



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: KEMTEC FT1344 COLLECTOR

CHEMICAL FAMILY:	Modified Thionocarbamate
SYNONYMS:	None
MOLECULAR FORMULA:	Mixture
MOLECULAR WEIGHT	Mixture
MANUFACTURER:	Kemtec Pty Ltd, Suite 131/15 Hall St, Port Melbourne VIC 3207
PRODUCT INFORMATION:	Tel: +613 9646 3833 • Fax: +613 9646 3933
EMERGENCY PHONE:	INFOSAFE 1800 638 556 (all hours)
ISSUE DATE:	November 30, 2014

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS No.	% (w/w)	OSHA (PEL)	ACGIH (TLV)	Carcinogen
Isobutanol	78-83-1	0-7.5%	100 ppm	50 ppm (TWA)	-
Butanol, sec	78-92-2	0-7.5%	150 ppm	100 ppm (TWA)	-
Modified Thionocarbamate	86329-09-1	60-100%	Not Established	Not Established	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR

Color:	Orange – Brown
Appearance:	Liquid
Odor:	Slight Pungent Garlic

STATEMENT OF HAZARD

N/A

POTENTIAL HEALTH EFFECTS

EFFECTS / ROUTES OF EXPOSURE

The acute oral (rat) LD50, acute dermal (rabbit) LD50 values are estimated to be >770 mg/kg and >2000 mg/kg, respectively. Direct contact with this material can cause moderate skin and mild eye irritation. Repeated or prolonged contact with this product may cause allergic skin reactions. Overexposure to vapors may cause irritation of the respiratory tract and eyes and may cause central nervous system effects. Refer to Section 11 for toxicology information on the regulated components of this product.



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:	Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.
EYE CONTACT:	Rinse immediately with plenty of water for at least 15 minutes.
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 a two piece PVC suit with hood or PVC overalls with hood.
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 :	Keep away from heat and flame. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Special Handling Statements :	None

STORAGE Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations or guidelines. Standards are primary 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.

Storage Temperature:	Room temperature Reason: Integrity
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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING MEASURES: 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

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.

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

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

COLOR:	Orange-Brown
APPEARANCE:	Liquid
ODOR:	Slight Pungent Garlic
BOILING POINT:	~ 439°F; 226°C
MELTING POINT:	Not applicable
VAPOR PRESSURE:	7.9 Pa @25°C
SPECIFIC GRAVITY:	0.994@ 20°C
VAPOR DENSITY:	Not available
% VOLATILE (BY WT.):	~13
pH:	Not available
SATURATION IN AIR (% by Vol):	Not available
EVAPORATION RATE:	Not available
SOLUBILITY IN WATER:	497 mg/L
VOLATILE ORGANIC CONTENT:	Not available
FLASH POINT:	151°F; 66°C TCC
FLAMMABLE LIMITS (% BY VOL.):	Not available
AUTO IGNITION TEMPERATURE:	651°F (344°C)
DECOMPOSITION TEMPERATURE:	Not Available
PARTIAL COEFFICIENT (n-octanol/water):	2.84
ODOR THRESHOLD:	See Section 2 for exposure limits

10. STABILITY AND REACTIVITY

STABILITY:	Stable
CONDITIONS TO AVOID:	None Known
POLYMERIZATION:	Will not occur
CONDITIONS TO AVOID:	None known
MATERIALS TO AVOID:	Strong acids, bases, oxidizers, high temperature
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide; carbon dioxide; 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:

Isobutanol has acute oral (rat) and dermal (rabbit) LD50 values of 2.46 g/kg and 3.4 g/kg, respectively. The LC50 (rat) following a 4 hour inhalation exposure is >8000 ppm (24.24 mg/L). Acute overexposure to isobutanol vapor can cause irritation to the eyes (severe), skin (moderate) and mucous membranes, as well as, central nervous system depression. Direct contact with isobutanol may cause severe eye and mild to moderate skin irritation.

2-Butanol has acute oral (rat) and dermal (rabbit) LD 50 values of 6.48 g/kg and >2.0 g/kg, respectively. In a 4 hour inhalation exposure to 16 000 ppm of 2 butanol vapor, five of six rats exposed died. Acute overexposure to 2-butanol vapor may cause severe irritation and central nervous system depression. Direct eye contact will cause severe irritation. Prolonged or repeated contact with skin can cause defatting and drying of skin which can cause irritation.

