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HI 93754E-25
Reagent Tube for COD Test (25 vials)

Safety Data Sheet

According to Regulation (EC) No. 1907/2006

Revision Date: 2008-12-01
Reason for Revision: REACH Compliance and General Update

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: Reagent for COD Test (25 vials)
Additional Product Codes: COD-MR.W/HG

Application: Mercury Free COD Reagent, for MR COD Analysis

Company Information (USA):
Hanna Instruments, Inc.
584 Park East Dr, Woonsocket, Rhode Island, USA 02895

Technical Service Contact Information:
1-800-426-6287 (8:30AM - 5:00PM ET)
+1-401-766-4260 (8:30AM - 5:00PM ET)

USA Emergency Contact Information: 1-800-424-9300 (Chemtrec 24Hr. Emergency)

International Emergency Contact Information: +1-703-527-3887 (Chemtrec 24Hr. Emergency)

E-mail Address: tech@hannainst.com

SECTION 2: HAZARD IDENTIFICATION

Contact with combustible material may cause fire. Causes severe burns. May cause sensitization by inhalation and skin contact. May cause cancer. May cause heritable genetic damage. May cause cancer by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May impair fertility. May cause harm to the unborn child.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	Sulfuric Acid	Potassium Dichromate
EC-No.:	231-639-5	231-906-6
CAS-No.:	7664-93-9	7778-50-9
Hazard:	C	T+, N, O, Carc. Cat. 2, Muta. Cat. 2, Repr. Cat. 2.
Phrases:	R: 35	R: 8-26-34-42/43-45-46-49-50/53-60-61
Content:	> 50% - <90%	> 0.5 - < 1.0 %

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Summon doctor.

After Skin Contact: Wash effected area with plenty of water. Immediately remove contaminated clothing.

After Eye Contact: Rinse out immediately with plenty of water and seek medical advice.

After Swallowing: Drink plenty of water (if necessary several liters), avoid vomiting (risk of perforation!). Immediately seek medical advice. Do not attempt to neutralize.

General Information: Remove contaminated, soaked clothing immediately and dispose of safely.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.

Special Risks:

Development of hazardous combustion gases or vapors possible in the event of fire. Hydrogen may form upon contact with metals (danger of explosion!). The following may develop in event of fire: Sulfur Oxides

Special Protective Equipment:

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Additional Information:

Product itself is non-combustible. Cool container with spray water from a safe distance. Contain escaping vapors with water. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.

Environmental Precautions:

Do not discharge into the drains/surface waters/groundwater.

Additional Notes:

Render harmless: neutralize with diluted sodium hydroxide solution or by throwing on lime, lime sand, or sodium carbonate.

SECTION 7: HANDLING AND STORAGE

Handling:

Avoid generation of vapors/aerosols. Work under hood.
Do not inhale substance.

Storage:

Tightly closed. In a well-ventilated place at +15 to +25 °C. Protect from light. Store in fridge if possible. Accessible only for authorized persons.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Ingredients:

SULFURIC ACID
EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	1 mg/m³

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	1 mg/m³

UK
Name: Chromium (VI) Compounds (as Cr)
Type: LTEL
Value: 0.05 mg/m³

Engineering:

Safety shower and eye wash.

Personal Protective Equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled

Respiratory Protection:

Required when vapors/aerosols are generated. Work under hood.

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Immediately change contaminated clothing and immerse in water. Apply skin-protective barrier cream. Wash hands and face after working with substance. Work under hood. Do not inhale substance. Avoid generation of vapors/aerosols. Under no circumstances eat or drink at workplace.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Yellow-orange liquid with undissolved solid	***Odor:***	Odorless	***Density at 20° C:***	~ 1.8 g/cm³
Melting Point:	NA	***Boiling Point:***	ND	***Solubility:***	Soluble (development of heat)
pH at 20° C:	< 0.5	***Explosion Limit:***	NA	***Flash Point:***	NA
Thermal Decomp.:	> 338 °C				

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Strong Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Hygroscopic. Has a corrosive effect Incompatible with metals.

Hazardous Decomposition Products:

In the event of fire: See section 5.

