

Beiblatt zum Sicherheitsdatenblatt / Supplement to the safety data sheet

Abschnitt 1 / Section 1

1.1 Produktidentifikation / Product identification

s. Original-Datenblatt / see original safety data sheet

1.2 Verwendungen des Stoffs / Uses of the substance

s. Original-Datenblatt / see original safety data sheet











1.3 Einzelheiten zum Lieferanten / Details of the supplier

Firmenname / *Supplier*
 Straße / *Street*
 Ort / *City*
 Tel. / *Phone*
 E-Mail / *E-Mail*

Stürmer Maschinen GmbH,
 Dr.-Robert-Pfleger-Str. 26,
 D-96103 Hallstadt
 +49 (0)951 96555 - 0 (07:00 - 17:00 Uhr / 07:00 am - 05:00 pm)
 info@stuermer-maschinen.de

1.4 Notrufnummer / Emergency Telephone

Wählen Sie die passende Notrufnummer anhand des GHS-Symbols auf Ihrem Gefahrgut oder entsprechend Abschnitt 2.2 des orig. Sicherheitsdatenblattes *.
 Call the appropriate emergency number using the GHS symbol on your dangerous goods or according to section 2.2 of the original safety data sheet *.

GHS Gefahren-piktogramm / GHS symbol	GHS-Kürzel/ GHS-no.	Mögliche Signalwörter/ Warning	Gefährdungsklassen / Description of hazards	Notrufnummer */ Emergency Phone *
	GHS01 bis GHS09			+49 (0)951 96555 - 590 Sammelnotrufnummer Gefahrstoffe
	GHS01	Gefahr oder Achtung / Danger or Attention	Explosive Stoffe/Gemische und Erzeugnisse mit Explosivstoff, selbstzersetzliche Stoffe/Gemische, organische Peroxide / Explosive substances / mixtures and products containing explosives, self-reactive substances / mixtures, organic peroxides	- 591
	GHS02	Gefahr oder Achtung / Danger or Attention	Selbstzersetzliche Stoffe/Gemische, organische Peroxide, entzündbare Gase, Aerosole Flüssigkeiten, Feststoffe, selbsterhitzungsfähige Gemische, pyrophore Flüssigkeiten und Feststoffe, Stoffe/Gemische, die bei Berührung mit Wasser entzündbare Gase bilden / Self-reactive substances / mixtures, organic peroxides, flammable gases, aerosols, liquids, solids, self-heating mixtures, pyrophoric liquids and solids, substances / mixtures which form flammable gases on contact with water	- 592
	GHS03	Gefahr oder Achtung / Danger or Attention	Oxidierende Gase, Flüssigkeiten, Feststoffe / Oxidizing gases, liquids, solids	- 593
	GHS04	Achtung / Attention	Verdichtete, verflüssigte, gelöste und tiefgekühlt verflüssigte Gase / Compressed, liquefied, dissolved and refrigerated liquefied gases	- 594
	GHS05	Gefahr oder Achtung / Danger or Attention	Verätzung der Haut, schwere Augenschäden, auch metallkorrosive Eigenschaften / Chemical burns to the skin, severe eye damage, also metal-corrosive properties	- 595
	GHS06	Gefahr / Danger	Äußerst schwere und schwere akute Gesundheitsschäden oder Tod / Extremely severe and severe acute damage to health or death	- 596
	GHS07	Achtung / Attention	Akute Gesundheitsschäden, Reizung der Haut, der Augen und der Atemwege, Sensibilisierung der Haut, narkotisierende Wirkungen / Acute damage to health, irritation of the skin, eyes and the respiratory tract, sensitization of the skin, narcotic effects	- 597
	GHS08	Gefahr oder Achtung / Danger or Attention	Chronische Gesundheitsschäden (Organschädigungen) bei einmaliger oder mehrmaliger Exposition, krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkungen, Lungenschäden durch Eindringen von Substanzen in die Lunge (Aspirationsgefahr), Sensibilisierung der Atemwege / Chronic damage to health (damage to organs) after single or multiple exposure, carcinogenic, mutagenic and reproductive effects, lung damage due to the penetration of substances into the lungs (risk of aspiration), sensitization of the respiratory tract	- 598
	GHS09	Achtung oder ohne Signalwort/ Attention or without wording	Giftig für Wasserorganismen mit kurz- und langfristiger Wirkung / Toxic to aquatic organisms with short and long-term effects	- 599

* 07:00 - 17:00 Uhr, außerhalb dieses Zeitraums kann die Nummer auf dem Sicherheitsdatenblatt angerufen werden / 07:00 am - 05:00 pm, outside this time, the number on the safety data sheet can be called