Modified Thionocarbamate (#2) has an oral (rat) and dermal (rat) LD 50 values of > 700 g/kg and >2 000 g/kg, respectively. This material is produced mild eye and moderate skin irritation in animal studies. Skin sensitization was produced in tests with guinea pigs. This material was positive in the Ames Salmonella assay, but not mutagenic in the in-vitro CHO/HGPRT forward gene mutation assay and lymphoma assay. When tested in an in-vivo mouse micronucleus test, this material did not show any evidence of causing chromosome damage or bone marrow cell toxicity and therefore is considered not mutagenic. Based on both the weight and strength of the evidence, this material is not considered mutagenic. In a 28 day oral (rat) toxicity study, systemic toxicity was observed at 150 mg/kg/day, with some treatment related effects at 50 mg/kg/day and 15 mg/kg/day. No suitable NOEL could be established due to the occurrence of treatment related changes at 15 mg/kg/day.

12. ECOLOGICAL INFORMATION

The ecological properties of this material have not been fully investigated.

It is presumed to be dangerous to the environment, very toxic to aquatic organisms, and may cause long-term adverse effects in the environment.

ALGAE TEST RESULTS

Test	Duration	Procedure	Species	Results	
The Selenastrum capricornutum (Prinz) algal assay bottle test	72 hr.	Growth Inhibition (OECD 201)	Green Algae (Selenastrum capricornutum)	3.9 mg/l 9.3 mg/l	EbC50 ErC50

FISH TEST RESULTS

Test	Duration	Procedure	Species	Results	
Acute toxicity, freshwater (OECD 203)	96 hr.	Static Renewal	Rainbow Trout (Salmo gairdneri)		LC50

INVERTEBRATE TEST RESULTS

Test	Duration	Procedure	Species	Results	
Acute Immobilization (OECD 202)	48 hr.	Static	Water Flea (Daphnia magna)	0.006 mg/l	LC50

ACCUMULATION TEST RESULTS

Test	Duration	Procedure	Species	Results	
Bacteria Inhibition	3 hr.	Respiration Inhibition (OECD 209)	Activated Sludge - Bacterial	137.5 mg/l	EC 50

Degradation

Test	Duration	Procedure	Results		
Abiotic Degradation	-	Other	Hydrolytically stable under acidic, neutral and basic conditions		



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: Packaging that cannot be cleaned should be disposed of like the product.

RECOMMENDED CLEANSING AGENT: Water



14. Transportation Information

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

ICAO/IATA				
PROPER SHIPPING NAME:	NOT APPLICABLE/NOT REGULATED			
HAZARD CLASS:	Not applicable			
PACKING GROUP:	Not applicable			
UN NUMBER:	Not applicable			
TRANSPORT LABEL REQUIRED:	None Required			
PACKING INSTRUCTIONS/ MAXIMUM NET QUANTITY:	PASSENGER AIRCRAFT	309	Not applicable	
	CARGO AIRCRAFT	310	Not applicable	
TECHNICAL NAME (N.O.S.):	Not Applicable			
IMO				
PROPER SHIPPING NAME:	NOT APPLICABLE/NOT REGULATED			
HAZARD CLASS:	Not applicable			
UN NUMBER:	Not applicable			
PACKING GROUP:	Not applicable			
TRANSPORT LABEL REQUIRED:	None Required			
TECHNICAL NAME (N.O.S.):	Not applicable			

15. REGULATORY INFORMATION

INVENTORY INFORMATION

United States (USA)	All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.
Canada	All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.
European Union (EU)	All components of this product are included in the European Inventory of Existing Chemical Substances (EIECS), or are not required to be listed on EINECS, or have be notified 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) or are not required to be listed on AICS.
China	All components of this product are NOT included on the Chinese inventory.
Japan	All components of this product are NOT included on the Japanese (ENCS) inventory.
Korea	All components of this product are NOT included on the Korean (ECL) inventory.
Philippines	All components of this product are NOT included on the Philippine (PICCS) inventory.

OTHER ENVIRONMENTAL INFORMATION

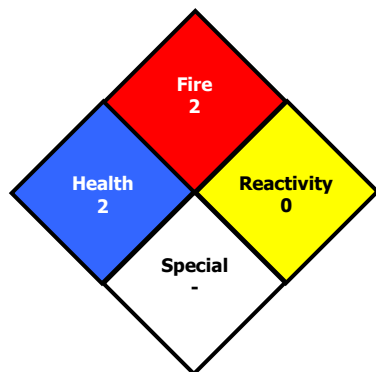
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste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

Component	CAS NO.	% (w/w)	TPQ (lbs)	RQ (lbs)	S313	TSCA 12B
Butanol, sec	78-92-2	0-7.5	None	0	Yes	No

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)

HEALTH - 2 -	Materials that, under emergency conditions can cause temporary incapacitation or residual injury.
FIRE - 2 -	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
REACTIVITY - 0 -	Materials that in themselves are normally stable, even under fire exposure conditions.

REASON FOR REVISION: Emergency contact update

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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.