NUMBER:	UN2053			UN2053
IMDG PAGE:	Not applicable			-
DOT HAZARDOUS SUBSTANCE:	Not applicable			Not applicable
TRANSPORT LABEL REQUIRED:	Flammable Liquid			Flammable Liquid
	ICAO/IATA			Transport Canada
SHIPPING NAME:	METHYL ISOBUTYL CARBINOL			METHYL ISOBUTYL CARBINOL
HAZARD CLASS:	3			3
SUBSIDIARY CLASS:	Not applicable			Not applicable
UN/ID NUMBER:	UN2053			UN2053
PACKING GROUP:	III			III
TRANSPORT LABEL REQUIRED:	Flammable Liquid			Flammable Liquid
PACKING INSTRUCTIONS/ MAXIMUM NET QUANTITY:	PASSENGER	309	60L	Not applicable
	CARGO	310	220L	

ADDITIONAL TRANSPORTATION INFORMATION

Technical Name (N.O.S.):

Comments:

15. REGULATORY INFORMATION

United States (USA):	This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C. 2601 et. seq.
Canada:	Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.
European Union (EU):	All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) in compliance with 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

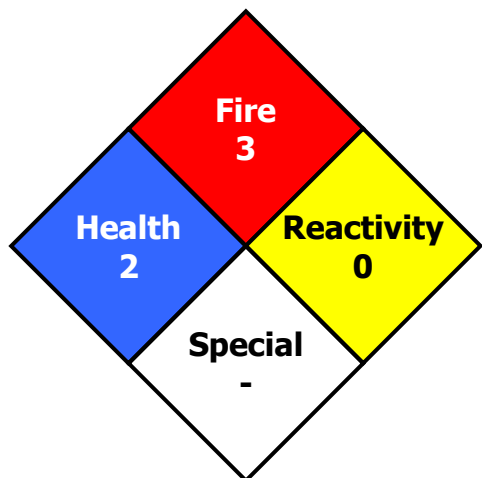
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste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

Component	CAS NO.	% (w/w)	TPQ (lbs)	RQ (lbs)	S313	TSCA 12B
This product does not contain any components regulated under these sections of the EPA						

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA

ACUTE (Y)	CHRONIC (N)	FIRE (Y)	REACTIVE (N)	PRESSURE (N)
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16. OTHER INFORMATION



NFPA HAZARD RATING (National Fire Protection Association)

FIRE:	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
HEALTH:	Materials that, under emergency conditions, can cause serious or residual injury even though prompt medical treatment was given.
REACTIVITY:	Materials that in themselves are normally stable, even under fire exposure conditions.

REASON FOR REVISION: Triennial review

Prepared By: F. Cappuccitti

Revised By: C. 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.