



Ascent Battery Supply, LLC  
 925 Walnut Ridge Drive  
 Hartland, Wisconsin 53029

## Material Safety Data Sheet

## Lead Acid, SLI - X2 Power

The information and recommendations below are believed to be accurate at the date of preparation. Ascent Battery Supply makes no warranty of merchantability or any other warranty, express or implied, with respect to such information and we assume no liability resulting from its use. This MSDS provides guidelines for safe use and handling of the product. It does not and cannot advise all possible situations. Your specific use of this product should be evaluated to determine if additional precautions must be taken.

<b>Distributed By</b>	Ascent Battery Supply, LLC Ascent Battery Supply 925 Walnut Ridge Drive	<b>Emergency Number</b>	INFOTRAC (800) 535-5053
<b>Address</b>	Hartland, Wisconsin 53029	<b>Overseas Emergency Number</b>	INFOTRAC (352) 323-3500 (Collect)
<b>Revision Date</b>	03/11		

### SECTION 1 – IDENTITY

<b>Product Name</b>	X2 Power
<b>Common</b>	Lead Acid, Electrical Storage Battery, SLI – Automotive, Marine
<b>Synonyms</b>	
<b>DOT Description</b>	Battery, wet, non-spillable (electric storage)
<b>Chemical Name</b>	Lithium Ion; Secondary Battery

### SECTION 2 – HAZARDOUS INGREDIENTS

Chemical Name	CAS No.	Percentage %
Lead	7439-92-1	50
Lead Oxide	1309-60-0	20
Electrolyte (Sulfuric Acid) 1.400 sg	7664-93-9	17

### SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS

<b>Boiling Point</b>	110°C (230°F) (Electrolyte)	<b>Melting Point</b>	327°C (621°F) (Lead)
<b>Vapor Pressure</b>	NA	<b>Vapor Density</b>	NA
<b>Specific Gravity</b>	NA	<b>Percent Volatile By Volume</b>	NA
<b>Solubility in Water</b>	100% (Electrolyte)	<b>Reactivity in Water</b>	NA
<b>Appearance and Odor</b>	Electrolyte is a clear liquid with an acidic odor.	<b>Evaporation Rate</b>	NA
<b>Flash Point</b>	259°C (Hydrogen)	<b>Flammable Limits in Air % by Volume</b>	NA
<b>Extinguisher Media</b>	Dry chemical type extinguishers or water.	<b>Auto-Ignition Temperature</b>	580°C (Hydrogen)
<b>Special Fire Fighting Procedures</b>	Full protective clothing and NIOSH-approved self-contained breathing apparatus with full face- shield.		
<b>Unusual Fire and Explosion Hazards</b>	Hydrogen and oxygen gases are produced in the cells during normal battery operation (hydrogen is flammable and oxygen supports combustion). These gases enter the air through the vent caps. To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery.		

## SECTION 4 – PHYSICAL HAZARDS

<b>Stable or Unstable</b>	Stable	<b>Conditions to Avoid</b>	Sparks and other sources of ignition. Electrical shorting.
<b>Incompatibility</b> (Materials to Avoid)	<ol style="list-style-type: none"> <li>1. Lead/lead compounds: Potassium, carbides, sulfides, peroxides, phosphorus, sulfur.</li> <li>2. Battery electrolyte (acid): Combustible materials, strong reducing agents, most metals, carbides, organic materials, chlorates, nitrates, picrates, and fulminates.</li> </ol>		
<b>Hazardous Decomposition Products</b>	<ol style="list-style-type: none"> <li>1. Lead/lead compounds: Oxides of lead and sulfur.</li> <li>2. Battery electrolyte (acid): Hydrogen, sulfur dioxide, and sulfur trioxide.</li> </ol>		

