

ELF ATOCHEM NORTH AMERICA / TURCO PRODUCT INC -- TURCOFORM ETCHANT-9H --  
6850-01-083-6293

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

Product ID:TURCOFORM ETCHANT-9H  
MSDS Date:07/13/1999  
FSC:6850  
NIIN:01-083-6293  
Status Code:A  
MSDS Number: CJSLY  
==== Responsible Party ====  
Company Name:ELF ATOCHEM NORTH AMERICA / TURCO PRODUCT INC  
Address:2000 MARKET ST  
City:PHILADELPHIA  
State:PA  
ZIP:19103-3222  
Country:US  
In  
fo Phone Num:215-419-7890  
Emergency Phone Num:800-424-9300 / 703-527-3887  
Resp. Party Other MSDS Num.:PRODUCT CODE# 05005  
Chemtrec Ind/Phone:(800)424-9300  
CAGE:61102

==== Contractor Identification ====

Company Name:TURCO PRODUCTS, INC. DIVISON OF ELF ATOCHEM NORTH AMERICA  
Address:2000 MARKET ST  
Box:City:PHILADELPHIA  
State:PA  
ZIP:19103-3222  
Country:US  
Phone:215-419-7890  
Contract Num:SP0450-00-M-D070  
CAGE:61102

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===== Composition/Information on Ingredients =====

Ingred Name:SODIUM  
HYDROXIDE  
CAS:1310-73-2  
RTECS #:WB4900000  
Minumum % Wt:90.  
Maxumum % Wt:95.  
OSHA PEL:2 MG/M3  
ACGIH STEL:C2 MG/M3  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:SODIUM SULFHYDRATE  
CAS:16721-80-5  
RTECS #:WE1900000  
&lt; Wt:5.  
EPA Rpt Qty:5000 LBS  
DOT Rpt Qty:5000 LBS

Ingred Name:WATER  
CAS:7732-18-5  
RTECS #:ZC0110000

0 = 118 MG/KG

Health Hazards Acute and Chronic:ACUTE: CORROSIVE TO EYES & SKIN.

CHRONIC: DERMATITIS, ULCERATION OF NASAL PASAGE. HIGH LEVELS OF DUSTS OR MISTS MAY BE CORROSIVE TO MUCOUS MEMBRANES PRODUCING EYE OR LUNG INJURY & CHEMICAL PNEUMONIA. LOWER CONCENTRATIONS MAY PRODUCE IRRITATION OF EYES, NOSE OR UPPER RESPIRATORY TRACT WITH COUGHING, SORE THROAT & SHORTNESS OF BREATH. IF SWALLOWED, MATL MAY CAUSE SEVERE INTERNAL INJURY, CHARACTERIZED BY PAIN IN MOUTH & S

TOMACH, VOMITING, & BREATHING DIFFICULTIES.

Explanation of Carcinogenicity:NO INDICATIONS THAT MATL IS CARCINOGENIC.

Effects of Overexposure:SEVERE EYE BURNS, BLINDNESS, SEVERE SKIN BURNS, LUNG INJURY AND CHEMICAL PNEUMONIA. IF SWALLOWED, PAIN IN MOUTH & STOMACH, VOMITING, & BREATHING DIFFICULTIES.

Medical Cond Aggravated by Exposure:LUNG DISEASE OR LIMITED RESPIRATORY CAPACITY.

===== First Aid Measures =====

First Aid:EYES:SPEED IS ESSENTIAL.

HOLD EYELIDS OPEN & FLUSH W/GENTLE

STREAM WATER 15 MINUTES. GET MEDICAL ATTENTION. SKIN:IMMEDIATELY FLUSH AREA WITH PLENTY OF WATER. REMOVE CONTAMINATED CLOTHING & SHOES. GET MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES. IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE WATER TO DRINK. GET MEDICAL ATTENTION IMMEDIATELY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL R

ESPIRATION. IF

BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION.

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

Flash Point:NONFLAMMABLE

Extinguishing Media:USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

Fire Fighting Procedures:FIREFIGHTERS AND OTHERS WHO MAY BE EXPOSED TO PRODUCTS OF COMBUSTION SHOULD WEAR FULL FIRE FIGHTING TURN OUT GEAR (FULL BUNKER GEAR) AND SELF-CONTAINED BREATHING APPARATUS (PRESSURE DEMAND NIOSH A

PPRO VED OR EQUIVALENT). FIRE FIGHTING EQUIPMENT SHOULD BE THOROUGHLY DECONTAMINATED AFTER USE.  
Unusual Fire/Explosion Hazard:FLAMMABLE HYDROGEN GAS MAY BE LIBERATED FROM CONTACT WITH SOME METALS.

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

Spill Release Procedures:SHOVEL DRY SPILL INTO DOT-APPROVED DRUMS FOR DISPOSAL. KEEP SPILL DRY UNTIL AS MUCH AS POSSIBLE HAS BEEN SWEEPED UP AND SHOVELED INTO DISPOSAL DRUMS. DISSOLVE RESIDUAL AMOUNTS IN WATER AND COLLECT SOLUTION IN DOT-APPROVED DRUMS FOR DISPOSAL. DO NOT ALLOW PRODUCT OR RINSE WATER FROM SPILL TO ENTER SEWER OR WATERWAY.

