

SAFETY DATA SHEET

JCB POWERMASTER BATTERY



Revision Issue Date: December 2009: Products are in accordance with REACH Regulation (EC) No 1272 / 2008 (GHS)

1. IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: JCB Powermaster - Lead Acid Batteries
Intended Use: Starter Battery

Name and telephone number of company:
JCB LIMITED
LAKESIDE WORKS ROCESTER
UTTOXETER
STAFFORDSHIRE
ST14 5JP
Tel: 01889 590312

Emergency telephone number in Australia (within hours of operation)
1300 522 232 (1300 JCB CEA)
(Mon to Fri 0800 to 1630 Local Time) Communications in English only

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Chemical Lead Acid battery:
Polypropylene case with six elements, each containing lead plates and sulphuric acid, with a specific gravity of 1.280g/cm³

Name	Concentration Range %	Hazardous Symbol	Risk Phrases	CAS Number	EINECS Number
Sulphuric Acid	25-50%	C - Corrosive	R35	7664-93-9	231-639-5

3. HAZARD IDENTIFICATION OF THE PREPARATION

Possible Hazards

Principal Physical Dangers: Causes severe burns.
Eye Contact: Eye Burns
Skin Contact: Skin Burns
Inhalation: Irritation to respiratory systems
Swallowing: Digestive tract burns
Environment: C Corrosive

Contact with some metals may produce flammable hydrogen gas.

4. FIRST AID MEASURES

Never give fluids or induce vomiting, if patient is unconscious or is having convulsions.

Inhalation: Remove to fresh air. Wash out mouth and nose with water. If breathing has stopped, apply artificial respiration (NOT MOUTH TO MOUTH) by qualified personnel. If conscious, give water. Call a physician or transport to a medical facility.

Eye Contact: SPEED IS ESSENTIAL, Flush eyes immediately with water for at least 15 minutes and seek urgent medical advice.

Skin Contact: Immediately remove contaminated clothing and wash affected areas with plenty of water. Seek urgent medical attention.

Ingestion: If conscious, wash out mouth with water, and give plenty of water to drink. Call a physician and transport to emergency facility immediately. Do not induce vomiting.

Note to Physician: The patient should be kept under medical review for at least 48 hours, as delayed pulmonary oedema can develop.

5. FIRE FIGHTING MEASURES

General Hazards: Toxic oxides of sulphur liberated on thermal decomposition e.g. sulphur trioxide. Contact with metals may form explosive hydrogen gas.

Extinguishing Media: Non-flammable liquid. Use dry powder or CO₂ for small fires. Flood fire with water from a distance. Keep containers cool by spraying with water. Care should be taken not to splatter or splash this material.

Extinguishing Media Not To Be Used: Do not put a solid stream of water onto spilled material, as this will cause a violent reaction. Do not absorb with sawdust.

Fire Fighting Protective Equipment: Wear protective, pressure self-contained breathing apparatus and protective fire-fighting clothing (including fire-fighting helmet, coat, trousers, boots and gloves).

6. ACCIDENTAL RELEASE MEASURES

General Hazards: Exclude sources of ignition and ventilate area. Avoid breathing vapours. Refer to protective measures listed in Sections 7 & 8.

Personal Precautions: Evacuate area. Only trained and properly protected personnel should be involved in cleanup operations. Avoid contact with skin and eyes. Wear suitable gloves, plastic apron and boots. Wear goggles and/or face shield. Wear suitable overalls. Eyewash bottles should be on hand.

Environmental Precautions: Contain liquid to prevent contamination of soil, surface water or ground water.

Methods for cleaning up: Small spills, neutralise with soda ash, earth or sand. Place into plastic containers for safe disposal. Dispose of according to applicable regulation, see Section 13. Large spills: Secure and block drains. Alert local authorities. Once cleaned the surface may be flushed. Treat as for small spills.

