

SAFT -- LITHIUM,THIONYL CHLORIDE (LI-SOCL2) NON-RECHARGEABLE BATTERY --
6135-01-395-9089

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Product Identification
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Product ID:LITHIUM,THIONYL CHLORIDE (LI-SOCL2) NON-RECHARGEABLE BATTERY

MSDS Date:06/01/2000

FSC:6135

NIIN:01-395-9089

Status Code:A

MSDS Number: CKYDF

=== Responsible Party ===

Company Name:SAFT

Address:RUE GEORGES LECLANCHE-BP 1039 86060

City:POITIERS CEDEX 09-FRANCE

Count

ry:FR

Info Phone Num:33(0)5 49 55 48 48

Emergency Phone Num:33 (0) 5 49 55 51 01

Resp. Party Other MSDS Num.:REVISION 2

CAGE:0UCL3

=== Contractor Identification ===

Company Name:PLAINVIEW BATTERIES INC

Address:23 NEWTOWN RD

Box:City:PLAINVIEW

State:NY

ZIP:11803

Country:US

Phone:516-249-2873

Contract Num:SP0411-01-M-E854

CAGE:0LEJ1

Company Name:SAFT

Address:RUE GEORGES LECLANCHE-BP 1039 86060

Box:City:POITIERS CEDEX 09-FRANCE

Country:FR

Phone:33(0)5 49 55 48 48

CAGE:0UCL3

Company Name:SAFT AMERIC

A INC PORTABLE BATTERY DIVISION

Address:711 INDUSTRIAL BLVD

Box:1886

City:VALDOSTA

State:GA

ZIP:31601

Country:US

Phone:912-247-2331

CAGE:67237

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Composition/Information on Ingredients
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Ingred Name:STEEL (IRON 30%, NICKEL 10%)

Minimum % Wt:30.

Maximum % Wt:40.

Ingred Name:PVC

CAS:9002-86-2

RTECS #:KV0350000

Minimum % Wt:2.

Minumum % Wt:4.
Maxumum % Wt:7.

Ingred Name:THIONYL CHLORIDE (SOCL2)
CAS:7719-09-7
RTECS #:XM5150000
Minumum % Wt:40.
Maxumum % Wt:46.
ACGIH STEL:C4.9 MG/M3;C1 PPM

Ingred Name:LITHIUM (LI) METAL
CAS:7439-93-2
RTECS #:OJ5540000
Minumum % Wt:4.
Maxumum % Wt:5.

Ingred Name:ALUMINUM CHLORIDE (ALCO3)
CAS:7446-70-0
RTECS #:BD0525000
Fraction by Wt: ~ 1.5%

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===== Hazards Identification =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Reports of Carcin

ogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:THE SAFT PRIMARY LITHIUM-THIONYL

CHLORIDE BATTERIES DO NOT CONTAIN TOXIC MATERIALS. THE LITHIUM
-THIONYL CHLORIDE BATTERIES DESCRIBED IN THIS MSDS ARE SEALED UNITS
WHICH ARE NOT HAZARDOUS WHEN USED AC CORDING TO THE RECOMMENDATIONS
OF THE MANUFACTURER. UNDER NORMAL CONDITIONS OF USE, THE ELECTRODE
MATERIALS AND LIQUID ELECTROLYTE THEY CONTAIN ARE NON-RE-REACTIVE
PROVIDED THE BATTERY INTEGRITY IS MA INTAI

NED AND SEALS REMAIN

INTACT. RISK OF EXPOSURE ONLY IN CASE OF ABUSE (MECHANICAL,
THERMAL, ELECTRICAL) WHICH LEADS TO THE ACTIVATION OF SAFETY VALVES
AND/OR THE RUPTURE OF THE BATTERY CONTAINERS. ELECTROLYTE (CONTD.
SEE "TOXICOLOGICAL")

Effects of Overexposure:BURNS AND SENSITIZATION BY SKIN CONTACT, EYE
DAMAGE.

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

First Aid:IN CASE BATTERY RUPTURES OR EXPLODES, EVACUATE PERSONNEL FROM
AREA AND PROVIDE MA

XIMUM VENTILATION. EYE CONTACT: FLUSH WITH WATER (EYELIDS HELD OPEN) FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION. SKIN CONTACT: REMOVE CONTAMINATED CLOTHING. FLUSH AFFECTED AREAS WITH WATER AND SOAP FOR AT LEAST 15 MINUTES. DO NOT APPLY GREASES OR OINTMENTS. GET MEDICAL ATTENTION. INGESTION: DILUTE BY GIVING WATER. GET MEDICAL ATTENTION. ASSURE THAT VICTIM DOES NOT ASPIRATE VOMITED MATERIAL BY USE OF POSITIONAL DRAINAGE. ASSURE THAT MUCOUS DOES NOT OBSTRUCT THE AIRWAY. DO NOT GIVE ANYTHING BY (CONTD. SEE "ECOLOGICAL")

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

Extinguishing Media: TYPE D EXTINGUISHERS, LITH-X. WATER MAY BE USED ONLY TO KEEP BATTERY COOL. NOT TO BE USED: WATER IN CASE OF BATTERY RUPTURE OR EXPLOSION (DETECTABLE BY THE PUNGENT ODOUR).

