



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	KEMTEC 1234 COLLECTOR
CHEMICAL FAMILY:	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:	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
Isopropyl ethyl thionocarbamate	141-98-0	90 - 98	Not established	Not established	-
Isopropanol	67-63-0	0 - 3	400 ppm (TWA) 980 mg/m ³ (TWA)	200 ppm (TWA) 400 ppm (STEL)	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR

Color:	Colorless to straw
Appearance:	Liquid
Odor:	Characteristic

STATEMENT OF HAZARD

**CAUTION! COMBUSTIBLE LIQUID AND VAPOR
MAY CAUSE ALLERGIC SKIN REACTION**

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 2,324 mg/kg, >2,000 mg/kg and 20 mg/l, respectively. Direct contact with this material may cause mild eye and skin irritation. This material was weakly sensitizing to the skin of guinea pigs. 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 Avoid contact with brass or copper, explosive amides may be formed.

Storage Temperature: Room temperature
Reason: Safety

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING MEASURES: Engineering controls are not usually necessary if good hygiene practices are followed.

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:	Colorless to straw
APPEARANCE:	Liquid
ODOR:	Characteristic
BOILING POINT:	392°F; 200°C
MELTING POINT:	Not applicable
VAPOR PRESSURE:	Not available
SPECIFIC GRAVITY:	0.990 – 1.004 @ 20°C
VAPOR DENSITY:	Heavier than air
% VOLATILE (BY WT.):	0 – 2
pH:	8.0 +/- 0.05 (5% water solution)
SATURATION IN AIR (% by Vol):	Not available
EVAPORATION RATE:	Not available
SOLUBILITY IN WATER:	Negligible
VOLATILE ORGANIC CONTENT:	Not available
FLASH POINT:	176°F; 80°C TCC
FLAMMABLE LIMITS (% BY VOL.):	Not available
AUTO IGNITION TEMPERATURE:	Not available
DECOMPOSITION TEMPERATURE:	392°F; 200°C
PARTIAL COEFFICIENT (n-octanol/water):	Not available
ODOR THRESHOLD:	See Section 2 for exposure limits

10. STABILITY AND REACTIVITY

STABILITY:	Stable
CONDITIONS TO AVOID:	Brass of copper
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:

Isopropyl ethyl thionocarbamate (IPETC) has acute oral (rat) and dermal (rabbit) LD50 values of 2324 mg/kg and >2000 mg/kg, respectively. This material causes mild eye and minimal skin irritation in studies with rabbits. Material tested positive (Guinea pig) for skin sensitization. This material is not expected to be an Ames mutagen based on SAR analysis.

Isopropanol has acute oral (rat) and dermal (rabbit) LD50 values of 5.0 g/kg and 12.8 g/kg, respectively. The 4-hour inhalation LC50 (rat) for isopropanol is >16,000 ppm (40.86 mg/L). Acute overexposure to isopropanol vapor may cause mild irritation of the eyes and respiratory tract. Chronic overexposure to isopropanol vapors may cause central nervous system depression, headaches, dizziness, nausea, and staggered gait. Liquid isopropanol may cause moderate to severe eye irritation. In laboratory animals studies, isopropanol has produced fetotoxic effects at levels that were maternally toxic and developmental effects at levels that were maternally non-toxic, and inhalation exposures that produced reduced fetal weight at non-maternally toxic levels.

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	96 hr.		Green Algae (Selenastrum capricornutum)	21 mg/l	EC50

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)	17 mg/l	LC50

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:	COMBUSTIBLE LIQUID, N.O.S.		
HAZARD CLASS	Combustible Liquid		
PACKING GROUP:	III		
UN/ID NUMBER:	NA1993		
TRANSPORT LABEL REQUIRED:	None required		
TECHNICAL NAME (N.O.S.):	Contains isopropanol		
HAZARDOUS SUBSTANCE:	Not applicable		
COMMENTS:	Not regulated in containers less than 120 gallons		
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	-	-
	CARGO AIRCRAFT	-	-
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 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 included on the Chinese inventory or are not required to be listed on the Chinese inventory.
Japan	All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.
Korea	All components of this product are NOT included on the Korean (ECL) inventory.
Philippines	All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

OTHER ENVIRONMENTAL INFORMATION

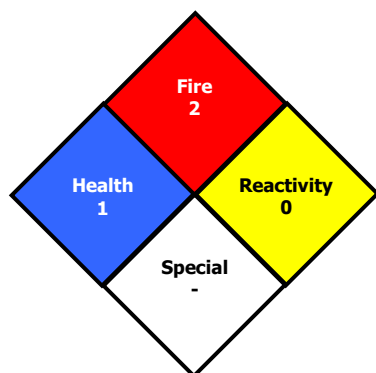
The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste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



NFPA HAZARD RATING (National Fire Protection Association)

HEALTH - 1 -	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 - 1 -	Materials that in themselves are normally stable, even under fire exposure conditions.

REASON FOR REVISION: Triennial review

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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.