Clore Automotive	**Safety Data Sheet** Charge It! PP15 Lithium-ion Battery Updated June 14, 2017

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lithium Ion Battery
Other Identification: Nominal Voltage: 11.1V
Rated Capacity: 5000mAh*3
Watt-hour: 51.13Wh
Weight: 443.30g
Company: Clore Automotive
Address: 8735 Rosehill Rd., Suite 220, Lenexa, KS 66215
E-mail: sales@cloreautomotive.com
Phone: 913.310.1050
Emergency: CHEMTEL – 888.255.3924; +1.813.248.0573
Model: **Booster PAC ES400 and Booster PAC ES580**

SECTION 2: HAZARDS IDENTIFICATION

Preparation hazards and classification
No harm during normal use. When the battery is in extreme pressure deformation, high-temperature environment, overload, short-circuit condition, or disassembled, an explosion of fire and chemical burn hazards may occur.
Primary Route(s) of Exposure
These chemicals are contained in a sealed stainless steel enclosure or a sealed aluminum foil package. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by inhalation, ingestion, eye contact and skin contact.
Potential Health Effects:
ACUTE (short term): See Section 8 for exposure controls. In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns.
Inhalation: A battery volatilizes no gas unless it is damaged. Damaged battery will volatilize little gas that may stimulate the respiratory tract or cause an anaphylaxis in serious condition.
Ingestion: Swallowing battery will be damaging to the digestive tract and cause chemical burns to the stomach; in serious conditions it will cause permanent damage.
Skin: In normal condition, contact between the battery and skin will not cause any harm. Contact with a damaged battery may cause skin allergies or chemical burns.

Eye: In normal condition, contact between the battery and eyes will not cause any harms. However, the gas volatilized from a damaged battery may be harmful to eyes.
CHRONIC (long term): See Section 11 for additional toxicological data.
Medical Conditions Aggravated by Exposure
No information available
Reported as Carcinogen
No information available

GHS Label elements, including precautionary statements:


GHS02

GHS05

GHS06

Signal word: Warning

Hazard statement(s):
H242: Heating may cause a fire;
H311: Toxic in contact with skin;
H314: Causes severe skin burns and eye damage;
H302: Harmful if swallowed;
H332: Harmful if inhaled;
Prevention:
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P271: Use only outdoors or in a well-ventilated area.
Response:
P312: Call a Poison center or doctor/physician if you feel unwell.
P302+P350 - IF ON SKIN: Gently wash with plenty of soap and water.
P301+P330+P331 - IF SWALLOWED: Rise mouth. Do NOT induce vomiting.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Disposal：
P501: Dispose of contents/container in accordance with local/national regulations.
Hazards not otherwise classified (HNOC)
Not Applicable

SECTION 3: INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration %
Lithium Cobalt Oxide (CoLiO2)	12190-79-3	29
Graphite	7782-42-5	17
Carbon Black	1333-86-4	4
Carbonate, Methyl Ethyl	623-53-0	10
Phosphate(1-), hexafluoro-, lithium	21324-40-3	9
Copper	7440-50-8	16
Nickel	7440-02-0	4
Aluminum	7429-90-5	11

SECTION 4: FIRST-AID MEASURES

Description of First Aid Measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice / attention if you feel unwell.

Skin contact: Remove contaminated clothes and rinse the skin with plenty of water. Get medical advice /attention if you feel unwell.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice / attention if you feel unwell.

Ingestion: Have victim drink 60 to 240 mL (2-8 oz.) of water and DO NOT induce vomiting. Get medical aid.

Most important symptoms/effects, acute and delayed

Contact with internal components may cause allergic skin sensitization (rash) and irritate eyes, skin, nose, throat, respiratory system. Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).

Immediate medical attention and special treatment

No information available.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Use foam, dry powder or dry sand, CO2 as appropriate.

Unsuitable extinguishing media: No information available.

Special hazards arising from the chemical:
Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO, CO2, Metal oxides, Irritating fumes.
Special protective equipment and precautions for fire-fighters:
Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filter mask (full mask) or isolated breathing apparatus. The staff must wear the clothing protective against fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to an open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
If the Li-ion Battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area, dispose the case after the batteries cool and vapors dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors.
Environmental Precautions:
Prevent material from contaminating soil and from entering sewers or waterways.
Methods and materials for containment and cleaning up:
If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid allowing leached substances to contaminate the ground or water.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:
Always follow the warning information on the batteries and in the unit's operating manual. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change, always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not short-circuit batteries. Use recommended charging time and current.
Conditions for safe storage, including any incompatibilities:
If the Li-ion Battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Li-ion Battery periodically. Operating temperature: Charge: 0°C~45°C. Discharge: -10°C ~50°C. Recommended storage temperature is -10°C ~45°C for 1 month storage and -10°C ~35°C for 3 months storage. The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more. The voltage for a long time storage shall be 3.7V~4.2V range. Do not store Li-ion Batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects. Keep out of reach of children.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Engineering Controls

Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keep away from heat and open flame. Store in a cool, dry place.

Personal Protective Equipment

Respiratory Protection: Not necessary under normal conditions.

