
MATERIAL SAFETY DATA SHEET

HELENA LABORATORIES
 1530 Lindbergh Dr./P.O. Box 752
 Beaumont, TX 77704-0752
 USA Toll Free 800-231-5663

DATE PREPARED: 2/2/2011
 REVISION: 3

1. IDENTIFICATION:

PRODUCT NAME: SPIFE IgG IEF KIT

PRODUCT NO.: 3389

2. INGREDIENTS (THE ABOVE KIT CONTAINS THE FOLLOWING ITEMS):

PRODUCT NUMBER	PRODUCT IDENTIFICATION (LABEL NAME)	COMMENTS
552077	IgG IEF GEL	
	HAZARDOUS INGREDIENT	
	THIMEROSAL	CAS # 54-64-8 % <0.1 MSDS ATTACHED
552078	IgG IEF ANODE SOLUTION	
	HAZARDOUS INGREDIENT	
	ACETIC ACID, GLACIAL	CAS # 64-19-7 % <10 MSDS ATTACHED
552079	IgG IEF CATHODE SOLUTION	
	HAZARDOUS INGREDIENT	
	SODIUM HYROXIDE	CAS # 1310-73-2 % <5 MSDS ATTACHED
552081	IgG IEF ACETATE BUFFER CONCENTRATE	
	HAZARDOUS INGREDIENT	
	SODIUM ACETATE TRIHYDRATE	CAS # 6131-90-4 % <20 NON-HAZARDOUS
552090	IgG IEF CHROMOGEN	
	HAZARDOUS INGREDIENT	
	3-AMINO-9-ETHYLCARBAZOLE	CAS # 132-32-1 % ≥ 25 MSDS ATTACHED

2. INGREDIENTS (THE ABOVE KIT CONTAINS THE FOLLOWING ITEMS) (CONT):

PRODUCT NUMBER	PRODUCT IDENTIFICATION (LABEL NAME)			COMMENTS
552091	IgG IEF SINGLE ANTIBODY			
	HAZARDOUS INGREDIENT	CAS #	%	
	THIMEROSAL	54-64-8	<0.1	MSDS ATTACHED
552080	IgG IEF BLOCKING AGENT			NON-HAZARDOUS

ATTACHED ARE THE MSDSs FOR THE ABOVE NAMED HAZARDOUS INGREDIENTS.

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DATE PREPARED: 3/23/2010
REVISION: 6

1. IDENTIFICATION:

NAME: THIMEROSAL

SYNONYMS: 2-(ETHYLMERCURIOMERCAPTO)BENZOIC ACID SODIUM SALT
ETHYLMERCURITHIOSALICYLIC ACID SODIUM SALT
MERCURY-([O-CARBOXYPHENYL])ETHYL SODIUM SALT
SODIUM ETHYLMERCURITHIOSALICYLATE

MOLECULAR WEIGHT: 404.81 G/MOL

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2. CHEMICAL COMPOSITION:

Table with 5 columns: CHEMICAL NAME/COMMON NAME, CAS #, %, EXPOSURE LIMITS (OSHA PEL), and LIMITS (ACGIH TLV). Row 1: THIMEROSAL, 54-64-8, 100, 0.01 mg/m3, 0.1 mg/m3

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NA = Not Applicable NE = Not Established
NL = Not Listed NIF = No Information Found

3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW: HIGHLY TOXIC BY INHALATION, HIGHLY TOXIC BY INGESTION, HIGHLY TOXIC BY SKIN ABSORPTION.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION? X SKIN? X INGESTION? X

ACUTE EFFECT OF OVEREXPOSURE:

EYES: CAUSES EYE IRRITATION

SKIN: MAY BE FATAL IF ABSORBED THROUGH THE SKIN. CAUSES SKIN IRRITATION.

INHALATION: MAY BE FATAL IF INHALED. MATERIAL IS IRRITATING TO UPPER RESPIRATORY TRACT.

INGESTION: MAY BE FATAL IF SWALLOWED.

CHRONIC EFFECTS OF EXPOSURE: MAY CAUSE CONGENITAL MALFORMATION IN THE FETUS.

TARGET ORGANS: KIDNEYS, CENTRAL NERVOUS SYSTEM.

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4. FIRST AID MEASURES:

EYE CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN IMMEDIATELY.

SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.

INHALATION: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN IMMEDIATELY.