7. HANDLING & STORAGE

Handling: Proper safe handling procedures must be instituted for handling this product, particularly for unloading bulk supplies. Emergency showers, hoses and eyewash should be available. Avoid inhalation of mists and ensure adequate ventilation to meet the LTEL. Product exposed to the atmosphere will absorb moisture. Wear PVC or rubber gloves, goggles and protective clothing. Always wash protective equipment after use. When diluting, prepare solutions slowly. Always add ACID TO WATER, never water to acid and stir. The battery should not be tilted at an angle of more than 45° for long periods. If the battery is dropped it should be scrapped immediately.

Precautions: Do not smoke. Do not place near open flames or sparks.
Never place a metal object (tool, lamp) on top of the battery.
Never stack more than two pallets at a time.

Recommendations for Use: Recharging should be done in a well ventilated area, which should include exterior fans to extract gases.

Storage: Keep in a cool, dry, well-ventilated place away from flammable materials, metals, nitrates, chlorates and carbides. Minimum storage temperature: 0°C, Maximum storage temperature: 52°C.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: The UK Health and Safety Executive have established a Long Term Exposure Limit (LTEL) of 1mg.m³, 8 hour TWA.

Occupational Exposure Controls: Control airborne concentration below the exposure guidelines. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Environmental Exposure Controls: Products to be stored in banded areas or self-banded (double-skinned tanks). Local drains are to be isolated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Personal Protective Equipment

Respiratory: In case of mist exceeding LTEL, use suitable respiratory protection.

Hand/Skin Protection: PVC or rubber gloves, boots and aprons.

Eye Protection: Use full face shield and goggles, giving complete protection to eyes.

Physical Form:	Liquid Sulphuric Acid
Appearance:	Colourless Liquid
Odour:	Odourless
p.H	<1
Boiling Point:	112°C
Boiling Ranges:	
Flash Point:	None
Flammability:	Not Flammable
Explosive Limits:	
Oxidising Properties:	
Solubility (Water):	Completely Miscible
Solubility (Oil):	May react and cause fire
Partition Coefficient n-octanol/water:	
Vapour Density (Air=1):	
Auto Ignition Temperature:	
Evaporation Rate (n-butyl acetate=1):	

Density at 20°C	% H ₂ SO ₄ W/W	Viscosity at 20°C	Vapour Pressure mm, Hg at 25°C	Freezing Point (°C)
1.180	25			-20
1.205	28	2.01	8.7	-27
1.230	31			-38
1.240	33			-47
1.250	34			-52
1.260	35			-58
1.270	36			-60
1.280	37			-61
1.300	40	2.70	13.8	-64
1.400	50	3.79	8.5	-36

10. STABILITY AND REACTIVITY

Stability: Over 338°C formation of SO₃ and H₂ (hydrogen)

Conditions to Avoid: Stable under normal conditions.

Material to Avoid: Avoid contact with metals, nitrates, chlorates, carbides, organic materials, cyanides, sulphides, and bases. Water may cause spattering of hot acid. Can ignite upon contact with combustibles.

Hazardous Decomposition Products: Thermal decomposition can liberate sulphur oxides and hydrogen on contact with water.

11. TOXICOLOGICAL INFORMATION

Inhalation: Vapour is severely irritating to the respiratory tract. Fluid build-up in the lungs may occur 48 hours after exposure and may prove fatal.

Ingestion: Corrosive – causes severe burns. Immediate damage to gastro-intestinal tract. Burns to mouth, throat, oesophagus and stomach. Exposure of strong mist in excess of LTEL may increase incidence of cancer in the larynx.

Skin Contact: Corrosive – Causes severe burns.

Eye Contact: Risk of severe damage to eyes. May cause permanent damage or even loss of sight. Mist will cause irritation.

Sensitisation: The substance has not been tested at all for this end point, so its hazardous property in this regard is not known.