Für alle anderen Informationen siehe Original-Sicherheitsdatenblatt / For all other information, see the original safety data sheet



骆驼集团股份有限公司

CAMEL GROUP CO.,LTD

LEAD ACID BATTERY MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's name: CAMEL GROUP CO.,LTD
Address: 83, Wudang Road, Shihua Town, Gucheng County, Hubei, China
Post code: 441003 Tel: +86 334 4102 Fax: +86 710 334 4151

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

main technical specification for Low-maintenance Batteries (Without Acid):

Battery type	Rating voltage	Rating capacity	Net weight Without Acid	CCA	Dimension (MAX)
	V	Ah	KG	A	L*W*H*TH (mm)
U1-9	12	24	9.1	280	175*175*190*190

C.A.S.	PRINCIPAL HAZARDOUS COMPONENT T(S) (chemical & common name(s))	Hazard Category	%	ACGIH TLV	OSHA PEL-TWA
7439-92-1	Lead/Lead Oxide/Lead Sulfate	Acute-Chronic	55-70%	0.05 mg/m ³	0.05 mg/m ³
7440-36-0	Antimony	Chronic	0-5%	0.5 mg/m ³	0.5 mg/m ³
7440-38-2	Arsenic	Acute-Chronic	< 1%	0.01 mg/m ³	0.01 mg/m ³
7664-93-9	Sulfuric Acid (Battery Electrolyte)	Reactive-Oxidizer Acute-Chronic	20-35%	1.0 mg/m ³	1.0 mg/m ³
7440-70-2	Calcium	Reactive	< 0.15%	Not established	Not established
7440-31-5	Tin	Chronic	< 0.3%	2.0 mg/m ³	2.0 mg/m ³

NOTE: PEL's for individual states may differ from OSHA PEL's. Check with local authorities for the applicable state PEL's.

OSHA - Occupational Safety and Health Administration; ACGIH - American Conference of Governmental Industrial Hygienists; NIOSH - National Institute for Occupational Safety and Health.

COMMON NAME: (Used on label) Maintenance-free Batteries

(Trade Name & Synonyms) Lead-Acid Storage Battery, With Acid ; Low-maintenance Batteries With Acid

Chemical Family: Toxic and Corrosive Material Mixture

Chemical Name: Lead-Acid Storage Battery Formula: Lead and Acid (electrolyte)

Declare: Maintenance Batteries, With Acid (Electrolyte) and does not contain Hg ;

NOTE: before using, immerse Battery Sulfuric Acid (Battery Electrolyte) Density must equal to 1.28 (25°C)

SECTION 3 - HAZARD IDENTIFICATION

Components	Density	Melting Point	Solubility (in H ₂ O)	Odor	Appearance
Lead	11.34	327.4°C	None	None	Silver-Gray Metal
Lead Sulfate	6.2	1170°C	40 mg/l (15°C)	None	White Powder



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Lead Dioxide	9.4	290°C	None	None	Brown Powder
Fiberglass Separator	N/A	N/A	Slight	Toxic	White Fibrous Glass Membrane
Container (ABS or PP)	N/A	N/A	NONE	No Odor	Solid Plastics

SECTION 4 - FIRST AID MEASURES

Emergency and First Aid Procedures	Contact with internal components if battery is opened/broken.
1. Inhalation	Remove to fresh air and provide medical oxygen/CPR if needed. Obtain medical attention.
2. Eyes	Immediately flush with water for at least 15 minutes, hold eyelids open. Obtain medical attention.
3. Skin	Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention if necessary.
4. Ingestion	Do not induce vomiting. If conscious drink large amounts of water/milk. Obtain medical attention. Never give anything by mouth to an unconscious person.

SECTION 5 - FIREFIGHTING MEASURES

Components	Flash Point	Explosive Limits	Comments
Lead	None	None	
Hydrogen	259°C	4% - 74.2%	Emit hydrogen only if over charged (Voltage>2.4 VPC). To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery. Extinguishing Media: Dry chemical, Foam, CO2
Fiberglass Separator	N/A	N/A	Toxic vapors may be released. In case of fire: wear self-contained breathing apparatus.
ABS	None	N/A	Danger: Vapors may cause Flash Fire. Harmful or Fatal if Swallowed. Vapor Harmful.
PP	None	N/A	Temperatures over 300 °C (572°F) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus.