INGESTION: IF SWALLOWED, WASH OUT MOUTH WITH WATER, PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IMMEDIATELY.

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5. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): > 482°F (> 250°C)

FLAMMABLE LIMITS: NA LEL NA UEL NA

EXTINGUISHING MEDIA: WATER SPRAY, CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

5. FIRE AND EXPLOSION HAZARD DATA(cont):

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

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6. SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: EVACUATE AREA. WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, BOOTS AND HEAVY GLOVES. SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICK UP IS COMPLETE.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: DO NOT BREATH DUST. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. WASH THOROUGHLY AFTER HANDLING. KEEP TIGHTLY CLOSED. STORE IN A COOL DRY PLACE. LIGHT SENSITIVE.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): APPROPRIATE NIOSH/MSHA - APPROVED

VENTILATION: LOCAL EXHAUST: MECHANICAL: OTHER: CHEMICAL FUME HOOD

PROTECTIVE GLOVES: CHEMICAL RESISTANT

EYE PROTECTION: SAFETY GOGGLES OR GLASSES

OTHER PROTECTIVE EQUIPMENT: OTHER PROTECTIVE CLOTHING, SAFETY SHOWER AND EYE BATH.

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9. PHYSICAL DATA:

BOILING POINT: NA SPECIFIC GRAVITY (H2O = 1): NA pH:

VAPOR PRESSURE (MM HG.): NA MELTING POINT: 232°C - 234°C

VAPOR DENSITY (AIR = 1): NA

SOLUBILITY IN WATER: SOLUBLE APPEARANCE AND ODOR: WHITE TO BEIGE POWDER

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10. STABILITY AND REACTIVITY:

STABILITY: UNSTABLE: STABLE: X

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS, STRONG ACIDS, STRONG BASES. MAY DISCOLOR ON EXPOSURE TO LIGHT.

HAZARDOUS DECOMPOSITION OF BY-PRODUCTS: TOXIC FUMES OF CARBON MONOXIDE, CARBON DIOXIDE, SULFUR OXIDES, MERCURY/MERCURY OXIDES.

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X

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11. TOXICOLOGICAL INFORMATION:

LD50/LC50: LD50 ORAL - RAT - 75 MG/KG

BEHAVIORAL: ATAXIA. INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA. PROLONGED OR REPEATED EXPOSURE MAY CAUSE ALLERGIC REACTIONS IN CERTAIN SENSITIVE INDIVIDUALS.

CARCINOGENICITY: NL NTP? NL IARC? NL OSHA? NL

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

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12. ECOLOGICAL INFORMATION: NO DATA AVAILABLE

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13. DISPOSAL CONSIDERATIONS: OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS.

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14. TRANSPORTATION INFORMATION:

UN#: 2025

PROPER SHIPPING NAME: MERCURY COMPOUND, SOLID, N.O.S.

PG: III

CLASSES: 6.1

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15. REGULATORY INFORMATION: THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS - MERCURY COMPOUNDS.

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16. OTHER INFORMATION: NONE

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DATE PREPARED: 2/2/2011
REVISION: 3

1. IDENTIFICATION:

NAME: 3-AMINO-9-ETHYLCARBAZOLE

CAS #: 132-32-1

MOLECULAR FORMULA: C14H14N2

MOLECULAR WEIGHT: 210.27

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2. CHEMICAL COMPOSITION:

Table with 5 columns: CHEMICAL NAME/COMMON NAME, CAS #, %, EXPOSURE LIMITS (OSHA PEL, ACGIH TLV). Row 1: 3-AMINO-9-ETHYLCARBAZOLE, 132-32-1, 100, NIF, NIF.

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NA = Not Applicable NE = Not Established
NL = Not Listed NIF = No Information Found

3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW: TOXIC BY INGESTION, CARCINOGEN

TARGET ORGANS: LIVER, NERVES, KIDNEY, BLADDER, BRAIN, HEART

PRIMARY ROUTE(S) OF ENTRY:

INHALATION? X SKIN? X INGESTION? X

ACUTE EFFECT OF OVEREXPOSURE:

EYES: MAY CAUSE EYE IRRITATION.

SKIN: MAY BE HARMFUL IS ABSORBED THROUGH SKIN.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION.

INGESTION: TOXIC IF SWALLOWED.

