

MALLINCKRODT BAKER, INC. -- SODIUM CYANIDE -- 6810-00-843-3643

===== Product Identification =====

Product ID:SODIUM CYANIDE

MSDS Date:11/17/1999

FSC:6810

NIIN:00-843-3643

Status Code:A

MSDS Number: CKWDZ

=== Responsible Party ===

Company Name:MALLINCKRODT BAKER, INC.

Address:222 RED SCHOOL LANE

City:PHILLIPSBURG

State:NJ

ZIP:08865-2219

Country:US

Info Phone Num:908-859-2151/ 800-582-2537

Emerge

ncy Phone Num:(800)424-9300

Resp. Party Other MSDS Num.:S3458

Preparer's Name:STRATEGIC SERVICES DIV.

Chemtec Ind/Phone:(800)424-9300

CAGE:70829

=== Contractor Identification ===

Company Name:MALLINCKRODT BAKER, INC.

Address:222 RED SCHOOL LANE

Box:City:PHILLIPSBURG

State:NJ

ZIP:08865

Country:US

Phone:800-582-2537

CAGE:70829

Company Name:PHOENIX INDUSTRIES INC

Address:1519 CHAMBERLAYNE PARKWAY

Box:City:RICHMOND

State:VA

ZIP:23222

Country:US

Phone:804-264-5183/FAX: 264-5535

Contract Num:SP0450-

01-M-D258
CAGE:0YED2

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Composition/Information on Ingredients
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Ingred Name:SODIUM CYANIDE
CAS:143-33-9
RTECS #:VZ7525000
Minumum % Wt:90.
Maxumum % Wt:100.
OSHA PEL:5 MG/M3
ACGIH STEL:C5 MG/M3
EPA Rpt Qty:10 LBS
DOT Rpt Qty:10 LBS

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Hazards Identification
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LD50 LC50 Mixture:ORAL RAT LD50: 6440 UG/KG
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards

Acute and Chronic:INHALATION: CORROSIVE TO RESPIRATORY
TRACT. INHIBITS CELLULAR RESPIRATION & MAY CAUSE BLOOD, CNS, &
THYROID CHANGES. MAY CAUSE WEAK & IRREGULAR HEART BEAT,
UNCONSCIOUSNESS, CONVULSIONS, COMA & DEATH. INGESTION: HIGHLY
TOXIC. CORROSIVE TO GASTROINTESTINAL TRACT. LARGER DOSES MAY
PRODUCE SUDDEN LOSS OF CONSCIOUSNESS & PROMPT DEATH FROM
RESPIRATORY ARREST. SKIN: CORROSIVE. MAY CAUSE SEVERE BURNS. M AY
BE ABSORBED THROUGH SKIN. EYES: MAY CAUSE DAMAGE.

CHRONIC-
PROLONGED OR REPEATED SKIN EXPOSURE MAY CAUSE A "CYANIDE" RASH &
NASAL SORES.

Effects of Overexposure:INHALATION: MAY CAUSE HEADACHE, WEAKNESS,
DIZZINESS, LABORED BREATHING, NAUSEA, & VOMITING. INGESTION:
BURNING IN THE MOUTH & ESOPHAGUS, & ABDOMINAL PAIN. OTHER SYMPTOMS
MAY BE SIMILAR TO THOSE NOTED FOR INHALATION EXPOSURE. SKIN: MAY
CAUSE SEVERE PAIN & DEEP ULCERS WHICH HEAL SLOWLY. MAY BE ABSORBED
THROUGH THE SKIN & CAUSE SYMPTOMS SIMILAR TO THOSE NOTED

FOR
INHALATION. EYE: SYMPTOMS MAY INCLUDE REDNESS, PAIN, BLURRED
VISION, & EYE DAMAGE.

Medical Cond Aggravated by Exposure:WORKERS USING CYANIDES SHOULD HAVE
A PREPLACEMENT AND PERIODIC MEDICAL EXAM. THOSE WITH HISTORY OF
CNS, THYROID, SKIN, HEART OR LUNG DISEASE MAY BE MORE SUSCEPTIBLE
TO THE EFFECTS OF THIS SUBSTANCE.

