



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	KEMTEC FT305 COLLECTOR
CHEMICAL FAMILY:	Xanthate Ester
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:	CHEMTREC • North America: +1.800.424.9300 • International: +1.703.527.3887
ISSUE DATE:	April 30, 2012

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS No.	% (w/w)	OSHA (PEL)	ACGIH (TLV)	Carcinogen
Carbonodithioic acid, O- pentyl S-propenyl ester - Alkyl-O-(n- amyl) xanthate, s-	2956-12-9	90-95	Not established	Not established	-
Pentyl alcohol	71-40-04	1-4	Not established	Not established	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR

Color:	Yellow-Orange
Appearance:	Liquid
Odor:	Garlic

STATEMENT OF HAZARD

**CAUTION! MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR SWALLOWED MAY CAUSE SKIN IRRITATION
COMBUSTIBLE LIQUID AND VAPOR**

POTENTIAL HEALTH EFFECTS

EFFECTS / ROUTES OF EXPOSURE

Acute oral (rat) and acute dermal (rabbit) values are 590 mg/kg and 280 mg/kg, respectively. No eye irritation and moderate skin irritation were produced during primary irritation studies with rabbits. 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:	Material burns to give toxic fumes. Do not flush to sewer which may contain acid. This could result in generation of toxic and explosive hydrogen sulfide gas.

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:	Use appropriate containment to avoid environmental contamination.

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 :	This product should not be mixed with acids since evolution of toxic and explosive hydrogen sulfide gas could result. This precaution does not, of course, apply to addition of this reagent to flotation pulps in amounts customarily used in flotation.

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 30 establishes storage conditions for 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
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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:	Yellow-Orange
APPEARANCE:	Liquid
ODOR:	Garlic
BOILING POINT:	Not available
MELTING POINT:	Not available
VAPOR PRESSURE:	7mg of Hg @ 125°C
SPECIFIC GRAVITY:	1.015-1.045
VAPOR DENSITY:	Not available
% VOLATILE (BY WT.):	Not available
pH:	Not applicable
SATURATION IN AIR (% by Vol):	~1 @ 125°C, 760mg Hg
EVAPORATION RATE:	Not available
SOLUBILITY IN WATER:	Negligible
VOLATILE ORGANIC CONTENT:	Not available
FLASH POINT:	203°F; 95°C TCC
FLAMMABLE LIMITS (% BY VOL.):	Not available
AUTO IGNITION TEMPERATURE:	Not available
DECOMPOSITION TEMPERATURE:	Not available
PARTIAL COEFFICIENT (n-octanol/water):	Not available
ODOR THRESHOLD:	Not available

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, oxidizing materials

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:

Carbonodithioic acid, O-pentylS-propenylester has approximate oral (rat) and dermal (rabbit) LD50 values of 590 mg/kg and 280 mg/kg, respectively. Direct contact with this material caused no eye and moderate skin irritation.

Pentylalcohol has an acute oral (rat) and dermal (rabbit) LD50 values of 2200 mg/kg and >3200 mg/kg, respectively. Direct contact with this material may cause severe eye and moderate skin irritation.

12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

ALGAE TEST RESULTS

Test	Duration	Procedure	Species	Results
				EC50

FISH TEST RESULTS

Test	Duration	Procedure	Species	Results

INVERTEBRATE TEST RESULTS

Test	Duration	Procedure	Species	Results

ACCUMULATION TEST RESULTS

Test	Duration	Procedure	Species	Results

DEGRADATION

Test	Duration	Procedure	Results
Biodegradability	28 days	-	< 70 %
COMMENTS:	Information based on structurally similar material		



13. DISPOSAL CONSIDERATIONS

RECOMMENDATIONS FOR THE PRODUCT: In accordance with regulations for special waste, product must be taken, after pretreatment, to an authorized special waste incineration plant.

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.

U.S. DOT				
PROPER SHIPPING NAME:	NOT APPLICABLE/NOT REGULATED			
HAZARD CLASS	Not applicable			
PACKING GROUP:	Not applicable			
UN/ID NUMBER:	Not applicable			
TRANSPORT LABEL REQUIRED:	None required			
TECHNICAL NAME (N.O.S.):	Not applicable			
HAZARDOUS SUBSTANCE:	Not applicable			
COMMENTS:	Not applicable			
TRANSPORT CANADA				
PROPER SHIPPING NAME:	NOT APPLICABLE/NOT REGULATED			
HAZARD CLASS	Not applicable			
PACKING GROUP:	Not applicable			
UN/ID NUMBER:	Not applicable			
TRANSPORT LABEL REQUIRED:	None required			
TECHNICAL NAME (N.O.S.):	Not applicable			
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	609	-	
	CARGO AIRCRAFT	611	-	
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 on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.
Australia	All components of this product have NOT yet been included in the Australian Inventory of Chemical Substances (AICS) or assessed by Worksafe Australia.
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

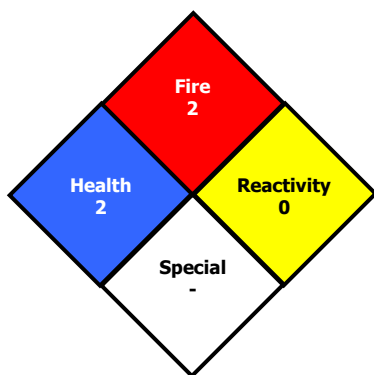
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste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

Component	CAS NO.	% (w/w)	TPQ (lbs)	RQ (lbs)	S313	TSCA 12B
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)

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: Triennial review

Prepared By: R.Nix

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.