CHRONIC EFFECTS OF EXPOSURE: NO DATA AVAILABLE.

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4. FIRST AID MEASURES:

EYE CONTACT: RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

SKIN CONTACT: WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.

INHALATION: IF INHALED, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.

INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.

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5. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): NA

FLAMMABLE LIMITS: NA LEL UEL

EXTINGUISHING MEDIA: USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF CONTAINED BREATHING APPARATUS FOR FIRE FIGHTING IF NECESSARY.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

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6. SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PERSONAL PRECAUTIONS

USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING DUST. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS.

ENVIRONMENTAL PRECAUTIONS

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

AVOID FORMATION OF DUST AND AEROSOLS.

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE.

RECOMMENDED STORAGE TEMPERATURE: 2-8°C.

KEEP IN A DRY PLACE.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): NIOSH/MSHA-APPROVED RESPIRATOR

VENTILATION: LOCAL EXHAUST: MECHANICAL: X
OTHER:

PROTECTIVE GLOVES: CHEMICAL-RESISTANT GLOVES.

EYE PROTECTION: SAFETY GLASSES OR GOGGLES.

OTHER PROTECTIVE EQUIPMENT: SAFETY SHOWER AND EYE BATH.

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9. PHYSICAL DATA:

BOILING POINT: NIF SPECIFIC GRAVITY (H2O = 1): NIF
pH: NIF

VAPOR PRESSURE (MM HG.): NIF MELTING POINT: 98-100°C

VAPOR DENSITY (AIR = 1): NIF

SOLUBILITY IN WATER: NIF APPEARANCE AND ODOR: POWDER

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10. STABILITY AND REACTIVITY:

STABILITY: X UNSTABLE: STABLE:

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS, ACIDS

HAZARDOUS DECOMPOSITION OF BY-PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITION - CARBON OXIDES, NITROGEN OXIDES (NOx).

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X

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11. TOXICOLOGICAL INFORMATION:

LD50/LC50: LD50 ORAL - RAT - 144 MG/KG

REPRODUCTIVE TOXICITY: NO DATA AVAILABLE

IRRITANCY, SENSITIVITY: NO DATA AVAILABLE

CARCINOGENICITY: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC, ACGIH, NTP OR OSHA.

POTENTIAL HEALTH EFFECTS: TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

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12. ECOLOGICAL INFORMATION: NO DATA AVAILABLE

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13. DISPOSAL CONSIDERATIONS: OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

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14. TRANSPORTATION INFORMATION:

DOT:

UN-NUMBER: 2811

CLASS: 6.1

PACKING GROUP: III

PROPER SHIPPING NAME: TOXIC SOLIDS, ORGANIC, N.O.S. (9-ETHYLCARBAZOL-3-YLAMINE)

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15. REGULATORY INFORMATION:

OSHA HAZARDS:

TARGET ORGAN EFFECT, TOXIC BY INGESTION, CARCINOGEN

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16. OTHER INFORMATION:

NFPA RATING:

HEALTH HAZARD: 2
FIRE: 0
REACTIVITY: 0

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DATE PREPARED: 2/2/2011
REVISION: 6

1. IDENTIFICATION:

NAME: ACETIC ACID, GLACIAL
CAS #: 64-19-7

MOLECULAR FORMULA: C2H4O2
MOLECULAR WEIGHT: 60.05

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2. HAZARDOUS INGREDIENTS:

Table with 5 columns: CHEMICAL NAME/COMMON NAME, CAS #, %, EXPOSURE LIMITS (OSHA PEL, ACGIH TLV). Row 1: ACETIC ACID, GLACIAL, 64-19-7, 100, 10 ppm, 10 ppm, 25 mg/m3, 15 ppm.

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NA = Not Applicable NE = Not Established
NL = Not Listed NIF = No Information Found

3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW: FLAMMABLE LIQUID AND VAPOR. CAUSES SEVERE BURNS BY ALL EXPOSURE ROUTES.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION? X SKIN? X INGESTION? X

ACUTE EFFECT OF OVEREXPOSURE:

EYES: CAUSES SEVERE BURNS. MAY CAUSE BLINDNESS OR PERMANENT EYE DAMAGE.

SKIN: CAUSES SEVERE BURNS. MAY BE HARMFUL IF CONTACT WITH SKIN.

INHALATION: CAUSES SEVERE BURNS. MAY BE HARMFUL IF INHALED.

