

Shield Batteries COSHH INFORMATION

LEAD ACID BATTERIES

THIS IS IMPORTANT HEALTH & SAFETY INFORMATION REQUIRED BY LAW. PLEASE DIRECT TO THE PERSON RESPONSIBLE FOR HEALTH & SAFETY

To The Person Responsible For Health & Safety. In accordance with the requirement of the Consumer Protection Act 1987 and the Health & Safety At Work Act 1974, we enclose data sheets containing health & safety information relating to Shield Batteries.

We have drawn up the data sheets with a view to making available information on the storage, handling and the use of our products and would welcome your co-operation in distributing this information within your organisation to those of your staff who are concerned with it.

The batteries supplied by us have been subject, so far as it is reasonably practicable, to the test, examinations and necessary research as required by Section 6 of the Health & Safety At Work Act 1974 and we are satisfied that they are safe and without risk to health when used properly. However, it is imperative that all persons who test, charge, fit or handle lead acid batteries are aware of the dangers which can exist if the tasks are carried out incorrectly. The stored electrical energy is significant, the units are heavy and the constituent parts are both corrosive and hazardous.

It is imperative that the manufacturers instructions should be read carefully and complied with. If there is any doubt about any aspects relating to the proper use of our products, we will be only too pleased to advise you on any precautions that may be necessary.

PRODUCT SAFETY DATA

PRODUCT

Lead Acid electric storage batteries filled with dilute sulphuric acid.

TECHNICAL NAME

Lead Acid Accumulator.

COMPONENTS IN A LEAD ACID BATTERY

Lead
Lead Dioxide
Lead Sulphate
Sulphuric Acid (of a maximum strength of 40%)

HAZARD CLASSIFICATION

Corrosive Group 8

U.N. NUMBER

2794

PACKING GROUP

3

<http://www.shieldbatteries.co.uk>

TYPE OF CONTAINER

Polypropylene

INTERNATIONAL AIR TRANSPORT ASSOCIATION CLASSIFICATION

Not classified for transport by air

NATURE OF SUBSTANCES WITHIN THE BATTERY

Corrosive
Stored electrical energy
Toxic compounds
Explosive gas mixture involved during charging

WARNING

Hydrogen and oxygen gases are emitted from a battery when being charged and at other times particularly if it is moved or shaken. These gases contain droplets of corrosive electrolyte.

PROTECTIVE MEASURES

Keep away from children
Keep away from sources of ignition, no naked flames
No smoking
Keep and charge in a well ventilated area
Wear protective clothing
Do not allow electrolyte to come into contact with skin or eyes
Do not ingest

ELECTROLYTE (BATTERY ACID)

The electrolyte in the battery is a mixture of sulphuric acid and water to concentrations of 40% sulphuric acid.

CORROSION

Attacks many metals with liberation of hydrogen gas which is highly flammable and forms explosive mixtures with air
Attacks clothing
Reacts with many chemicals with varying degrees of violence
Avoid contact with sulphide waste or arsenic

FLASH POINT

Non-flammable, however hydrogen gas may be evolved.

BOILING POINT

110 Degrees Celsius

HEALTH RISKS ASSOCIATED WITH ELECTROLYTE

GENERAL

Corrosive and irritant. Inhalation and skin absorption are primary.

INHALATION

The vapour can irritate all parts of the respiratory system.

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HEALTH RISKS ASSOCIATED WITH ELECTROLYTE (cont..)

SKIN CONTACT

Prolonged contact will result in tissue damage

EYE CONTACT

Burns the eyes severely. Permanent damage may occur if urgent medical aid is not sought

INGESTION

Will cause severe internal irritation and damage

* See Emergency First Aid Advice

SPILLAGE OF ELECTROLYTE

Wear protective clothing. A rubber or PVC apron with bib, rubber or PVC gloves and a face visor. Neutralise with alkali (soda ash, sodium carbonate, sodium bicarbonate) washed down with water and scrubbed with a hard broom.

ALL SPILLAGES MUST BE CONTAINED DO NOT ALLOW TO ENTER MAIN DRAINAGE

If electrolyte has entered a water course or sewer or contaminated soil or vegetation, your local Environmental Agency Office should be advised.

EMERGENCY FIRST AID

INHALATION

Remove from exposure, rest and keep warm. Obtain medical attention immediately.

EYE CONTACT

Wash out with plenty of water for at least 15 minutes. Obtain URGENT medical attention.

SKIN CONTACT

Remove contaminated clothing immediately and wash affected skin with plenty of water. Obtain medical attention.

