



Midac spa – Via Alessandro Volta, 2 - 37038 Soave (VR) – Tel. 045.61.32.132 – Fax 045.61.32.133

# **MATERIAL SAFETY DATA SHEET**

## **Lead-acid batteries**

Conforming to the 28/01/1992 Legislative Decree and successive amendments  
18/12/2006 Regulation EEC/EU n° 1907

---

Revision 03 – March 2009



Midac spa – Via Alessandro Volta, 2 - 37038 Soave (VR) – Tel. 045.61.32.132 – Fax 045.61.32.133

## 1. PRODUCT IDENTIFICATION AND MANUFACTURER

Identification of the substance or preparation: Lead-acid battery

Use of the substance or preparation: Starter batteries for cars and vehicles

Company: Midac spa  
Via Alessandro Volta, 2 – 37038 Soave (VR)  
Telephone 045.61.32.132 Fax 045.61.32.133

E-mail address of the competent person responsible for the safety data sheet:  
[bovo@midacbatteries.com](mailto:bovo@midacbatteries.com)

Emergency telephone: Bologna - Poison Center, Ospedale Maggiore  
051-6478955, 24 hours

## 2. SAFETY WARNINGS AND HAZARDS

**Using correctly intact battery: do not exist special hazards to humans and the environment.**

### **Danger of Explosion:**

An explosive mixture of oxyhydrogen gas occurs when charging batteries. Therefore do not smoke, do not use naked flames or fires, and do not cause sparks in the immediate vicinity of the battery. Avoid short-circuits in the battery terminals. Always use anti-static materials when cleaning. Do not store the battery in sealed containers; always store in a cool and well-ventilated area away from direct sunlight and heat sources.

### **Corrosive Hazard:**

Lead-acid batteries contain sulphuric acid diluted in a water solution which is corrosive and harmful to skin and eyes. Specific gravity 1.22-1.30 kg/l.

### **Health Hazard:**

There are no hazards to health if the battery is used and handled in the correct way. The battery however contains lead compounds which are harmful if swallowed or inhaled.

## 3. COMPOSITION - INFORMATION ON INGREDIENTS

Component	% in weight	CAS n.	EEC n.	Symbols	R-Phrases
Lead metal and compounds	60-70	7439-92-1			
Sulphuric acid solution	20-30	7664-93-9	16-020-00-8	C	R35 S2; S26; S30
Thermoplastic polymers	6-9				

#### 4. FIRST AID MEASURES

First aid concerns above all exposure to the sulphuric acid solution (electrolyte) as all the other battery components are solid and are not considered hazardous if the battery is used and handled properly.

**a) Inhalation:**

Probability of exposure by inhalation is low, however in the event this should occur move the injured person away from the contaminated area to fresh air. If the injured person has respiratory problems, seek medical advice immediately.

**b) Skin contact:**

If the acid comes into contact with skin thoroughly wash the contaminated area with plenty of clear water. Remove all contaminated clothing. If skin irritation persists, seek medical advice immediately.

**c) Eye contact:**

If acid comes into contact with eyes thoroughly wash eyes with plenty of clear water. Keep eyes open when rinsing. Seek medical advice immediately.

**d) Swallowing:**

Rinse mouth with plenty of clear water and drink water immediately. Do not induce vomiting. Seek medical advice immediately.

- Specific first aid facilities and equipment to be made available: bottles for eye washing or emergency eye washing fountains; showers .

#### 5. FIRE-FIGHTING SAFETY MEASURES

Lead-acid batteries are not highly combustible, the only hazard of combustion are the thermoplastic polymers which are a 6-9% of battery weight.

Always wear suitable breathing apparatus when extinguishing a fire.

**a) Suitable fire extinguishers:**

Dry powder, foam and CO<sub>2</sub>.

**b) Incorrect fire extinguishers:**

Do not use water extinguishers as water causes an exothermic reaction (heat release) when it comes into contact with acid.

#### 6. MEASURES IN CASE OF ACCIDENTAL RELEASE

**a) Personal precautions:**

In case of battery acid spillage always wear suitable PPE (personal protective equipment) to avoid the electrolyte coming into contact with skin and eyes such as rubber gloves, rubber boots protective anti-acid safety glasses and overalls.