INGESTION: CAUSES SEVERE BURNS. MAY BE HARMFUL IF SWALLOWED.

CHRONIC EFFECTS: EXPERIMENTS HAVE SHOWN REPRODUCTIVE TOXICITY EFFECTS ON LABORATORY ANIMALS. MAY CAUSE ADVERSE LIVER EFFECTS. MAY CAUSE ADVERSE KIDNEY EFFECTS. CHRONIC EXPOSURE TO CORROSIVE FUMES/GASES MAY CAUSE EROSION OF THE TEETH FOLLOWED BY JAW NECROSIS. BRONCHIAL IRRITATION WITH CHRONIC COUGH AND FREQUENT ATTACKS OF PNEUMONIA ARE COMMON. GASTROINTESTINAL DISTURBANCES MAY ALSO BE SEEN.

4. FIRST AID MEASURES:

EYE CONTACT: RINSE IMMEDIATELY WITH PLENTY OF WATER, ALSO UNDER THE EYELIDS, FOR AT LEAST 15 MINUTES. IMMEDIATE MEDICAL ATTENTION IS REQUIRED.

SKIN CONTACT: WASH OFF IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IMMEDIATE MEDICAL ATTENTION IS REQUIRED.

INHALATION: MOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. DO NOT USE MOUTH-TO-MOUTH RESUCITATION IF VICTIM INGESTED OR INHALED THE SUBSTANCE; INDUCE ARTIFICIAL RESPIRATION WITH A RESPIRATORY MEDICAL DEVICE. IMMEDIATE MEDICAL ATTENTION IS REQUIRED.

INGESTION: DO NOT INDUCE VOMITING. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

5. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): 4°C

FLAMMABLE LIMITS: LEL 4.0% UEL 19.9%

EXTINGUISHING MEDIA: USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OF CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES: AS IN ANY FIRE, WEAR SELF-CONTAINED BREATHING APPARATUS PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT) AND FULL PROTECTIVE GEAR. THERMAL DECOMPOSITION CAN LEAD TO RELEASE OF IRRITATING GASES AND VAPORS.

5. FIRE AND EXPLOSION HAZARD DATA (CONT):

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLAMMABLE. RISK OF IGNITION. VAPORS MAY FORM EXPLOSIVE MIXTURES WITH AIR. VAPORS MAY TRAVEL TO SOURCE OF IGNITION AND FLASH BACK. CONTAINERS MAY EXPLODE WHEN HEATED. CAUSES SEVERE BURNS BY ALL EXPOSURE ROUTES. CONTACT WITH METALS MAY EVOLVE FLAMMABLE HYDROGEN GAS.

6. SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

REMOVE ALL SOURCES OF IGNITION. USE PERSONAL PROTECTIVE EQUIPMENT. EVACUATE PERSONNEL TO SAFE AREAS. KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

SHOULD NOT BE RELEASE INTO THE ENVIRONMENT.

REMOVE ALL SOURCES OF IGNITION. SOAK UP WITH INERT ABSORBENT MATERIAL. USE SPARK-PROOF TOOLS AND EXPLOSION-PROOF EQUIPMENT. KEEP IN SUITABLE AND CLOSED CONTAINERS FOR DISPOSAL.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

USE ONLY UNDER A CHEMICAL FUME HOOD. USE EXPLOSION-PROOF EQUIPMENT. KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND SOURCES OF IGNITION. DO NOT BREATHE VAPORS OR SPRAY MIST. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.

KEEP CONTAINERS TIGHTLY CLOSED IN A DRY, COOL AND WELL-VENTILATED PLACE. KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND SOURCES OF IGNITION. FLAMMABLES AREA.

8. EXPOSURE CONTROL/PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): NIOSH-MSHA-APPROVED RESPIRATOR

VENTILATION: LOCAL EXHAUST: MECHANICAL: X OTHER:

PROTECTIVE GLOVES: WEAR APPROPRIATE CHEMICAL RESISTANT CLOTHING. CHEMICAL RESISTANT GLOVES. DO NOT GET THIS MATERIAL IN CONTACT WITH SKIN.

EYE PROTECTION: CHEMICAL GOGGLES ARE RECOMMENDED. FACE-SHIELD.

OTHER PROTECTIVE EQUIPMENT: PROVIDE EYEWASH STATION AND SAFETY SHOWER.

