



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	KEMTEC FT2020 COLLECTOR
SYNONYMS:	None
PRODUCT DESCRIPTION:	Dithiophosphate salt
INTENDED/RECOMMENDED USE:	Mining Chemical
MANUFACTURER:	Kemtec Mineral Processing • 131/15 Hall St • Port Melbourne, VIC 3207 • Australia
PRODUCT INFORMATION:	Tel: +61 3 96463833 • Fax: +61 3 96463933
EMERGENCY PHONE:	INFOSAFE 1800 638 556 (24 hrs)
ISSUE DATE:	March 31, 2015

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS No.	% (w/w)	Symbols	Risk Phrases
Sodium hydroxide	1310-73-2	0.5	C	R35
Diethyldithiophosphoric acid, sodium salt, hydrolyzed	3338-24-7	35.0 – 50	Not Established	

3. HAZARDS IDENTIFICATION

Classified according to the Australian Approved Criteria for Classifying Hazardous Substances and ADG Code for transport by Road and Rail: **DANGEROUS GOODS.**

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Skin Corrosion – Sub-category 1B

Eye Damage – Category 1

SIGNAL WORD: DANGER



HUMAN AND ENVIRONMENTAL HAZARDS

R32 - Contact with Acids Liberates Very Toxic Gas.

R38 - Irritating to Skin.

R41 - Risk of Serious Damage to Eyes.

R52/53 – Harmful to Aquatic Organisms, May Cause Long-Term Adverse Effects in the Aquatic Environment.

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:	Take off immediately all contaminated clothing. Wear impermeable gloves. Wash immediately with plenty of water and soap. Pay particular attention to skin crevices, nail folds, etc. Do not reuse contaminated clothing without laundering. Do not reuse contaminated leatherware.
EYES CONTACT:	In case of eye contact, immediately irrigate with plenty of water for 15 minutes. Obtain medical attention without delay.
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, carbon dioxide or dry chemical to extinguish fires.
Protective Equipment:	Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection). Use approved air-supplied full face respirator.
Special Hazards:	Sulfur dioxide or hydrogen sulphide may be formed under fire conditions. Do not flush to sewer which may contain acid. This could result in generation of toxic and explosive hydrogen sulfide gas. HAZCHEM Code: Not applicable

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear a two piece PC suit with hood of PVC overalls with hood.
METHODS FOR CLEAN UP:	Cover spills with some inert absorbent material. Sweep up and place in a waste disposal container. Flush area with water.

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 :	Large quantities of undiluted product should not be mixed with acids, since evolution of toxic and explosive hydrogen sulphide gas could result. In particular, precautions must be taken to avoid the accidental discharge of large volumes of the product in acid storage tanks or any tank containment containing acidic materials. This precaution does not, of course, apply to the addition of this product to flotation pulps in amounts customarily used in flotation, were the product amounts are small and instantly diluted to concentrations well below the solubility limits.

STORAGE

None

Storage Temperature:	Room temperature
Reason:	Product integrity
Australian AS 1940 Classification:	C1 combustible liquid

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

CONTROL PARAMETERS – Limits

Sodium hydroxide 1310-73-2

Australia	2 mg/m ³ (Peak)
New Zealand-Workplace	2 mg/m ³ (Ceiling)

Exposure Limit:

ACGIH (TLV)	2 mg/m ³ (Ceiling)
-------------	-------------------------------

ENGINEERING MEASURES	Utilize a closed system process when available. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.
-----------------------------	--

RESPIRATORY PROTECTION:	For operations where inhalation exposure can occur, use an approved respirator recommended by an industrial hygienist after an evaluation of the operation. Where inhalation exposure cannot occur, no respiratory protection is required. A full face piece respirator also provides eye and face protection.
--------------------------------	--

EYE PROTECTION:	Prevent eye and skin contact. Provide eye wash fountain and safety in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.
------------------------	---

SKIN PROTECTION:	Prevent contamination of skin or clothing when removing protective equipment. 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, APPEARANCE AND ODOR:	Amber to dark brown, clear liquid; sulfur odor
BOILING POINT:	103 °C
MELTING POINT:	-16.1 °C
VAPOR PRESSURE:	Similar to water
SPECIFIC GRAVITY:	1.12 @ 20°C
VAPOR DENSITY:	Similar to water
% VOLATILE (BY WT.):	~50 (water)
pH:	>10
SATURATION IN AIR (% by Vol):	Similar to water
EVAPORATION RATE:	Similar to water
SOLUBILITY IN WATER:	Complete
VOLATILE ORGANIC CONTENT (EU):	Not available
FLASH POINT:	>93°C, Setaflash Closed Cup
FLAMMABLE LIMITS (% BY VOL.):	Not available
AUTOIGNITION TEMPERATURE:	477 °C
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:	None known
POLYMERIZATION:	Will not occur
CONDITIONS TO AVOID:	None known
MATERIALS TO AVOID:	Strong acids and/or oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon dioxide, carbon monoxide; oxides of sulfur (includes sulfur di and tri oxides), oxides of phosphorus.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Irritating to Skin
 Risk of Serious Damage to Eyes

