



Material Safety Data Sheet

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Report No.: DGC160223010GE

MSDS

Compliant with
Regulation (EC) No.1907/2006&1272/2008

Applicant: Neata Battery Manufacture Co., Ltd.
Address: West Zone Industrial Park, Xiaolan, Zhongshan, Guangdong, China

Product Name: Maintenance-free Lead Acid Battery

Issue date: February 26, 2016

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Section 1 - Chemical Product and Company Identification

Product Name: Maintenance-free Lead Acid Battery

Model No.: 2V4Ah,2V4.5Ah,2V5Ah,2V6Ah,4V3.0Ah,4V3.2Ah,4V3.5Ah,4V4.0Ah,4V4.5Ah,4V5.0Ah, 4V5.5Ah,4V6.0Ah,4V6.5Ah,4V7.0Ah,4V7.5Ah,4V8.0Ah,4V8.5Ah,4V9.0Ah,4V10Ah,4V12Ah, 6V1.0Ah,6V1.2Ah,6V1.3Ah,6V1.5Ah,6V2.0Ah,6V2.5Ah,6V2.3Ah,6V2.8Ah,6V3.0Ah,6V3.2Ah, 6V3.3Ah,6V3.5Ah,6V4.0Ah,6V4.5Ah,6V5.0Ah,6V5.2Ah,6V5.5Ah,6V6.0Ah,6V6.5Ah,6V6.8Ah, 6V7.0Ah,6V7.2Ah,6V7.5Ah,6V8.0Ah,6V8.5Ah,6V9.0Ah,6V10Ah,6V12Ah,6V14Ah,6V15Ah, 6V7.0Ah,6V7.2Ah,6V7.5Ah,6V8.0Ah,6V8.5Ah,6V9.0Ah,6V10Ah,6V12Ah,6V14Ah,6V15Ah, 6V20Ah,6V40Ah,6V50Ah,6V100Ah,6V120Ah,6V150Ah,6V180Ah,6V200Ah,6V220Ah, 6V250Ah, 12V0.8Ah, 12V1.0Ah, 12V1.2Ah, 12V1.3h, 12V1.5Ah, 12V2.0Ah, 12V2.3Ah, 12V2.6Ah 12V2.8Ah, 12V3.0Ah, 12V3.2Ah, 12V3.3Ah, 12V3.5h, 12V4.0Ah, 12V4.5Ah, 12V5.0Ah, 12V5.2Ah, 12V5.5Ah, 12V6.0Ah, 12V6.5Ah, 12V7.0Ah, 12V7.2h, 12V7.5Ah, 12V8.0Ah, 12V8.5Ah, 12V9.0Ah, 12V10Ah, 12V12Ah, 12V13Ah, 12V14Ah, 12V15h, 12V17Ah, 12V18Ah, 12V20Ah, 12V22Ah, 12V24Ah, 12V26Ah, 12V28Ah, 12V30Ah, 12V33h, 12V35Ah, 12V38Ah, 12V40Ah, 12V42Ah, 12V45Ah, 12V50Ah, 12V55Ah, 12V60Ah, 12V65h, 12V70Ah, 12V75Ah, 12V80Ah, 12V85Ah, 12V90Ah, 12V95Ah, 12V100Ah, 12V110Ah, 12V120h, 12V130Ah, 12V145Ah, 12V150Ah, 12V160Ah, 12V170Ah, 12V180Ah, 12V200Ah, 12V220Ah, 12V250h, 12V260Ah, 2V50Ah, 2V100Ah, 2V150Ah, 2V200Ah, 2V250Ah, 2V300Ah, 2V350Ah, 2V400Ah, 2V450Ah, 2V500Ah, 2V600Ah, 2V650Ah, 2V800Ah, 2V900Ah, 2V1000Ah, 2V1500Ah, 2V1800Ah, 2V2000Ah, 2V2500Ah, 2V3000Ah

Emergency Telephone: /

Section 2 – Composition/Information on Ingredient

Chemical Name		Specific gravity	CAS No.
Plate	Lead dioxide	58%~70%	1309-60-0
	Lead		7439-92-1
AGM		1.5%~3%	65997-17-3
Electrolyte (dilute sulphuric acid)		20%~30%	7664-93-9
Battery container (ABS plastic)		5%~10%	9003-56-9
Epoxide-resin glue		0.3%~0.8%	---
Red marking glue		0.01%~0.05%	---
Black marking glue		0.01%~0.05%	---
Terminal	Copper	0%~0.15%	7440-50-8
	Silver		7440-22-4
Safety valve (EPDM)		0.01%~0.12%	25038-36-2
Electrolysis lead 1#		surplus	7439-92-1

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Section 3 - Hazards Identification

Invasive ways: inhalation

Health harm: The chemical substances of the battery can cause irritation of the skin and eyes.