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9. PHYSICAL DATA:

BOILING POINT: 117-118°C SPECIFIC GRAVITY (H2O = 1): 1.05
pH: <2.5 (10g/L)
VAPOR PRESSURE: 1.52 kPa MELTING POINT: 16-16.5°C
VAPOR DENSITY (AIR = 1): 2.10
SOLUBILITY IN WATER: SOLUBLE APPEARANCE AND ODOR: COLORLESS LIQUID WITH VINEGAR-LIKE ODOR

10. STABILITY AND REACTIVITY:

STABILITY: UNSTABLE: STABLE: X
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS, STRONG BASES, METALS
HAZARDOUS DECOMPOSITION OF BY-PRODUCTS: CARBON MONOXIDE (CO), CARBON DIOXIDE (CO2).
HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X

11. TOXICOLOGICAL INFORMATION:

LD50/LC50: 3310 MG/KG (RAT)
REPRODUCTIVE TOXICITY: EXPERIMENTS HAVE SHOWN REPRODUCTIVE TOXICITY EFFECTS ON LABORATORY ANIMALS.
IRRITANCY, SENSITIVITY: NIF
CARCINOGENICITY: NO NTP? IARC? OSHA?
POTENTIAL HEALTH EFFECTS: CORROSIVE. CAUSES SEVERE SKIN AND EYE BURNS. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. AVOID PROLONGED CONTACT WITH EYES, SKIN AND CLOTHING.

12. ECOLOGICAL INFORMATION: EXPECTED TO BE BIODEGRADABLE.

13. DISPOSAL CONSIDERATIONS: OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORTATION INFORMATION:

DOT:
UN NUMBER: UN2789
PROPER SHIPPING NAME: ACETIC ACID, GLACIAL
HAZARD CLASS: 8
SUBSIDIARY HAZARD CLASS: 3
PACKING GROUP: II

15. REGULATORY INFORMATION: THIS PRODUCT IS A "HAZARDOUS CHEMICAL" AS DEFINED BY THE OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. ALL COMPONENTS ARE ON THE U.S. EPA TSCA INVENTORY LIST.

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16. OTHER INFORMATION:

NFPA RATINGS:

HEALTH: 3
FLAMMABILITY: 2
INSTABILITY: 0

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DATE PREPARED: 2/2/2011
REVISION: 3

1. IDENTIFICATION:

NAME: SODIUM HYDROXIDE
CAS #: 1310-73-2

MOLECULAR WEIGHT: 40.00
CHEMICAL FORMULA: NaOH

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2. CHEMICAL COMPOSITION:

Table with 5 columns: CHEMICAL NAME/COMMON NAME, CAS #, %, EXPOSURE LIMITS (OSHA PEL, ACGIH TLV). Row 1: SODIUM HYDROXIDE, 1310-73-2, >95, 2 MG/M³, 2 MG/M³

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NA = Not Applicable NE = Not Established
NL = Not Listed NIF = No Information Found

3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW: CAUSES SEVERE BURNS BY ALL EXPOSURE ROUTES. WATER REACTIVE. HYGROSCOPIC.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION? X SKIN? X INGESTION? X

ACUTE EFFECT OF OVEREXPOSURE:

EYES: CAUSES SEVERE BURNS. MAY CAUSE BLINDNESS OR PERMANENT EYE DAMAGE.

SKIN: CAUSES SEVERE BURNS. MAY BE HARMFUL IF CONTACT WITH SKIN.

INHALATION: CAUSES SEVERE BURNS. MAY BE HARMFUL IF INHALED.

INGESTION: CAUSES SEVERE BURNS. MAY BE HARMFUL IF SWALLOWED.

CHRONIC EFFECTS: PROLONGED SKIN CONTACT MAY DEFAT THE SKIN AND PRODUCE DERMATITIS.

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4. FIRST AID MEASURES:

EYE CONTACT: RINSE IMMEDIATELY WITH PLENTY OF WATER, ALSO UNDER THE EYELIDS, FOR AT LEAST 15 MINUTES. IMMEDIATE MEDICAL ATTENTION IS REQUIRED.

SKIN CONTACT: WASH OFF IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IMMEDIATE MEDICAL ATTENTION IS REQUIRED.

