## TANGRAM COMPANY LLC -- LITHIUM HYDROXIDE -- 6810-00-559-3261

Product ID:LITHIUM HYDROXIDE MSDS Date:12/12/2000 FSC:6810 NIIN:00-559-3261 MSDS Number: CLBRQ === Responsible Party === Company Name: TANGRAM COMPANY LLC Address:125 CORPORATE DR City:HOLTSVILLE State:NY ZIP:11742 Country:US Info Phone Num:516-758-0471 Emergency Phone Num: (800) 424-9300 Chemtrec Ind/Pho ne:(800)424-9300 CAGE:1H2F5 === Contractor Identification === Company Name: TANGRAM COMPANY LLC Address:125 CORPORATE DR Box:City:HOLTSVILLE State:NY ZIP:11742 Country:US Phone:631-758-0460 Contract Num:SP0450-01-M-D846 CAGE:1H2F5 Company Name: TANGRAM COMPANY LLC Address:125 CORPORATE DR Box:City:HOLTSVILLE State:NY ZIP:11742 Country:US Phone:631-758-0460 Contract Num:SP0450-01-M-ZB85 CAGE:1H2F5 Company Name: TANGRAM COMPANY LLC Address:125 CORPORATE DR Box:City:HOLTSVILLE State:NY ZIP:11742 Count

ry:US Phone:631-758-0460 Contract Num:SP0450-02-D-4004 CAGE:1H2F5

Ingred Name:LITHIUM HYDROXIDE CAS:1310-65-2 RTECS #:OJ6307070 = Wt:99. Other REC Limits:2 MG/M3

LD50 LC50 Mixture:ORAL LD50(RAT):

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:EFFECTS OF SINGLE OVERESPOSURE: THIS MATERIAL IS CORROSIVE TO SKIN, EYES

(MAY CAUSE BLINDNESS), NOSE,

THROAT, AND RESPIRATORY TRACT. EFFECTS OF OVEREXPOSURE: THE USE OF THIS PRODUCT IN INDUSTRIAL AND COMMERICAL APPLICATIONS PRESENTS NO SIGNIFICANT TOXICITY HAZARD. THE SYMPTOMS DESCRIBED IN SIGNS/SYMPTOMS OF OVEREXPOSURE ARE BASED ON THERAPEUTIC APPLICATIONS OF LITHIUM CARBONATE WHERE RELATIVELY LA RGE DOSES ARE TAKEN BY MEDICALLY SUPERVISED PATIENTS.

Explanation of Carcinogenicity:THIS PRODUCT IS NOT INDICATED TO BE CARGINOGENIC.

Effects

of Overexposure:LITHIUM CARBONATE IS USED THERAPEUTICALLY AT 500 TO 2000 MG/DAY ORAL DOSES FOR SPECIFIC MENTAL DISORDERS. THERAPEUTIC EFFECTS OCCUR AT BLOOD LEVELS OF 2.8 TO 8.3 MG LITHIUM PER LITER. MINIMAL SIGNS OF TOXICITY MAY ALSO OCCUR AT THESE THERAPEUTIC LEVELS AND INVOLVE PRIMARY GASTROINTESTINAL UPSET. INCREASED DOSAGES CAN PRODUCE TREMORS, DOOWSINESS AND UNSTEADY GAIT. SIGNS OF TOXICITY RESOLVE RAPIDLY ON CESSATION OF TREATMENT. PROLONGED TREATMENT AT TOX

IC LEVELS RESULT IN DEHYDRATION, KIDNEY DAMAGE, WEIGHT LOSS AND THYROID DISTURBANCES. Medical Cond Aggravated by Exposure:NO APPLICABLE DATA WAS FOUND

First Aid:EYE: IMMEDIATELY FLUSH WITH WATE FOR 15 MINUTES, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. IMMEDIATELY SEE A PHYSICIAN. SKIN: IMMEDIATELY FLUSH WITH PLENTY OF WATER. IF IRRITATION PERSISTS SEEK MEDIC AL ATTENTION. INHALATION: REMOVE TO FRESH AIR. SUPPORT RESPIRATION IF NECESSARY. IF BREATHING DISCOMFORT OCCURS AND PERSISTS, SEE A PHYSICIAN. INGESTION: DRINK TWO GLASSES OF WATER. DO NOT INDUCE VOMI TING. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEE A PHYSICIAN IMMEDIATELY.