Fire Fighting Procedures: USE SELF-CONTAINED BREATHING APPARATUS TO AVOID BREATHING IRRITANT FUMES. WEAR PROTECTIVE CLOTHING AND EQUIPMENT TO PREVENT BODY CONTACT WITH ELECTROLYTE SOLUTION..

Unusual Fire/Explosion Hazard: BATTERY CAN SPOUT VAPORIZED OR DECOMPOSED ELECTROLYTE FUMES IN CASE OF EXPOSURE ABOVE 100C RESULTING FROM UNAPPROPRIATE USE OR THE ENVIRONMENT. RISK OF EXPLOSION IS INCREASED IF THE MELTING POINT OF LITHIUM (180.5C) IS EXCEEDED. HYDROGEN COMING FROM DECOMPOSITION OF LITHIUM METAL WITH WATER IS FLAMMABLE.

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

Spill Release Procedures: THE MATERIAL CONTAINED WITHIN THE BATTERIES WOULD ONLY BE EXPELLED UNDER ABUSIVE CONDITIONS. USING SHOVEL OR BROOM, COVER BATTERY OR SPILLED SUBSTANCES WITH DRY SAND OR, PREFERABLY, SODIUM CARBONATE (Na_2CO_3) OR 1:1 MIXTURE OF SODA ASH AND SLAKED LIME. KEEP AWAY FROM WATER, RAIN, SNOW. PLACE IN APPROVED CONTAINER (AFTER COOLING IF NECESSARY) AND DISPOSE IN ACCORDANCE WITH LOCAL REGULATIONS.

Neutralizing Agent: SODIUM CARBONATE OR 1:1 MIXTURE OF SODA ASH AND SLAKED LIME.

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Handling and Storage
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Handling and Storage Precautions:DO NOT OPENED, DESTROYED, INCINERATED BATTERIES SINCE THEY MAY LEAK OR RUPTURE AND RELEASE INGREDIENTS TO ENVIRONMENT. DO NOT CRUSH, PIERCE, SHORT TERMINALS. DO NOT DIRECTLY HEAT OR SOLDER. DO NOT THROU INTO FIRE. DO NOT MIX NEW AND USED BATTERIES. AND BATTERIES OF DIFFERENT TYPES AND BRANDS.

Other Precautions:KEEP BATTERIES IN NON CONDUCTIVE (PLASTIC) TRAYS. STORE IN COOL (BELOW 30C

) AND VENTILATED AREA AWAY FROM MOISTURE, SOURCE OF HEAT, OPEN FLAMES, FOOD, DRINK. KEEP ADEQUATE CLEARANCE BETWEEN WALLS AND BATTERIES. TEMP. ABOVE 100C MAY CAUSE BATTERY LEAKAGE AND RUPTURE. KEEP BATTERIES IN (CONTD. SEE "STATE REG.")

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Exposure Controls/Personal Protection
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Respiratory Protection:NOT NECESSARY UNDER NORMAL USE. IN CASE OF BATTERY RUPTURE, USE SELF CONTAINED FULL-FACE RESPIRATORY EQUIPMENT WITH TYPE ABEK FILTER.

Protective G

loves:NOT NECESSARY UNDER NORMAL USE.VITRON RUBBER FOR HANDLING LEAKING BATTERY.

Eye Protection:NOT NECESSARY UNDER NORMAL USE.SAFETY GLASSES WITH SIDE SHIELD FOR LEAKERS.

Other Protective Equipment:NOT NECESSARY UNDER NORMAL USE. USE RUBBER APRON AND PROTECTIVE WORKING CLOTHES IN CASE OF HANDLING A RUPTURED BATTERY.

Work Hygienic Practices:IN CASE OF INCIDENT, SEEK MEDICAL ATTENTION.

Supplemental Safety and Health

KEEP ONLY IN THE ORIGINAL CONTAINER. HANDLE AND OPEN CONTAINER WITH CARE. ENSURE EFFECTIVE VENTILATION.

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Physical/Chemical Properties
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HCC:Z6

Melt/Freeze Pt:=-180.5C, 356.9F

M.P/F.P Text:LITHIUM INGREDIENT

Decomp Temp:=-100.C, 212.F

Decomp Text:ELECTROLYTE FUMES

Appearance and Odor:SMALL METAL CYLINDERS, HERMETICALLY SEALED.

