COSHH INFORMATION and PRODUCT SAFETY DATA

PRODUCT
Lead acid electric storage batteries filled with dilute sulphuric acid

TECHNICAL NAME
Lead Acid Accumulator

COMPONENTS
Lead
Lead Dioxide
Lead Sulphate
Sulphuric Acid (Max strength of 40%)

HAZARDOUS CLASSIFICATION
Corrosive Group 8

U.N. NUMBER
2794

PACKING GROUP
3

CONTAINER TYPE
Polypropylene

I.A.T.A - AIR TRANSPORT CLASSIFICATION
Not classified for transport by air unless specified on individual products

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 during charge and at other times, such as when the battery is moved, shaken or subject to vibration. These gases contain small droplets of corrosive electrolyte.

PROTECTIVE MEASURES
Keep away from children
Keep away from sources of ignition such as Naked Flames, Cigarettes and machinery that may cause sparks
Keep and charge in a well ventilated area
Wear protective clothing
Do not ingest or allow electrolyte to come into contact with skin or eyes

ELECTROLYTE

The electrolyte contained within the battery is a mixture of sulphuric acid and water (up to 40% sulphuric acid)

CORROSION
Attacks many metals with liberation of hydrogen gas which is highly flammable and has the potential to form 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 form.

BOILING POINT
110 Degrees Centigrade / 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.

CONTACT WITH EYES
Burns the eyes severely. Permanent damage will occur if urgent medical aid is not sought.

SKIN CONTACT
Prolonged contact will cause tissue damage.

INGESTION
Will cause severe irritation and damage.

SPILLAGE OF ELECTROLYTE

Wear protective clothing such as a rubber or PVC apron with bib, rubber or PVC gloves and face visor.

Neutralize all 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 SYSTEM

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

EMERGENCY FIRST AID

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

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

SKIN CONTACT
Remove contaminated clothing immediately and rinse affected skin with water for at least 15 minutes. Obtain URGENT medical attention.

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

If electrolyte has been swallowed give water to drink immediately and DO NOT induce vomiting. Seek URGENT medical attention.

BURNS
Apply a sterile bandage. Obtain medical attention.

LEAD & LEAD COMPOUND BURNS

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 is negligible and does not present any risk to health.

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

HANDLING AND STORAGE

Batteries are generally heavy and often 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 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 attempts 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 instruction 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 / non-trained persons must never remove electrolyte from a battery. This should only be carried out in a controlled environment by persons trained in that operation.

DISTRIBUTORS

If acid of 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 centigrade / 60 degrees farenheit. The use of a higher concentration of acid is highly dangerous and should only take place under the supervision of a qualified chemist.

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 any other conductive objects on 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, shaken or subject to vibration. 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 must always be taken :-

Charging and storage must be carried out in well ventilated areas.

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
DO NOT USE WATER OR FOAM AS THESE MAY CAUSE ELECTRIC SHOCK

AGM AND GEL BATTERIES

PRODUCT
A.G.M. Batteries (Absorbed Glass Mat)
Lead acid electrical storage batteries with immobilized dilute sulphuric acid absorbed into the plates. Batteries are totally sealed with no danger of leakage.

PRODUCT
GEL Batteries (Gel filled batteries)
Lead acid electrical storage batteries with the electrolyte immobilized in a silica gel.
Batteries are totally sealed with no danger of leakage.

TYPE OF CONTAINER
Polypropylene

TECHNICAL NAME
Lead Acid Accumulator

COMPONENTS
Lead
Lead Dioxide
Immobilized Sulphuric Acid (Max strength of 40%)

HAZARDOUS CLASSIFICATION
Batteries : Immobilized electrolyte

UN Number
2800

CLASS
8

I.A.T.A. TRANSPORT ASSOCIATION CLASSIFICATION
These batteries are unregulated for air transport because they meet the requirements of : Special Provision "A 67" as promulgated by the International Civil Aviation Association (I.A.T.A. and I.C.A.O). They also meet the Vibration and Pressure Differential Tests of the International Maritime Dangerous Goods (I.M.D.G.) regulations.

TRANSPORT DETAILS FOR AGM AND GEL BATTERIES

PRODUCT
A.G.M. Batteries (Absorbed Glass Mat)
Lead acid electrical storage batteries with immobilized dilute sulphuric acid absorbed into the plates. Batteries are totally sealed with no danger of leakage.

PRODUCT
GEL Batteries (Gel filled batteries)
Lead acid electrical storage batteries with the electrolyte immobilized in a silica gel.
Batteries are totally sealed with no danger of leakage.

TYPE OF CONTAINER
Polypropylene "Non spillable"

TECHNICAL NAME
Lead Acid Accumulator

COMPONENTS
Lead
Lead Dioxide
Immobilized Sulphuric Acid (Max strength of 40%)

HAZARDOUS CLASSIFICATION
Batteries : Immobilized electrolyte. UN Number 2800, Class 8. Unregulated by DOT for transportation by Road, Rail, Sea and Air, because they meet the requirements of 49 CFR 173.159(d). The only transportation requirements are : (1) The batteries must be securely packed in such a way as to prevent the possibility of short circuiting. (2) The battery and outer packaging must be labelled "Non spillable Battery"

I.A.T.A. TRANSPORT ASSOCIATION CLASSIFICATION
These batteries are unregulated for air transport because they meet the requirements of : Special Provision "A 67" as promulgated by the International Civil Aviation Association (I.A.T.A. and I.C.A.O). They also meet the Vibration and Pressure Differential Tests of the International Maritime Dangerous Goods (I.M.D.G.) regulations.

TRANSPORT DETAILS FOR WET FLOODED BATTERIES

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Lead acid electric storage batteries filled with dilute sulphuric acid

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Sulphuric Acid (Max strength of 40%)

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