Extinguishing Media: ANY SUITABLE FOR SURROUNDING FIRE. Fire Fighting Procedures: NONE Unusual Fire/Explosion Hazard: NONE. THIS PRODUCT IS NOT AN EXPLOSIVE

Spill Release Procedures:SWEEP UP AND PLACE IN A SUITABLE CONTAINER. Neutralizing Agent:NONE PROVIDED BY MFR

Handling and Storage Precautions:DO NOT GET IN EYES, ON SKIN, OR CLOTHING. AVOID BREATHING THE DUST. KEEP CONTAINER CLOSED. STORE AWAY FROM ACIDS AND WATER. WASH THOROUGHLY AFTER HANDLING. Other Precautions:NONE

Respiratory Protection:WEAR NIOSHA/MSHA APPROVED RESPIRATOR WHEN ADEQUATE VENTILATION IS NOT AVAILABLE. Ventilation:USE WITH ADEQUATE VENTILATION Protective Gloves:RUBBER GLOVES Eye Protection:SAFETY GLASSES WITH SIDE SHIELDS, CHEMICAL WORKERS DUST-PROOF GOGGLES Other Protective Equipment:QUICK DRENCH EYEWASH AND SAFETY SHOWER Work Hygienic Practices:NONE PROVIDED BY MFR Supplemental Safety and Health NOTE TO PHYSICIAN: LITHIUM HYDROXIDE HAS HIGH INHALATION CORROSIVI TY AND IS CORROSIVE BY INGESTION. REMOVAL OF EXPOSURE SHOULD BE IMMEDIATE, USING LARGE AMOUNTS OF WATER AND GASTRIC GAVAGE IF NECESSAR Y. TREATMENT IS OTHERWISE SYMPTOMTIC AND SUPPORTIVE.

HCC:B1 Melt/Freeze

Melt/Freeze Pt:=243.3C, 470.F Decomp Temp:Decomp Text:NONE PROVIDED BY MFR Spec Gravity:1.5 G/CC pH:NONE PROVIDED Viscosity:NONE PROVIDED BY MFR Solubility in Water:10 WT% BY WT @ 77 F (25C) Appearance and Odor:WHITE CRYST

ALS, ODORLESS Percent Volatiles by Volume:NONE PROVIDE Corrosion Rate:NONE PROVIDED BY MFR
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Stability Indicator/Materials to Avoid:YES STRONG ACIDS, ALUMINUM, ZINC Stability Condition to Avoid:NONE Hazardous Decomposition Products:NONE Conditions to Avoid Polymerization:WILL NOT OCCUR. REACTS WITH ACIDS
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Toxicological Information: STUDIES OF PREGNANT MICE/RATS A SSOCIATED WITH BIRTH DEFECTS ONLY AT DOSE LEVELS THAT PRODUCE MATERNAL TOXICITY. EARLIER DATA SUGGEST INCREASED CARDIOVASCULAR DEFECTS IN BABIES BORN TO WOMEN ON LITHIUM CARBONATE BUT RECENT DATA HAVE NOT FOUND THE ASSOCIATION. WOMEN ON THERAPUTIC DOSES HAVE POTENTIAL TO DELIVER FETUS WITH POOR MUSCLE TONE, SLOW HEART RATE & CYANOSIS. THESE LEVELS & HIGHER MAY POSE R ISK TO CONCEPTUS & BENEFITS TO MOTHER MUST BE WEIGHED. EXPOSURE TO LITHIUM IN INDUSTRIAL SETTINGS
IS NOT CONSIDERED TO POSE RISK TO HUMAN HEALTH.
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Ecological:NOT PROVIDED
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Waste Disposal Methods:DISPOSE OF WASTE ACCORDING TO FEDERAL EPA, STATE AND LOCAL REGULATIONS
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Transport Information:CORROSIVE SOLID, N.O.S., 8, UN1759, PGII, FOREIGN: LITHIUM HYDROXIDE, MONOHYDROXIDE, CORROS IVE MATERIAL, UN2680
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Federal Regulatory Information:NOT PROVIDED State Regulatory Information:LISTED AS REPRODUCTIVE TOXIN IN CALIFORNIA.
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