**b) Environmental protective measures:**

Always keep electrolyte or lead dust away from sewers, water drains and water sources.

**c) Methods for cleaning up:**

Neutralise with sodium or calcium carbonate.

To contain spillage use sand, earth or other similar absorbing material.



Midac spa – Via Alessandro Volta, 2 - 37038 Soave (VR) – Tel. 045.61.32.132 – Fax 045.61.32.133

Do not use rags or sawdust.

Do not use water (although the sulphuric acid is diluted in a water solution when it comes into contact with water it may have an exothermic (heat release) reaction).

## 7. HANDLING AND STORAGE

Keep batteries away from heat sources, sparks or naked flames.

Do not store batteries in sealed containers; store in a cool and well-ventilated area away from direct sunlight and heat sources.

## 8. PERSONAL PROTECTION / EXPOSURE CONTROL

Except for safety shoes, all other PPE (personal protective equipment) are for protection against exposure to electrolyte as other battery components are solid and are not considered hazardous (unless lead compounds are voluntary or accidentally swallowed).

Recommended PPE (personal protective equipment):

anti-acid rubber gloves (resistant to sulphuric acid); safety glasses (mask or visor); anti-acid overalls; rubber boots.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state of the product : solid with a prismatic shape

Electrolyte: Sulphuric acid in a water solution.  
Corrosive  
Specific gravity 1.22-1.30 kg/l.  
Odourless .  
Non-flammable.

## 10. STABILITY AND REACTIVITY

This product is normally stable and non-reactive.

The amount of hydrogen and oxygen gas fumes released into the surroundings can be neglected.

However, always avoid naked flames or sparks in vicinity of the battery.

## 11. TOXICOLOGICAL INFORMATION

Not applicable.

## 12. ENVIRONMENTAL INFORMATION

The electrolyte solution reacts with water and organic substances causing damage to flora and fauna. Batteries also contain soluble lead compounds which can be toxic for the aquatic environment.



### 13. WASTE MANAGEMENT

Used lead-acid batteries are classified as “hazardous waste products” and by law it is obligatory to dispose of them through authorised waste management centres for recycling. It is strictly forbidden to dispose of used batteries in the environment such as landfills, lakes or other unauthorised locations.

For further information and for contact details of your local waste management centre contact:

COBAT – Authorised centre for managing lead-acid batteries and lead waste products.  
via Toscana 1 - 00187 ROMA

### 14. TRANSPORT

#### By land (ADR/RID - road/railway):

Proper Shipping Name	BATTERIES, WET, FILLED WITH ACID electric storage
UN No.	2794
Classification ADR/RID:	80
Hazard class	8
Packaging group	III

#### By sea (IMDG):

Proper Shipping Name	UN2794 – BATTERIES, WET, FILLED WITH ACID electric storage
IMDG UN No.	2794
IMDG Hazard class	8
IMDG Emergency Medical Schedules - EmS	F-A, S-B
IMDG Packaging group	III

#### By air (ICAO/IATA):

Proper Shipping Name	UN2794 – BATTERIES, WET, FILLED WITH ACID electric storage
ICAO/IATA UN No.	2794
ICAO/IATA Hazard class	8
ICAO/IATA Packaging group	III

## 15. REGULATORY INFORMATION

### Classification and labelling

Risk phrases (are purely indicative as they **are not applicable to this product**, but only to a part which is the electrolyte):

R35 causes severe burns

S-phrases (safety phrases):

S2 keep out of reach of children

S16 keep away from sources of ignition – No smoking.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S30 Never add water to this product

Where applicable, to make reference to normative following:

- L. 136/83;
- D. Lgs. 334/1999;
- D.P.R. 250/89;
- D.P.R. 303/56;
- D. Lgs. 152/2006;
- D. 2006/121/CE;
- R. CE n. 1907/2006.

## 16. OTHER INFORMATION



The information contained herein is correct to the best of our knowledge at the time of issue.

Such information refers to the specific product described herein and is not to be considered as guarantee of product quality and performance.

The user is however responsible for determining product suitability, accuracy and completeness of the information provided herein for battery applications.