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First Aid Measures
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First Aid:IN CASE OF CYANIDE POISONING, START FIRST AID TREATMENT
IMMEDIATELY, TH

DO NOT GET MEDICAL ATTENTION. ADMINISTER ANTIDOTE KIT (SEE SUPPLEMENTAL DATA) & OXYGEN PER PRE-PLANNED INSTRUCTIONS IF SYMPTOMS OCCUR. INHALATION: REMOVE TO FRESH AIR. KEEP PATIENT WARM & AT REST DO NOT GIVE MOUTH TO MOUTH RESUSCITATION. INGESTION: IF PATIENT IS CONSCIOUS, IMMEDIATELY GIVE ACTIVATED CHARCOAL SLURRY. DO NOT INDUCE VOMITING. SKIN: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MIN WHILE REMOVING CONTAMINATED CLOTHING & SHOES. EYES: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MIN LIFTING EYELIDS OCCASIONALLY.

===== Fire Fighting Measures =====

Extinguishing Media:USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE. DO NOT USE CARBON DIOXIDE. CARBON DIOXIDE CAN REACT WITH THIS MATERIAL IN THE PRESENCE OF MOISTURE.

Fire Fighting Procedures:IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE O

PERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE. WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL. REACTS SLOWLY WITH WATER TO FORM HYDROGEN CYANIDE.

Unusual Fire/Explosion Hazard:UPON DECOMPOSITION OR CONTACT WITH ACIDS, THIS MATERIAL RELEASES HIGHLY FLAMMABLE & TOXIC HYDROGEN CYANIDE GAS. EXPLOSION: UPON HEATING WITH CHLORATES OR NITRITES TO 450C(842F) MAY CAUSE AN EXPLOSION. VIOLENT EXPLOSION OCCURS IF MELTED WITH NITRITE SALT. SEALED CONTAINERS MAY RUPTURE WHEN HEATED.

===== Accidental Release Measures =====

Spill Release Procedures:VENTILATE AREA. QUALIFIED PERSONNEL ONLY TO HANDLE SPILL. CLEANUP PERSONNEL REQUIRE PROTECTIVE CLOTHING & RESPIRATORY PROTECTION FROM VAPORS. COLLECT MATERIAL & PLACE IN A CLOSED CONTAINER FOR RECOVERY OR DISPOSAL. DO NOT FLUSH TO SEWER! DECONTAMINATE LIQUID OR SOLID RESIDUES IN SPILL AREA WITH SODIUM OR CALCIUM HYPOCHLORITE SOLUTION. REGULATIONS (CERCLA) MAY REQUIRE REPORTING SPILLS & RELEASES.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOL, DRY, VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE. SEPARATE FROM INCOMPATIBLES. WORKERS MUST CAREFULLY FOLLOW GOOD HYGIENE PRACTICES, INCLUDING NO EATING, DRINKING, OR SMOKING IN WORKPLACE.

Other Precautions:PROPER USE & MAINTENANCE OF PROTECTIVE EQUIPMENT IS ESSENTIAL

ENTIAL. WORKERS USING CYANIDE NEED PREPLACEMENT & ANNUAL MEDICAL EXAMS. SPECIAL TRAINING SHOULD BE GIVEN TO WORKERS USING CYANIDE. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (DUST, SOLIDS); OBSERVE ALL WARNINGS.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:(NIOSH APPROVED):IF THE EXPOSURE LIMIT IS EXCEEDED, WEAR A SUPPLIED AIR, FULL-FACEPIECE RESPIRATOR, AIRLINED HOOD, OR FULL-FA

CEPIECE SELF-CONTAINED BREATHING APPARATUS. THIS SUBSTANCE HAS POOR WARNING PROPERTIES.

Ventilation:A SYSTEM OF LOCAL &/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY

Protective Gloves:WEAR IMPERVIOUS GLOVES AS APPROPRIATE, TO PREVENT SKIN CONTACT.

Eye Protection:USE CHEMICAL SAFETY GOGGLES &/OR FULL FACE SHIELD WHERE DUSTING OR SPLASHING OF

Other Protective Equipment:WEAR IMPERVIOUS PROTECTIVE CLOTHING,

INCLUDING BOOTS, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT.

Work Hygienic Practices:WORKERS MUST FOLLOW GOOD HYGIENIC PRACTICES, INCLUDING NO EATING, DRINKING, OR SMOKING IN WORKPLACE.

Supplemental Safety and Health

DISPOSAL CON'T: PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE & LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOSE OF CONTAINER & UNUSED

CONTENTS IN ACCORDANCE WITH FEDERAL, STATE, & LOCAL REQUIREMENTS.