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

Oral	Rat	Acute LD50	>2000 mg/kg
Dermal	Rabbit	Acute LD50	>2000mg/kg
Inhalation	Rat	Acute LC50 4 hr	>20 mg/l

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	Dermal	Rabbit	Irritating
Acute Irritation	Eye	Rabbit	Causes serious Damage

ALLERGIC SENSITIZATION

Sensitization	Dermal	Not Sensitizing
Sensitization	Inhalation	Not Sensitizing

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No Data
-----------------------	---------

HAZARDOUS INGREDIENT TOXICITY DATE

Sodium diethyl dithiophosphate has estimated acute oral (rat) and dermal (rabbit) LD50 values of greater than 5000 mg/kg and 2000 mg/kg, respectively. Direct contact with sodium diethyl dithiophosphate can cause eye burns and skin corrosion.

Sodium hydroxide is corrosive to eyes, skin, and the soft tissues of the digestive and respiratory tracts. Even dilute solutions of sodium hydroxide can produce irreversible damage to eyes and skin. A one percent solution/24 hrs caused severe eye irritation in monkeys. Acute overexposure to sodium hydroxide mists or dusts causes severe respiratory irritation. The acute oral (rat) and dermal (rabbit) LD50 values are 104-340 mg/kg and 1250 mg/kg, respectively. The human oral LDLo is 1.57 mg/kg.

12. ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 This material is not readily biodegradable.

FISH TEST RESULTS

Test: Acute toxicity, freshwater (OECD 203)
Duration: 96 hr. **Procedure:** Semi-static
Species: Fathead Minnow (*Pimephales promelas*)
 >100 mg/l LC50

INVERTEBRATE TEST RESULTS

Test: US EPA TG OPPTS 850.1035
Duration: 96 hr **Procedure:** Static
Species: Mysid Shrimp (*Mysidopsis bahia*)
 34 mg/l LC50

DEGRADATION

Test: Seawater Closed Bottle Method (OECD 306)
Duration: 28 day **Procedure:** Ready biodegradability
 44 % Limited Degradability

13. DISPOSAL CONSIDERATIONS

RECOMMENDATIONS FOR THE PRODUCT: When possible recycle, recover and reuse the materials, where permitted. If disposal is necessary, it is recommended that the organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

14. TRANSPORTATION INFORMATION

	D.O.T. Shipping Information			IMO Shipping Information
SHIPPING NAME:	CORROSIVE LIQUID,BASIC,ORGANIC, N.O.S.			CORROSIVE LIQUID,BASIC,ORGANIC, N.O.S.
HAZARD CLASS	8			8
PACKING GROUP:	II			II
UN/ID NUMBER:	3267			3267
IMDG PAGE:	Not Applicable			-
DOT HAZARDOUS SUBSTANCE:	Not Applicable			Not Applicable
TRANSPORT LABEL REQUIRED:	CORROSIVE			CORROSIVE
	ICAO/IATA			Transport Canada
SHIPPING NAME:	CORROSIVE LIQUID,BASIC,ORGANIC, N.O.S.			CORROSIVE LIQUID,BASIC,ORGANIC, N.O.S.
HAZARD CLASS:	8			8
SUBSIDIARY CLASS:	Not Applicable			-
UN/ID NUMBER:	3267			3267
PACKING GROUP:	II			II
TRANSPORT LABEL REQUIRED:	CORROSIVE			CORROSIVE
PACKING INSTRUCTIONS/ MAXIMUM NET QUANTITY:	PASSENGER	809	1L	Not applicable
	CARGO	813	30L	

ADDITIONAL TRANSPORTATION INFORMATION

Technical Name (N.O.S.): (contains dithiophosphate salt)

15. REGULATORY INFORMATION

MARKING AND LABELING

Symbol(s) Xi - Irritant

Risk Phrases

R32	Contact with acids liberates very toxic gas.
R38	Irritating to skin
R41	Risk of Serious damage to eyes
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39	Wear eye/face protection.
S50A	Do not mix with acids or aqueous solutions of acids since evolution of poisonous and flammable hydrogen sulfide gas could result. This precaution does not, of course apply to the addition of this material to flotation pulps in the amounts normally used in flotation.

OTHER AUSTRALIAN INFORMATION

Poison Schedule No.: 5

INVENTORY INFORMATION

Australia:	All components of this product are included in the Australian Inventory of Chemical Substances (AICS)
European Union (EU):	One or more components of this product are NOT included in the European Inventory of Existing Chemical Substances (EINECS). These components can be supplied in quantities of less than 100 kg/yr for research and analysis purposes.
United States (USA):	All components of this product are included on the TSCA Chemical Inventory and are not required to be listed on the TSCA Chemical Inventory.
Canada:	This product contains components not on the Domestic Substances List. These components have been reported in accordance with subsection 26 of the Canadian Environment Protection Act..
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.

16. OTHER INFORMATION

REASON FOR REVISION: Transport Information Revision

Prepared By: Kenneth Lee

Revised By: Nicole Watt

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.