Exposure to the electrolyte contained inside the battery may result in corrosion or chemical burns.

Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs. Lead dioxide may lead to damage of unborn babies, and weaken the reproductive ability.

No hazards occur during the normal operation of a Lead Acid Battery as it is described in the instructions for use that are provided with the Battery. Lead Acid Batteries have three significant characteristics:

1. They contain an electrolyte which contains diluted sulphuric acid. Sulphuric acid may cause severe chemical burns.
2. During the charging process or during operation, they might develop hydrogen gas and oxygen, which under certain circumstances may result in an explosive mixture.
3. They can contain a considerable amount of energy, which may be a source of high electrical current and a severe electrical shock in the event of a short circuit.

The Batteries have to be marked with the symbols listed under section 15.

Environment hazard: Batteries no matter in the atmosphere or buried in deep underground, the heavy metals will overflow with the exudate, may cause the pollution of groundwater bodies, soil, serious harm to human health.

Burning explosion harm: Inflammable and explosive

Section 4 - First Aid Measures

Skin: If electrolyte leakage occurs and makes contact with skin, immediately remove contaminated clothing, scrub with a dry cloth first, then wash with plenty of water, wash with 3%-5% NaHCO₃ solution finally. Get medical aid.

Eyes: Immediately flush eyes with plenty of water. Occasionally lifting the upper and lower eyelids. Get medical.

Inhalation: Immediately move to fresh air, maintain the airway smooth. Difficulty in breathing, give oxygen. If breathing stops, artificial respiration should begin immediately. Get medical aid.

Intake: Ingestion: The product will not be human intake.



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Section 5 – Fire and Explosion Hazard Data

Flash Point (°C): N/A

Fire disaster/Explosion risk: Generally, security, no fire and no explosion. While, severe impact and high fever may cause explode.

Extinguishing agent: Carbon dioxide, dry chemical or foam extinguishers.

Fire extinguishing methods: 1. Fire personnel are required to wear self-contained breathing apparatus to avoid breathing irritant fumes. Wear protective clothing and equipment to prevent body contact with electrolyte solution. 2. Rapid evacuation of emergency personnel to leave the fire, quickly cut off the fire source. 3. To mist cooling the tanks or containers exposed to fire. 4. If the spill has not ignited, water spray mist to spread the steam and to protect personnel attempting to stop the leak. 5. Large area of the large fire, use water spray control of unmanned aircraft operated or automatic swinging fire hose.

Fire-fight notes : 1. Move containers as far as possible from the fire scene to department. 2. In imposing the upper hand to avoid the risk of steam and toxic decomposition products. 3. Tank safety valve has been sounded, or discoloration due to fire and immediately evacuated.

Section 6 - Accidental Release Measures

The information is of relevance only if the battery is broken and the ingredients are released.

Clean-up methods: 1. Isolate leakage pollution area, access restricted. 2. Recommend emergency personnel to wear self positive pressure respirator and acid-base proofing overalls. 3. Do not contact with the leakage directly, if the chemical substances leaked outside of battery, try neutralizing exposed battery parts with soda ash or sodium bicarbonate until fizzing stops, and using sand or bonding agent to absorb split acid. 4. Collect residue in a suitable container and place the broken battery in a heavy-duty plastic bag or other non-metallic container.

Note: 1. Leakage region ventilation. 2. Fight or remove all ignition sources. 3. To prevent leakage of material into the sewer or confined space. 4. Notify the government health and safety and environmental protection-related units.

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Section 7 - Handling and Storage

Handling Precautions: 1. With closed operation, provide a good natural ventilation. The operator must go through specialized training, strict compliance with operating rules. 2. Keep away from heat, ignition sources and no smoking. Use non-sparking ventilation explosion-proof type equipment. 3. Do not crush, short (+) and (-) battery terminals with conductive (i.e. metal) goods. 4. Do not directly heat or solder. Do not throw into fire or the place where may be submerged by water. 5. Do not be installed in sealed equipments. 6. Make sure than the connection between batteries is correct. 7. Do not use the battery in places where are full of dust (it should be regular checked when used in dusty environment). 8. Use tools which are with insulating bush when handling. 9. Do not clean the battery with diluent, gasoline, kerosene or composite liquid. 10. Slow handling when disassembly. 11. Do not cover the battery with materials which can produce static electricity. 12. Battery do not be thrown away, put in as much as possible separated from other garbage. 13. Pay special attention to be not smash foot.