INGESTION

If the electrolyte has been confined to the mouth give large quantities of water as a mouth wash ensuring that it is NOT swallowed
If electrolyte has been swallowed, give water to drink immediately. to drink immediately.

DO NOT INDUCE VOMITING - OBTAIN URGENT MEDICAL ATTENTION

BURNS

Apply sterile bandage. Obtain medical attention.

LEAD AND LEAD COMPOUNDS

Lead and lead compounds are classified as being potentially toxic

The lead and lead compounds are well contained within the battery and the possibility of lead exposure is negligible. However the battery cells should not be dismantled under any circumstances

Small amounts of arsenic and antimony are present in certain types of battery, and during the charging process there is a chance that stibine and arsenic may be given off as gases.

The concentration of these gases are negligible and do not present any risk to health.

Guidance notes are available from the Health & Safety Executive on Stibine and Arsenic. (E.H. 11 and E.H. 12)

HANDLING AND STORAGE

Batteries are generally heavy and awkward to handle. Care should be taken and correct lifting techniques employed.

Keep the battery upright at all times

Always wear protective clothing when handling batteries, rubber or PVC apron, rubber or PVC gloves and eye protection. This is particularly important during fitting and charging operations.

Use only distilled water for topping up cells, other substances may cause a dangerous reaction in the cells. Top up to the recommended level - do not over fill. Follow manufacturers instructions.

Ensure batteries are maintained in dry, clean conditions, to avoid the possibility of corrosion and short circuits developing.

No attempt should be made to repair a battery. This work involves a number of hazards and should be carried out by suitably trained persons in accordance with manufacturer's instructions.

All labelling and manufacturer's instructions must be read carefully and complied with.

The electrolyte is dilute sulphuric acid which is both poisonous and corrosive. It must not be allowed to come into contact with eyes, skin or clothing.

Members of the public must never remove electrolyte from a battery. This should only be carried out in a controlled environment by persons trained to perform that operation.

DISTRIBUTORS

If acid of the recommended specific gravity is not available for the internal filling, the maximum concentration dilution with water should not exceed a specific gravity of 1.400 when measured at 16 degrees Celcius or 60 degrees Fahrenheit.

The use of a higher concentration of acid is highly dangerous and should only take place under the supervision of a qualified chemist.

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FIRE PRECAUTIONS

The internal ohmic resistance of a lead acid battery is very low and a high current will flow if the terminals are short circuited. Sparks and molten metal may be ejected. It is therefore essential to avoid metal objects touching across the terminals.

Before working on or near a battery, remove any metallic items from hands, wrist and neck, together with any such items that may fall from pockets.

Always use insulated tools. Spanners should be of the single ended type.

Do not place tools or other conductive objects on the top of batteries. Switch off all chargers before connection/disconnections are made to batteries.

Charge off the vehicle in a well ventilated area. Hydrogen and oxygen gases are emitted from a battery when it is being charged and also at other times, particularly if it is moved or shaken.

These gases contain droplets of corrosive electrolyte.

A hydrogen/air mixture can produce a violent explosion if ignited, and it must be assumed that this mixture is present in the immediate vicinity at the top of the battery at all times.

The boxes and lid are made from several types of plastic components, which in normal conditions present no hazard. However, in the case of fire the plastic could decompose and may give off toxic vapours. Suitable respiratory protection should be worn during fire fighting.

The following precautions therefore must always be taken:-

1. Charging and storage must be carried out in well ventilated areas.
2. No smoking or naked flames should be permitted in the charging area or elsewhere during installations, inspections on or near the battery.

TO EXTINGUISH FIRE USE CO2 OR SMOTHER WITH DRY POWDER.

CARRIAGE BY ROAD

Acid filled batteries are subject to the Road Traffic (Carriage of Dangerous Substances in Packages) Regulations.

MARKING OF VEHICLES

The corrosive hazard diamond label must be displayed at the front and rear of all vehicles.

DISPOSAL OF USED PRODUCTS

Batteries, battery acid and lead compounds must be disposed of in accordance with current Environmental Legislation.

Scrap batteries are classified as Special waste, and their movement is controlled under cover of the Environmental Agencies EB consignment note.

For advice regarding the disposal of scrap batteries, consult your local Environmental Agency Office.

REFERENCES

SAFE OPERATION OF STARTER BATTERIES BS.6604 ELECTRIC STORAGE BATTERIES (Safe Charging And Use) (Available from H.S.E free of charge)

WE INVITE YOU TO PHOTOCOPY THIS INFORMATION AND PASS IT ON TO YOUR CUSTOMERS AND STAFF.

This information has been supplied by Shield Batteries.

<http://www.shieldbatteries.co.uk>