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

Handling and Storage Precautions:DO NOT BREATHE DUST OR THE MIST. DO NOT GET IN EYES, SKIN, OR CLOTHING. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINER TIGHTLY CLOSED. USE ONLY WITH ADEQUATE VENTILATION. STORE IN A COOL, DRY PLACE. AVOID EXCESSIVE HEAT. STORE OUT OF DIRECT SUN

LIGHT IN A COOL, WELL-VENTILATED PLACE.

Other Precautions:TO AVOID RAPID TEMPERATURE RISE, VIOLENT SPATTERING, OR EXPLOSIVE ERUPTIONS; ALWAYS ADD CAUSTIC TO WATER WHEN MIXING. NEVER ADD WATER TO CAUSTIC WHEN MIXING.

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

Respiratory Protection:DO NOT BREATHE DUST. DO NOT BREATHE MIST. USE NIOSH APPROVED RESPIRATORY PROTECTION EQUIPMENT TO MATCH AND/OR COMPONENTS WHERE AIRBORNE EXPOSURE LIKELY. OBSERVE RESPIRATOR USE LIMITATIONS SPECIFIED BY NIOSH OR MANUFACTURER.

Ventilation:USE LOCAL MECHANICAL EXHAUST VENTILATION AT SOURCES OF AIR CONTAMINATION SUCH AS OPEN PROCESS EQUIP. CONSULT ACGIH VENTILATION MANUAL OR NFPA STANDARD 91.

Protective Gloves:NEOPRENE GLOVES SHOULD BE WORN WHEN HANDLING THIS MATERIAL.

Eye Protection:WEAR CHEMICAL GOGGLES, A FACE SHIELD.

Other Protective Equipment:CHEMICAL RESISTANT CLOTHING SUCH AS RUBBER APRON WHEN SPLASHING MAY OCCUR. RINSE IMMEDIATELY IF SKIN IS

CONTAMINATED. SAFETY SHOWER AT ANY LOCATION WHERE SKIN CONTACT CAN OCCUR.

Work Hygienic Practices: REMOVE CONTAMINATED CLOTHING PROMPTLY & WASH BEFORE REUSE. CLEAN PROTECTIVE EQUIPMENT BEFORE REUSE. WASH SKIN THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

FOR EMERGENCY & OTHER CONDITIONS WHERE POTENTIAL FOR SIGNIFICANT EXPOSURE, USE APPROVED FULL FACE POSITIVE-PRESSURE, SELF-CONTAINED BREATHING APPARATUS OR POSITIVE-PRESSURE AIRLINE W/AUXILIARY SELF-CONTAINED

AIR SUPPLY. RESPIRATORY PROTECTION PROGRAMS MUST COMPLY W/29 CFR & 1910.134.

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

HCC:B1

pH:13.5 IN 3.1% H<sub>2</sub>O

Solubility in Water: APPRECIABLE

Appearance and Odor: MIXTURE OF WHITE AND YELLOW FLAKES, SULFUR ODOR.

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

Stability Indicator/Materials to Avoid: YES

CONTACT WITH WATER, STRONG ACIDS, REACTIVE METALS, AND ORGANIC MATERIALS MAY LEAD TO GENERATION OF HYDROGEN GAS IN EXPLOSIVE AMOUNTS.

Stability Condition to Avoid: THIS MATERIAL IS CHEMICALLY STABLE UNDER NORMAL AND ANTICIPATED STORAGE AND HANDLING CONDITIONS.

Hazardous Decomposition Products: TOXIC HYDROGEN SULFIDE GAS, SULFUR OXIDES, AND ACID GASES.

Conditions to Avoid Polymerization: HAZARDOUS POLYMERIZATION IS NOT KNOWN TO OCCUR.

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

Toxicological Information: SODIUM HYDROXIDE: SLIGHTLY TOXIC IF ABSORBED THROUGH SKIN

IN, LD<sub>50</sub> RABBITS, FOR DRY MATERIAL IS 1,350 MG/KG, CORROSIVE TO RABBIT EYES AND SKIN. INHALATION OF UNMEASURED CONCENTRATIONS 30 MINUTES PER DAY FOR 2.5 MONTHS RESULTED IN LUNG DAMAGE IN RATS. A RODENT DRINKING WATER STUDY AT 1% (DURATION UNKNOWN) WAS REPORTED TO RESULT IN NERVOUS SYMPTOMS AND GROWTH RETARDATION, GROWTH WAS UNEFFECTED, NO TUMORS WERE SEEN. THE MATERIAL PRODUCED NO GENETIC CHANGES IN STANDARD TESTS USING BACTERIAL CELLS. SULFUR: ORAL LD<sub>50</sub> RATS >5,000

MG/KG, INHALATION,  
LC50 MICE=873 PPM, 1 HR, SLIGHTLY TOXIC.

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

Ecological:SODIUM HYDROXIDE: DATA FROM SEVERAL SEVERAL SPECIES OF FISH SHOWED A RANGE OF TOLERANCE THAT WAS MOST LIKELY FROM CHANGES IN THE PH . THE MINIMUM LETHAL CONCENTRATION FOR MINNOWS, MAYFLY LARVEA & DAPHN EA WAS 100 PPM, AND CHRONOMUS LARVEA 700 PPM. SODIUM SULFHYDRATE (45% SOLUTION):MODERATELY TOXIC TO FISH ON AN ACUTE BASIS, LC50=4-1

0 MG/L FOR CREEK CHUB. IT IS SLIGHTLY TOXIC TO DAPHNEA, LC50=100 MG /L. HYDROGEN SULFIDE:HIGLY TOXIC TO FISH & OTHER AQUATIC LIFE, LC50