Storage Precautions: 1. Stored in a cool, dry, well-ventilated place, keep batteries in non-conductive (i.e. plastic) trays. Storage areas should be clearly marked "no obstacles." 2. Away from combustibles areas. Away from heat, ignition sources. Avoid overheating and supercooling. Avoid contacting with metal containers directly, adopt acid proofing and flame resistant materials. 3. Near the storage areas have adequate fire extinguishers and spill clean-up equipment. 4. Avoid storing large quantities of indoor, as much as possible stored in the isolation of the fire building. 5. Small parts, avoid contact with children, to avoid being swallowed children.

Section 8 - Exposure Controls, Personal Protection

Engineering controls: Keep good conditions for natural ventilation.

Personal Protective Equipment:

During installation, normal conditions of use or in the event of battery breakage, no exposure to lead and lead containing battery paste. Exposure to sulphuric acid and acid mist might occur during charge.

Respiratory protection: Not necessary under normal use. In case of battery rupture, use self-contained full-face respiratory equipment, equipment with type ABEK filter.

Eye protection: Processing of this product releases vapors or fumes which may cause eye irritation.

Where eye contact may be likely wear chemical goggles and have eye flushing equipment available.

Hand protection: Use insulated rubber gloves

Body protection: Wear acid resistant apron or clothes

Other protection: In the workplace non-smoking or eating. Use standard lead-acid battery practices. Do not wear metallic jewelry when working with batteries. Use non-conductive tools only. Discharge static electricity prior to working on a battery. Maintain fire extinguisher and emergency communication device in the work area. After work, take a bath. Separate storage of contaminated clothing, washed standby. Pay attention to personal hygiene.

Hygiene measures: Follow correct safety rules, do not reuse the container that repair or without trade processed. Refer to the MSDS measures, even an empty container handling.

Section 9 - Physical and Chemical Properties

Physical State: solid

Color: black

Odor: Odorless

Mechanical resistance: N/A

Section 10 - Stability and Reactivity

Stability: Stable under normal use, hazardous reactions occurring under specific conditions, such as overheating and overcharging.

Avoid material: Conductive materials, water, seawater, strong oxidizers, strong acids, strong alkaline materials, organic solvents

Avoid contact with conditions: When a battery cell is exposed to an external short-circuit, crushes, modification, high temperature above 100 °C, it will be the cause of heat generation and ignition. Direct sunlight and high humidity.

Hazardous decomposition products: Once batteries are breakage, split sulphuric acid should be careful which is corrosive, nonflammable liquid (thermal decomposition at 338°C) and destroys organic materials such as cardboard, wood, textiles and reacts with metals, producing hydrogen. Acid or harmful gas is emitted during fire.

Report No.: DGC160223010GE**Section 11 - Toxicological Information**

Carcinogenicity: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a category 1 carcinogen (inhalation), a substance that is carcinogenic to humans. This classification does not apply to the liquid forms of sulfuric acid contained within the battery. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist at high levels.

Section 12 - Ecological Information

This information is of relevance if the battery is broken and the ingredients are released to environment. In order to avoid damage to the sewage system, the acid has to be neutralized by means of time or sodium carbonate before disposal. Ecological damage is possible by change of pH. The electrolyte solution reacts with water and organic substances, causing damage to flora and fauna. The electrolyte may also contain soluble components of lead that can be toxic to aquatic environments. Leaking metals will easily penetrate the soil, polluting groundwater, and then into the fish life, crops, the destruction of the human living environment, an indirect threat to human health. More importantly, the contaminated soil will be permanently lose its use value.

The waste batteries contain heavy metals can not be biodegradable and can accumulate in vivo.

Section 13 - Disposal Considerations

The nature of waste: Hazardous waste

Waste disposal methods: Dispose of batteries according to government regulations. Recommend sent to a special recycling bins of used batteries.

Notes waste: Do not waste batteries and garbage mixed together, to be dealt with separately.

Section 14 - Transport Information

In the case of transportation, confirm no leakage and no overspill form a container. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handle carefully. Do not give shocks that result in a mark of hitting on a cell.

Section 15 - Regulatory Information

In accordance with EU Battery Directive and the respective national legislation, Lead Acid batteries have to be marked by a crossed out dust bin with the chemical symbol for lead shown below, together with the ISO return/recycling symbol.

Section 16 - Additional Information

References: N/A

The data in this Material Safety Data Sheet relates only to the specific material designated herein.

Photograph of Sample



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