===== Physical/Chemical Properties =====

HCC:T2

Boiling Pt:=1496.C, 2724.8F

Melt/Freeze Pt:=564.C, #####F

Vapor Pres:1 @817C(1503F)

Spec Gravity:1.60@25C/4C

pH:AQUEOUS SOLUTION

Evaporation Rate & Reference:NO INFORMATION FOUND

Solubility in Water:48G/100CC@10C(50F)

Appearance and Odor:WHITE DELIQUESCENT GRANULAR SOLID; ALMOND ODOR. BITTER ALMONDS.

Percent Volatiles by Volume:0

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===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

CARBON DIOXIDE, ACID, NITRATES, NITRITES, CHLORATES, FLUORINE, MAGNESIUM & STRONG OXIDIZERS. REACTS WITH ACIDS TO LIBERATE TOXIC & FLAMMABLE HYDROGEN CYANIDE GAS. WATER OR WEAK ALKALINE SOLUTIONS CAN PRODUCE DANGEROUS AMOUNT

Stability Condition to Avoid: VERY STABLE WHEN DRY. MOISTURE WILL CAUSE DECOMPOSITION, RELEASING POISONOUS HYDROGEN CYANIDE GAS. HEAT, MOISTURE, INCOMPATIBLES.

Hazardous Decomposition Products: EMITS TOXIC FUMES OF CYANIDE AND OXIDES OF NITROGEN WHEN HEATED TO DECOMPOSITION.

Conditions to Avoid Polymerization: WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information: NOTE TO PHYSICIAN: IF PATIENT DOES NOT RESPOND TO AMYL NITRITE, INJECT INTRAVENOUSLY WITH 10ML OF A 3% SOLUTION OF SODIUM NITRITE AT A RATE OF NOT MORE THAN 2.5 TO 5 ML PER MINUTE. ONCE NITRITE ADMINISTRATION IS COMPLETE, FOLLOW DIRECTLY WITH 50 ML OF A 25% SOLUTION OF SODIUM THIOSULFATE AT THE SAME RATE BY THE SAME ROUTE. GIVE VICTIM OXYGEN & KEEP UNDER OBSERVATION. IF EXPOSURE WAS SEVERE, WATCH VICTIM FOR 24-48 HOURS. IF SIGNS OF CYANIDE POISONING PERSIST OR REAPPEAR, REPEAT NITRITE & THIOSULFATE INJECTIONS 1 HOUR LATER IN 1/2 THE ORIGINAL DOSES. CYANOCOBALAMIN (B12), 1 MG INTRAMUSCULARLY, MAY SPEED RECOVERY.

===== Ecological Information =====

Ecological: ENVIRONMENTAL FATE: NOT INFORMATION FOUND. ENVIRONMENTAL TOXICITY: THIS MATERIAL IS EXPECTED TO BE VERY TOXIC TO AQUATIC LIFE. THIS MATERIAL IS EXPECTED TO BE VERY TOXIC TO TERRESTRIAL LIFE.

===== Disposal Considerations =====

Waste Disposal Methods: CYANIDES MUST BE OXIDIZED TO HARMLESS WASTE BEFORE DISPOSAL. AN ALKALINE SOLUTION (PH ABOUT 10) IS TREATED WITH CHLORINE OR COMMERCIAL BLEACH IN EXCESS TO DECOMPOSE CYANIDE. WHEN CYAN

IDE-FREE, IT CAN BE NEUTRALIZED. WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE HANDLED AS HAZARDOUS WASTE & SENT TO A RCRA APPROVED WASTE FACILITY.

===== MSDS Transport Information =====

Transport Information:DOT: RQ, SODIUM CYANIDE, SOLID; HAZARD CLASS: 6.1; UN/NA: UN1689; PACKING GROUP: I. IMO: SODIUM CYANIDE, SOLID; HAZARD CLASS: 6.1; UN/NA: UN1689; PACKING GROUP: I.

===== Regulatory Information =====

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SARA Title III Information:SODIUM CYANIDE: SARA 302: RQ 10, TPQ 100.
SARA LIST- NO, CHEMICAL CATEGORY- CYANIDE COMPOUND.
Federal Regulatory Information:SODIUM CYANIDE: TSCA- YES, CERCLA 10, RCRA 261.33- P106, TSCA 8(D)- NO.

===== Other Information =====

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