Skin and body Protection: Not necessary under normal conditions. Wear neoprene or nitrile rubber gloves if handling an open or leaking battery.

Hand protection: Not necessary under normal conditions. Wear neoprene or natural rubber material gloves if handling an open or leaking battery.

Eye Protection: Not necessary under normal conditions. Wear safety glasses if handling an open or leaking battery.

Other Protective Equipment

Have a safety shower and eye wash fountain readily available in the immediate work area.

Hygiene Measures

Do not eat, drink, or smoke in work area.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

(a) Appearance Silver	Solid
(b) Odor	Monotony
(c) Odor threshold	Not available.
(d) pH	Not available.
(e) Melting point/freezing point	Not available.
(f) Initial boiling point and boiling range	Not available.
(g) Flash point	Not applicable.
(h) Evaporation rate	Not applicable.
(i) Flammability	Non-flammable.
(j) Upper/lower flammability or explosive limits	Not available.
(k) Vapor pressure	Not applicable.
(l) Vapor density	Not available.
(m) Relative density	Not available.
(n) Solubility(ies)	Insoluble in water.
(o) Partition coefficient: n-octanol/water	Not available.
(p) Auto-ignition temperature	130°C
(q) Decomposition temperature	Not available.
(r) Viscosity	Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage and handling conditions.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: When heated above 150 °C, the risk of rupture occurs. Due to special safety construction, rupture implies continuous release of pressure without ignition.
Conditions to avoid: Do not subject Li-ion Battery to mechanical shock. Keep away from open flames, high temperature.
Incompatible materials: Strong oxidizer, strong acid.
Hazardous decomposition products: Under fire conditions, the electrode materials can form carcinogenic nickel and cobalt oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure
Inhalation: Inhalation of a large number of vapors or fumes released due to heat may cause respiratory distress.
Ingestion: Ingestion of battery contents may cause mouth, throat and intestinal burns/damage.
Skin contact: Contact with battery electrolyte may cause burns and skin irritation.
Eye contact: Contact with battery electrolyte may cause burns. Eye damage is possible.
Under normal conditions (during charge and discharge), release of ingredients does not occur. If accidental release occurs, see information in Sections 2 and 4. Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.
Information on toxicological characteristics
Acute toxicity: No data available.
Skin corrosion/irritation: The liquid in the battery irritates.
Serious eye damage/irritation: The liquid in the battery irritates.
Respiratory sensitization: The liquid in the battery may cause sensitization to some person.
Skin sensitization: The liquid in the battery may cause sensitization to some person.
Carcinogenicity: Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).
Germ Cell Mutagenicity: No data available.
Reproductive Toxicity: No data available.
STOT-Single Exposure: No data available.
STOT-Repeated Exposure: No data available.
Aspiration Hazard: No data available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Water hazard class 1 (self-assessment): slightly hazardous for water.
Persistence and Degradability: No information available.
Bioaccumulative potential: No information available.
Mobility in soil: No information available.
Other adverse effects: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Safe handling and methods of disposal:
Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements. Product disposal recommendation: Observe local, state and federal laws and regulations. Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassembly the battery. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or reused. Observe local, state and federal laws and regulations. There are potential effects on the environment and human health of the substances used in batteries and accumulators if not disposed of properly. Dispose of waste batteries and accumulators according to regulations and of participate in their separate collection so as to facilitate treatment and recycling.

SECTION 14: TRANSPORT INFORMATION

According to PACKING INSTRUCTION 965 ~ 970 of IATA DGR 56th Edition for transportation, the special provision 188 of IMDG (inc Amdt 35-10), the batteries should be securely packed and protected against short-circuits. Review whether the packaging of the product is uncompromised and secure before transport. Ensure there is no sign of damage, stress, or breakage. Do not combine in a shipment with oxidizers or food chemicals. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, products should be isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, avoiding stop overs in residential areas and congested areas.

Per IATA Packing Instructions 967 Section II; based upon the watt-hour rating of the unit, it may be shipped without a Shipper's Declaration for Dangerous Goods, following the specific instructions listed in the regulations. See Clore PP15 shipping instructions for further details.

UN number: 3480 & 3481
UN Proper shipping name: LITHIUM ION BATTERIES (including lithium ion batteries) or; LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion batteries)
Transport hazard class(es): 9
Packing group (if applicable): II
Marine pollutant (Yes/No): No
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): No information available.
Special precautions: No information available.

SECTION 15: REGULATORY INFORMATION

OSHA hazard communication standard (29 CFR 1910.1200)
Hazardous: Non-hazardous: X

SECTION 16: OTHER INFORMATION

Preparation and revision information
Date of previous revision: Not applicable. Date of this revision: 2015-07-25
Revision summary: This is the original SDS.
Abbreviations and acronyms

TSCA:	Toxic Substances Control Act
DSL:	Domestic Substances List
EINECS:	European Inventory of Existing Commercial Chemical Substances
ENCS:	Japanese Existing and New Chemical Substances
ECL:	Existing Chemicals List, the Korean chemical inventory
IECSC:	Inventory of existing chemical substances in China.

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