Flash Point Not Applicable	Flammable Limits in Air % by Volume (When charging) Hydrogen (H ₂) Lower 4.1% Upper 74.2%	Extinguisher Media Class ABC, CO ₂ , Halon	Auto-Ignition Temperature Polypropylene 675° F
Special Fire	Lead-acid batteries do not burn or burn with difficulty. Do not use water on fires where molten metal is present. Extinguish fire		



Fighting	with agent suitable for surrounding combustible materials. Cool exterior of battery if exposed to fire to prevent rupture. The acid mist and vapors
Procedures	generated by heat or fire are corrosive. Use NIOSH approved self-contained breathing apparatus (SCBA) and full protective equipment operated in positive-pressure mode.
Unusual Fire and Explosion Hazards	Hydrogen gas and sulfuric acid vapors are generated upon overcharge and polypropylene case failure. Ventilate charging areas as per ACGIH Industrial Ventilation: A Manual of Recommended Practice and National Fire Code, 1980 Vol. 1, P. 12, B-9, 10. Hydrogen gas may be flammable or explosive when mixed with air, oxygen, and chlorine. Avoid open flames/sparks/other sources of ignition near battery. To avoid risk of fire or explosion, keep sparks or other sources of ignition away from batteries and do not allow metallic materials to simultaneously contact negative and positive terminals of cells and batteries. SULFURIC ACID REACTS VIOLENTLY WITH WATER/ORGANICS.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup: Stop release, if possible. Avoid contact with any spilled material. Contain spill, isolate hazard area, and deny entry. Limit site access to emergency responders. Neutralize with sodium bicarbonate, soda ash, lime or other neutralizing agent. Place battery in suitable container for disposal. Dispose of contaminated material in accordance with applicable local, state and federal regulations. Sodium bicarbonate, soda ash, sand, lime or other neutralizing agent should be kept on-site for spill remediation.

Personal Precautions: **Acid resistant** aprons, boots and protective clothing. ANSI approved safety glasses with side shields/face shield recommended. Ventilate enclosed areas.

Environmental Precautions: Lead and its compounds **and sulfuric acid** can pose a severe threat to the environment. Contamination of water, soil, and air should be prevented.

SECTION 7 - HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage	Keep away from flames during and immediately after charging. Combustion or overcharging may create or liberate toxic and hazardous gases and liquids including hydrogen, sulfuric acid mist, sulfur dioxide, sulfur trioxide , stibine, arsine and sulfuric acid . Store batteries in cool, dry, well-ventilated area. Do not short circuit battery terminals, or remove vent caps during storage or recharging. Protect battery from physical damage.
Other Precautions	GOOD PERSONAL HYGIENE AND WORK PRACTICES ARE MANDATORY. Refrain from eating, drinking or smoking in work areas. Thoroughly wash hands, face, neck, and arms before eating, drinking or smoking. Launder soiled clothing before reuse. Emptied batteries contain hazardous sulfuric acid residue .

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection (Specify Type)	Acid gas NIOSH approved respirator is required when the PEL is exceeded or employee experiences respiratory irritation. When exposure levels are unknown or when firefighting, wear a self-contained breathing apparatus with a full facepiece
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	operated in positive pressure mode				
Ventilation	Must be provided when charging in an enclosed area. Change air every 15 min.	Local Exhaust	When PEL is exceeded.	Mechanical (General)	Normal mechanical ventilation recommended for stationary applications.
Protective Gloves	Wear rubber or plastic acid resistant gloves with elbow length gauntlet when filling batteries.		Eye Protection	ANSI approved safety glasses with side shields/face shield recommended. Safety goggles.	
Other Protective Clothing or Equipment	Ventilation as described in the Industrial Ventilation Manual produced by the American Conference of Governmental Industrial Hygienists, shall be provided in areas where exposures are above the PEL or TLV specified by OSHA or other local, state and federal regulations. Acid-resistant rubber or plastic apron, boots and protective clothing. Safety shower and eyewash.				

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Percent Volatile by Volume (%) Without Acid	Melting Point Polypropylene > 320° F x Vapor Density Hydrogen (Air = 1): 0.069 At STP Evaporation Rate Not Applicable
Solubility in Water Appearance and Odor	Battery: Polypropylene or hard rubber case, solid; may be contained within an outer casing of aluminum or steel. Case has metal terminals. Lead (internal): Gray, metallic, solid; Brown/grey oxide

SECTION 10 - STABILITY AND REACTIVITY

Stability	Unstable Stable	Conditions to Avoid	High temperatures - cases decompose at >320°F. Avoid overcharging and smoking, or sparks near battery surface and rapid overcharge.
Incompatibility (Materials to Avoid)	Sparks, Open flames, Keep battery case away from strong oxidizers.		
Hazardous Decomposition Products	An explosive hydrogen/oxygen mixture within the battery may occur during charging. Combustion can produce carbon dioxide (CO ₂) and carbon monoxide (CO). Molten metals produce fumes and/or vapor that may be toxic or respiratory irritants.		
Hazardous Polymerization	May Occur	Will Not Occur	Do not overcharge

SECTION 11 - TOXICOLOGICAL INFORMATION

GENERAL: The primary routes of exposure to lead are ingestion or inhalation of dust and fumes.