INHALATION: MOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. DO NOT USE MOUTH-TO-MOUTH RESUCITATION IF VICTIM INGESTED OR INHALED THE SUBSTANCE; INDUCE ARTIFICIAL RESPIRATION WITH A RESPIRATORY MEDICAL DEVICE. IMMEDIATE MEDICAL ATTENTION IS REQUIRED.

INGESTION: DO NOT INDUCE VOMITING. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

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5. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): NA

FLAMMABLE LIMITS: NA LEL UEL

EXTINGUISHING MEDIA: SUBSTANCE IS NONFLAMMABLE; USE AGENT MOST APPROPRIATE TO EXTINGUISH SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: AS IN ANY FIRE, WEAR SELF-CONTAINED BREATHING APPARATUS PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT) AND FULL PROTECTIVE GEAR.

UNUSUAL FIRE AND EXPLOSION HAZARDS: THERMAL DECOMPOSITION CAN LEAD TO RELEASE OF IRRITATING GASES AND VAPORS. WATER REACTIVE. CORROSIVE MATERIAL. CAUSES SEVERE BURNS BY ALL EXPOSURE ROUTES.

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6. SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

USE PERSONAL PROTECTIVE EQUIPMENT. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK. AVOID DUST FORMATION. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

SHOULD NOT BE RELEASE INTO THE ENVIRONMENT.

AVOID DUST FORMATION. SWEEP UP OR VACUUM UP SPILLAGE AND COLLECT IN SUITABLE CONTAINER FOR DISPOSAL.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

USE ONLY UNDER A CHEMICAL FUME HOOD. WEAR PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. DO NOT BREATHE DUST. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

KEEP CONTAINERS TIGHTLY CLOSED IN A DRY, COOL AND WELL-VENTILATED PLACE. CORROSIVES AREA.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): NIOSH APPROVED

VENTILATION: LOCAL EXHAUST: MECHANICAL: X
OTHER:

PROTECTIVE GLOVES: CHEMICAL RESISTANT GLOVES.

EYE PROTECTION: SAFETY GLASSES, GOGGLES OR FULL FACE SHIELD.

OTHER PROTECTIVE EQUIPMENT: EYEWASH STATIONS AND SAFETY SHOWERS.

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9. PHYSICAL DATA:

BOILING POINT: 1390°C SPECIFIC GRAVITY (H2O = 1): 2.13
pH: 14 (5% SOLUTION)

VAPOR PRESSURE (MM HG.): NIF MELTING POINT: 318°C

VAPOR DENSITY (AIR = 1): NIF

SOLUBILITY IN WATER: SOLUBLE APPEARANCE AND ODOR: WHITE SOLID, ODORLESS

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10. STABILITY AND REACTIVITY:

STABILITY: HYGROSCOPIC. WATER REACTIVE. UNSTABLE: STABLE:

INCOMPATIBILITY (MATERIALS TO AVOID): WATER, METALS, ACIDS.

HAZARDOUS DECOMPOSITION OF BY-PRODUCTS: CARBON MONOXIDE (CO), CARBON DIOXIDE (CO2), SODIUM OXIDES.

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X

11. TOXICOLOGICAL INFORMATION:

LD50/LC50: LD50 DERMAL: 1350 MG/KG (RABBIT)

REPRODUCTIVE TOXICITY: NIF

IRRITANCY, SENSITIVITY: CAUSES SEVERE BURNS BY ALL EXPOSURE ROUTES.

CARCINOGENICITY: NO NTP? IARC? OSHA?

POTENTIAL HEALTH EFFECTS: PRE-EXISTING EYE DISORDERS. SKIN DISORDERS.

12. ECOLOGICAL INFORMATION: DO NOT EMPTY INTO DRAINS.

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHODS: OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORTATION INFORMATION:

DOT: UN NUMBER: UN1823 PROPER SHIPPING NAME: SODIUM HYDROXIDE, SOLID HAZARD CLASS: 8 PACKING GROUP: II

15. REGULATORY INFORMATION:

CERCLA: THIS MATERIAL, AS SUPPLIED, CONTAINS ONE OR MORE SUBSTANCES REGULATED AS A HAZARDOUS SUBSTANCE UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) (40 CFR 302).

16. OTHER INFORMATION:

NFPA RATINGS: HEALTH: 3 FLAMMABILITY: 0 INSTABILITY: 1

The information herein is given in good faith but no warranty, expressed or implied, is made.