Substances to be Avoided:

Combustible substances, water, metals, metal alloys, alkali metals, alkali compounds, alkali hydroxides, alkali oxides, alkaline earth compounds, alkalis, ammonia, nitrates, sodium carbonate, lithium silicide, halogen-halogen compounds, salts of oxyhalogenic acids, bromates, chromates/perchromates, perchlorates, perchloric acid, permanganates, permanganic acid, organic nitro compounds, nonmetals, nonmetallic oxides, picrates, hydrogen peroxide, nitramide, mercury nitride, ammonium iron (III) sulfate dodecahydrate

SECTION 11: TOXICOLOGICAL INFORMATION

Quantitative data on the toxicity of this product is not available.

APPLICABLE TO MAIN COMPONENT:
The following applies to Sulfuric acid, as the pure substance:
Acute toxicity
LC50 Inhalation, Rat: 510 mg/kg/2h.
LD50 Oral, Rat: 2140 mg/kg
Specific symptoms in animal studies:
Eye irritation test (rabbit): burns.
Skin irritation test (rabbit): burns.
Toxicological values are not available due to other dangerous properties of the substance.
Subacute to chronic toxicity
Applicable to partial component(s):
Bacterial mutagenicity: Ames test: negative.
No teratogenic effect in animal experiments.

In Case of Inhalation:	After inhalation of aerosols: damage to the affected mucous membranes.
In Case of Skin Contact:	Severe burns with formation of scabs.
In Case of Eye Contact:	Burns, corneal lesion.
In Case of Ingestion:	Severe pain (risk of perforation!), nausea, vomiting and diarrhea.
Further Data:	The product should be handled with the usual care when dealing with chemicals. Property that must be anticipated on the basis from the components of the preparation:

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the toxicity of this product is not available.

APPLICABLE TO MAIN COMPONENT:
The following applies to Sulfuric acid, as the pure substance:
Biologic degradation:
Methods for the determination of biodegradability are not applicable to inorganic substances.
Behavior in environmental compartments:
Concentration in organisms is not to be expected.
Ecotoxic effects:
Quantitative data on the ecological effect of this product are not available.
Further ecologic data:
The following applies to sulfuric acid: biological effects: harmful effect on aquatic organisms. Harmful effect due to pH shift. Toxic effect on fish and algae. Caustic even in diluted form. Does not cause biological oxygen deficit. Endangers drinking water supplies if allowed to enter soil and/or waters in large quantities. Neutralization possible in waste water treatment plants.
Daphnia toxicity: Daphnia magna EC 50 : 29 mg/L/24 h (calculated on the pure substance).

Further Data: DO NOT ALLOW TO ENTER WATERS, WASTE WATERS, OR SOIL!

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORTATION INFORMATION

Land:	***Sea:***	***Air:***
ADR/RID: 9/PG II/ UN3316 Name : CHEMICAL KIT	IMDG: 9/PG II/ UN3316 Name: CHEMICAL KIT	ICAO/IATA: 9/PG II/ UN3316 Name: CHEMICAL KIT

Transport data applies to the COMPLETE KIT!

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol: T: Toxic
C: Corrosive
O: Oxidizer

R-phrases: 8-35-42/43-45-46-49-52/53-60-61: Contact with combustible material may cause fire. Causes severe burns. May cause sensitization by inhalation and skin contact. May cause cancer. May cause heritable genetic damage. May cause cancer by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May impair fertility. May cause harm to the unborn child.

S-phrases: 26-30-36/37/39-45-53: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never add water to this product. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Attention – avoid exposure – obtain special instructions before use.

Contains: Sulfuric acid, Potassium dichromate

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3

8: Contact with combustible material may cause fire.
26: Very toxic by inhalation.
34: Causes burns.
35: Causes severe burns.
42/43: May cause sensitization by inhalation and skin contact.
45: May cause cancer.
46: May cause heritable genetic damage.
49: May cause cancer by inhalation.
50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
60: May impair fertility.
61: May cause harm to the unborn child.

Revision Information

Revision Date:	2008-12-01
Supersedes edition of:	2008-01-03
Reason for revision:	REACH Compliance and General Update

Legend

NA: Not Applicable
ND: Not Determined

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.