ACUTE:

INGESTION/INHALATION: Exposure to lead and its compounds may cause headache, nausea, vomiting, abdominal spasms, fatigue, sleep



disturbances, weight loss, anemia, and pain in the legs, arms and joints. Kidney damage, as well as anemia, can occur from acute exposure.

CHRONIC:

INHALATION/INGESTION: Prolonged exposure to lead and its compounds may produce many of the symptoms of short-term exposure and may also

cause central nervous system damage, gastrointestinal disturbances, anemia, and wrist drop. Symptoms of central nervous system damage include

fatigue, headaches, tremors, hypertension, hallucinations, convulsions and delirium. Kidney dysfunction and possible injury has also been associated

with chronic lead poisoning. Chronic over-exposure to lead has been implicated as a causative agent for the impairment of male and female reproductive capacity, but there is, at present, no substantiation of the implication. Pregnant women should be protected from excessive exposure.

Lead can cross the placental barrier and unborn children may suffer neurological damage or developmental problems due to excessive lead exposure in pregnant women.

SECTION 12 - ECOLOGICAL INFORMATION

In most surface water and groundwater, lead forms compounds with anions such as hydroxides, carbonates, sulfates, and phosphates and precipitates out of the water column. Lead may occur as sorbed ions or surface coatings on sediment mineral particles or may be carried in colloidal particles in surface water. Most lead is strongly retained in soil, resulting in little mobility. Lead may be immobilized by ion exchange with hydrous oxides or clays or by chelation with humic or fulvic acids in the soil. Lead (when in the dissolved phase) is bioaccumulated by plants and animals, both aquatic and terrestrial.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal	Lead-acid batteries are completely recyclable. Return whole scrap batteries to distributor, manufacturer or lead smelter for recycling. Methods For information on returning batteries to Concorde for recycling call +86 0710 7617594. For neutralized spills, place residue in acid-resistant containers with sorbent material, sand or earth and dispose of in accordance with local, state and federal regulations for acid and lead compounds. Contact local and/or state environmental officials regarding disposal information.
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SECTION 14 - TRANSPORT INFORMATION

UN DOT PROPER SHIPPING NAME: Batteries, wet, filled with acid electric storage (other than unit loads in open cargo transport units)

CNA DOT HAZARD CLASS: 8

U.S. DOT ID NUMBER: UN 2794

U.S. DOT PACKING GROUP: ***

U.S. DOT LABEL: Corrosive

IMO PROPER SHIPPING NAME: Batteries, wet, filled with acid IMO U.N. CLASS: 8 IMO U.N. NUMBER: UN 2794 IMO LABEL: Corrosive

IMO VESSEL STOWAGE: A Ems # - F-A, S-B

IATA PROPER SHIPPING NAME: Batteries, wet, filled with acid IATA U.N. CLASS: 8 IATA U.N. NUMBER: UN 2794 IATA LABEL: Corrosive



ERG Code: 8L

SECTION 15 - REGULATORY INFORMATION

U.S. Hazardous Under Hazard Communication Standard:	Lead - YES	
	Antimony - YES	Arsenic - YES
Ingredients Listed on TSCA Inventory:	YES	
CERCLA Section 304 Hazardous Substances:	Lead – YES	RQ: NA*
	Antimony – YES	RQ: 1000 pounds RQ: 5000 pounds
	Arsenic – YES	RQ: 1 pound

*Reporting not required when diameter of the pieces of solid metal released is equal to or exceeds 100 micrometers.

EPCRA Section 302 Extremely Hazardous Substance:

EPCRA Section 313 Toxic Release Inventory:	Lead - CAS NO: 7439-92-1	
	Antimony - CAS NO: 7440-36-0	Arsenic - CAS NO: 7440-38-2

SECTION 16 - OTHER INFORMATION

All information, recommendations, and suggestions in this MSDS, concerning our products are based on tests and data believed to be reliable, it cannot be guaranteed. Since the actual use by others is beyond our control it is the users responsibility to determine the safety, toxicity and suitability for their own use of the product described herein.

STANDARD: GB12268-2005 EQUAL TO IMDG Code 2004,第3204套修正案)

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