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Stability and Reactivity Data
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Stability Indicator/Materials to Avoid:YES

OXIDIZING AGENTS, WATER, ALKALIS. AVOID ELECTROLYTE CONTACT WITH ALUMINUM OR Z

INC.

Stability Condition to Avoid: AVOID HEAT ABOVE 100C OR INCINERATE, DEFORM, MUTILATE, CRUSH, PIERCE, DISASSEMBLE, RECHARGE. SHORT CIRCUIT, PROLONGED EXPOSURE TO HUMID CONDITIONS.

Hazardous Decomposition Products: H₂, Li₂O, LiOH DUST, Cl₂, SO₂, S₂CL₂, HCL, SO₂, AL(OH)₃ MAY BE PRODUCED IN VARIOUS REACTIONS OF INGREDIENTS WITH WATER AND/OR THERMAL DECOMPOSITION OF THIONYL CHLORIDE ABOVE 140C.

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

Toxicological I

nformation: THE SAFT PRIMARY LITHIUM-THIONYL CHLORIDE BATTERIES DO NOT CONTAIN TOXIC MATERIALS. (CONTD. FROM "HEALTH HAZARDS") LEAKAGE, ELECTRODE MATERIALS REACTION WITH MOISTURE/WATER OR BATTERY VENT/ EXPLOSION / FIRE MAY FOLLOW, DEPENDING UPON THE CIRCUMSTANCES. CONTACT WITH LEAKAGE FROM BROKEN BATTERY CASE IS HARMFUL TO SKIN MAY, MAY CAUSE SEVERE BURNS AND RISK OF SERIOUS DAMAGE TO EYES, IS HARMFUL IF SWAL LOWED, MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTA CT. THE CONTENTS REACTS WITH WATER AND YIELDS FLAMMABLE GASES.

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

Ecological: WHEN PROPERLY USED OR DEPOSED, THE LITHIUM-THIONYL CHLORIDE BATTERIES DO NOT PRESENT ENVIRONMENTAL HAZARD. (CONTD. FROM "FIRST AID") MOUTH TO AN UNCONSCIOUS PERSON. INHALATION: MOVE TO FRESH AIR AND V ENTILATE THE CONTAMINATED AREA. GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED. GET MEDICAL ATTENTION.

===== Disposa

I Considerations =====

Waste Disposal Methods: LITHIUM BATTERIES SHOULD HAVE TERMINALS INSULATED PRIOR TO DISPOSAL. DISPOSE IN ACCORDANCE WITH APPLICABLE REGULATIONS WHICH VARY BETWEEN COUNTRIES. (IN MOST COUNTRIES, THRASHING OF USED BATTERIES IS FORBIDDEN. END-USERS ARE INVITED TO DISPOSE OF THEM THROUGH NON PROFIT ORGANIZATIONS, MANDATED BY LO CAL GOVERNMENTS OR (CONTD.SEE "OTHER INFORMATION")

===== MSDS Transport Information =====

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Transport Information:UNITED NATIONS: UN 3090; CLASS 9: PKGING: ICAO 903 FOR AIR, IMDG FOR SEA. INTERNATIONAL CONVENTIONS: AIR, IATA; SEA, IMDG; LAND: ADR (ROAD), RID (RAIL); OTHER: IN USA: 49 CFR CH 1, PARA. 173- 185. LI THIU-THIONYL CHLORIDE CELLS WITH LESSTHAN 0.5 GRAM OF LITHIUM METAL ARE NOT RESTRICTED FOR TRANSPORTATION. DEPENDING ON LITHIUM CONTENT, DESIGN, ABILITY TO PASS TESTS DEFINED IN "RECOMMENDATIONS ON TRANSPORT OF DANGEROUS GOODS CHAPTER 38.3

MANUAL OF TESTS AND CRITERIA REF. ST/ SG/ AC. 10/ 11 THIRD REVISED EDITION 1999". LITHIUM-TIONYL CHLORIDE CELLS MAY OR MAY NOT BE ASSIGNED TO UN 3090,CLASS- 9 THAT IS RESTRICTED FOR TRANSPORT.

===== Regulatory Information =====

State Regulatory Information:(CONTD. FROM "OTHER PRECAUTIONS") ORIGINAL PACKAGING UNTIL USE AND DO NOT JUMBLE THEM. LITHIUM-TIONYL CHLORIDE BATTERIES ARE NOT RECHARGEABLE AND SHOULD NOT BE TENTATIVELY CHARGED.

FOLLOW MFR'S RECOMM ENDATIONS REGARDING MAXIMUM RECOMMENDED CURRENTS AND OPERATING TEMPERATURE RANGE. APPLYING PRESSURE ON DEFPRMING THE BATTERY MAY LEAD TO DISASSEMBLY FOLLOWED BY EYE, SKIN, AND THROAT IRRITATION.

===== Other Information =====

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