ISO9001:2000 Certified

Material Safety Data Sheet
Indicator Solution for Cyanide

Section 1 - Chemical Product and Company Identification

MSDS Name:
Indicator Solution for Cyanide
Catalog Numbers:
LC15585
Synonyms:
None

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
67-64-1	Acetone	>99
536-17-4	p-Dimethylaminobenzalrhodanine	0.02

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Clear, yellow to orange solution*
Danger! Flammable liquid and vapor. Causes irritation to eyes, skin, and respiratory tract. Vapors may cause drowsiness and dizziness. Repeated exposure may cause skin dryness or cracking.
Target Organs: *Central nervous system, eyes, respiratory system, skin, liver, kidneys, spleen*

Potential Health Effects

Eye:
Causes eye irritation.
Skin:
Causes skin irritation. May be harmful in contact with skin.
Ingestion:
May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed.

Inhalation:
Causes respiratory tract irritation. May cause central nervous system effects. May be harmful if inhaled.

Chronic:
Repeated exposure to skin may cause dryness or cracking. Liver and kidney injuries may occur. Experiments have shown reproductive toxicity effects on laboratory animals.

Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid at once.

Skin:
Get medical aid at once. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:
Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid at once.

Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water spray may not cool material below flash point.

Extinguishing Media:
For small fires, use dry chemical, carbon dioxide, sand or alcohol-resistant foam.

Autoignition Temperature:
465°C (869°F)

Flash Point:
-20°C (-4°F)

NFPA Rating:
CAS# 536-17-4: Health- 1, Flammability- 1, Instability- 1.
CAS# 67-64-1: Health- 1, Flammability- 3, Instability- 0.

Explosion Limits:
Lower: 2.5% Upper: 12.8%

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (sand, vermiculite, fuller's earth), and transfer to a suitable container labeled as flammable. Remove all sources of ignition. Use spark-proof tools and equipment.

Section 7 - Handling and Storage

Handling:

Keep away from heat, sparks, and other sources of ignition. Do not breathe mist or vapors. Do not get in eyes, on skin, or on clothing. Use explosion-proof equipment and non-sparking tools.

Storage:

Store in tightly-closed containers in a cool, dry, well-ventilated area. Keep away from sources of ignition.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Acetone	500 ppm TWA 750 ppm STEL	250 ppm TWA 2500 ppm IDLH	1000 ppm TWA 2400 mg/m3 TWA
p-Dimethylaminobenzal-rhodanine	none listed	none listed	none listed

OSHA Vacated PELs:

Acetone: 750 ppm TWA, 1000 ppm STEL

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: Yellow to orange
Odor: Sweet
pH: 7
Vapor Pressure: 247 mbar @ 20°C

Vapor Density:	2.0 (air =1)
Evaporation Rate:	5.6 (butyl acetate = 1)
Viscosity:	0.32 mPa s @ 20°C
Boiling Point:	56°C (133°F)
Freezing/Melting Point:	-95°C (-139°F)
Decomposition Temperature:	Not available
Solubility in water:	Soluble
Specific Gravity/Density:	0.790
Molecular Formula:	Not applicable
Molecular Weight:	Not applicable

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Incompatible materials, heat, sparks, sources of ignition.

Incompatibilities with Other Materials:
Oxidizing agents, strong reducing agents, strong bases, peroxides.

Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide, formaldehyde, methanol, sulfur oxides, nitrogen oxides.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 67-64-1: AL31500000
CAS# 536-17-4: not available

LD50/LC50:
CAS# 67-64-1:
Oral, rat: LD50 = 5800 mg/kg
CAS# 536-17-4:
Oral, rat: LD50 = >500 g/kg

Carcinogenicity:
No chemical in this product is listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:
No information found

Teratogenicity:
Teratogenic effects have occurred in experimental animals.

Reproductive:
Experiments have shown reproductive toxicity effects on laboratory animals.

Mutagenicity:
Mutagenic effects have occurred in experimental animals.

Neurotoxicity:
No information found

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Acetone solution
Hazard Class: 3
UN Number: UN1090
Packing Group: PGII

Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 67-64-1 is listed on the TSCA inventory.
CAS# 536-17-4 is listed on the TSCA inventory.

SARA Reportable Quantities (RQ):

CAS# 67-64-1: 5000 lb. final RQ; 2270 kg final RQ

CERCLA/SARA Section 313:

Not reportable under Section 313.

OSHA - Highly Hazardous:

None of the chemicals in this product are considered highly hazardous by OSHA.

US State

State Right to Know:

CAS# 67-64-1 is listed on the following state Right-to-Know lists: California, Massachusetts, Minnesota, Pennsylvania.

California Regulations:

None.

European/International Regulations

Canadian DSL/NDSL:

CAS# 67-64-1 is listed on Canada's DSL List.
CAS# 536-17-4 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 67-64-1 is listed on the Canadian Ingredient Disclosure List.
CAS# 536-17-4 is not listed on the Canadian Ingredient Disclosure List.

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Section 16 - Other Information

MSDS Creation Date: November 11, 1998
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