## SECTION 5 – HEALTH HAZARDS

<b>Threshold Limit Value</b>	NA
<b>Signs and Symptoms of Exposure</b>	<ol style="list-style-type: none"> <li>1. Acute Effects: Over exposure to lead may lead to loss of appetite, constipation, sleeplessness and fatigue. Over exposure to acid may lead to skin irritation, corneal damage of the eyes and upper respiratory system.</li> <li>2. Chronic Effects: Lead and its components may cause damage to kidneys and nervous system. Acid and its components may cause lung damage and pulmonary conditions.</li> </ol>
<b>Medical Conditions Generally Caused by Exposure</b>	Potential to Cause Cancer: The International Agency for Research on Cancer has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist is not generated under normal use of this product. Misuse of the product, such as overcharging, may however result in the generation of sulfuric acid mist.
<b>Routes of Entry</b>	<ol style="list-style-type: none"> <li>1. Inhalation: Acid mist from formation process may cause respiratory irritation.</li> <li>2. Skin Contact: Acid may cause irritation, burns and/or ulceration.</li> <li>3. Skin Absorption Not a significant route of entry.</li> <li>4. Eye Contact: Acid may cause severe irritation, burns, cornea damage and/or blindness.</li> <li>5. Ingestion: Acid may cause irritation of mouth, throat, esophagus and stomach.</li> </ol>
<b>Emergency and First Aid Procedures for</b>	
<b>1. Inhalation</b>	Remove from exposure, move to fresh air, and apply oxygen if breathing is difficult. Consult physician immediately.
<b>2. Eyes and Skin</b>	<p>Skin: Wash with plenty of soap and water for at least 15 minutes. Remove any contaminated clothing. Consult physician if skin irritation appears.</p> <p>Eyes: Flush with plenty of water immediately for at least 15 minutes, lifting lower and upper eyelids occasionally. Consult a physician immediately.</p>
<b>4. Ingestion</b>	Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Consult a physician immediately.

## SECTION 6 – SPECIAL PROTECTION INFORMATION

<b>Respiratory Protection</b>	None required under normal handling conditions. During battery formation (high-rate charge condition), acid mist can be generated which may cause respiratory irritation. Also, if acid spillage occurs in a confined space, exposure may occur. If irritation occurs, wear a respirator suitable for protection against acid mist.				
<b>Ventilation</b>	NA	<b>Local Exhaust</b>	NA	<b>Mechanical (General)</b>	NA
<b>Gloves</b>	Vinyl coated, VC, gauntlet type gloves with rough finish are preferred.		<b>Safety Glasses</b>	Chemical splash goggles are preferred. Also acceptable are "visor-gogs" or a chemical face shield worn over safety glasses.	
<b>Other Protective Equipment</b>	Safety shoes are recommended when handling batteries. All footwear must meet requirements of ANSI Z41.1 -Rev.1972				

## SECTION 7 – SPECIAL PRECAUTIONS – SPILL AND LEAKAGE PROCEDURES

**Precautions to be Taken when Handling and Storing** Store in a cool, dry place in closed containers. Keep away from ignition sources and high temperatures. Avoid skin or eye contact. Avoid breathing vapors. Do not use near sources of ignition.

**Other Precautions** Store lead/acid batteries with adequate ventilation. Room ventilation is required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space. Do not remove vent covers. Follow shipping and handling instructions which are applicable to the battery type. To avoid damage to terminals and seals, do not double stack industrial batteries.

**Steps to be Taken if chemicals are spilled** Not applicable under normal conditions. In case of damage resulting in breakage of the battery container, see Section 6 – Special Protection Information.

**Waste Disposal**

1. Battery electrolyte (acid): Neutralize as above for a spill, collect residue, and place in a drum or suitable container. Dispose of as hazardous waste.
2. Do not flush lead contaminated acid to sewer.
3. In case of accidental spill, utilize personal protective equipment, i.e., face shield, rubber apron, rubber safety shoes.
4. Batteries: Send to lead smelter for reclamation following applicable Federal, State and local regulations. Product can be recycled along with automotive (SLI) lead acid batteries.
5. Battery may be returned, shipping pre-paid, to the manufacturer or any distributor for recycling. See 1.C for manufacturer's address or visit our web site @ [www.northstarbattery.com](http://www.northstarbattery.com).

\*In accordance to Local, State and Federal regulations and laws.

## SECTION 8 – TRANSPORTATION AND REGULATORY INFORMATION

### Shipping and Transportation

Proper Shipping Name	UN2800 - Battery, wet, non-spillable (electric storage)
IATA	Batteries must be packed to protect against short circuits and firmly secured to skids or pallets. Packaging instruction 806 Not restricted per special provision A67.
U.S. DOT	X2 Batteries have been deemed to meet all requirements as specified in 49CFR§ 173.159 (d) for exception as hazardous material classification.
IMDG	X2 Batteries Company products, submitted and tested by Wyle Labs, have been deemed to meet all requirements as specified in special provision 238 for determination of "Non-Spillable" and are not subject to the provision of this Code.