Repeated Dose Toxicity: Long-term effects from repeated exposure may cause erosion or discolouration of the teeth.
Mutagenicity: The substance has not been tested at all for this end point, so its hazardous property in this regard is not known.
Carcinogenicity: The substance has not been tested at all for this end point, so its hazardous property in this regard is not known.
Reproductive Toxicity: The substance has not been tested at all for this end point, so its hazardous property in this regard is not known.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Large discharges into watercourses may contribute to the acidification of water and soil and will injure aquatic life and soil micro-organisms. Bluegill sunfish TLM (24hr) 24.5mg/1 (fresh water). Daphnia Magna Lethal (24-72hr) 29mg/1 (soft water). Mosquito fish TLM (96hr) 42mg/1. 50mg/1 is regarded to all aquatic life. A concentration of 58mg/1 will cause 50% inhibition of sewerage organism.

Mobility: Soluble in aqueous systems. May layer out across the bottom surface of a water body. This effect may be more pronounced where there is little potential for natural turbulence.

Bioaccumulation Potential: None.

Persistence and Degradability: Will disperse as ions.

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground or into any body of water. The preferred options are to send to a licensed re-claimer or to permit incinerators.

14. TRANSPORT INFORMATION

	ADR / RID	IMO / IMDG	ICAO / IATA
UN Number	2794	2794	2794
Class	8	8	8
Proper Shipping Name	Lead-Acid Starter Batteries	Lead-Acid Starter Batteries	Lead-Acid Starter Batteries
Packing Group	III	III	III
Marine Pollutant		YES	
Hazardous Chemical Code	2R		
Label	Corrosive	Corrosive IMDG Pg 8230	Corrosive
Passenger			809 – 1 Ltr 813-30 Ltr
Exemption	Disposition 598		
Code Danger	8.0	F-A / S-B	

Other applicable information: Sample shipment not allowed by mail.

The following special provisions in ADR apply to:

295 (applicable to UN2794) – Batteries need not be individually marked and labelled if the pallet bears the appropriate mark and label.

598 (applicable to UN2794) – The following are not subject to the requirements of ADR:

a) New storage batteries when:

- they are secured in such a way that they cannot slip, fall or be damaged.
- they are provided with carrying devices, unless they are suitably stacked, e.g. on pallets.
- there are no dangerous traces of alkalis or acids on the outside.
- they are protected against short circuits.

b) Used storage batteries when:

- their cases are undamaged.
- they are secured in such a way that they cannot leak, slip or fall or be damaged e.g. by stacking on pallets.
- there are no dangerous traces of alkalis or acids on the outside of the articles.
- they are protected against short circuits.

“Used storage batteries”, means storage batteries carried for recycling at the end of their normal service life.

15. REGULATORY INFORMATION

EEC Classification and User Label Information: Classification according to the UK Chemical (Hazard Information and Packaging) Regulations (CHIP) 2002 and REACH Regulation (EC) No 1272 / 2008 (GHS).

Classification: Sulphuric Acid

Hazard Symbol: C – Corrosive

E – Explosive

Xi – Irritant

Xn - Harmful

R Phrases:

R2	Risk of explosion by shock, friction, fire or other sources of ignition
R22	Harmful if swallowed
R35	Causes severe burns
R36/37/38	Irritating to eyes, respiratory system and skin

S Phrases:

S1/2	Keep locked up and out of reach of children
S13	Keep away from food, drink and animal feeding stuffs
S16	Keep away from sources of ignition – No Smoking
S20	When using, do not eat or drink
S24	Avoid contact with skin

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

S27/28 After contact with skin, take off immediately contaminated clothing and wash immediately with plenty of water

S29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point

S30 Never add water to this product

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S40 To clean the floor and all objects contaminated with this material, neutralise with alkali – soda ash, sodium carbonate, sodium bicarbonate and dilute with plenty of water

S45 In case of an accident or you feel unwell, seek medical advice immediately (show the label where possible).



E – Explosive

C- Corrosive

Xi – Irritant

Xn – Harmful

16. OTHER INFORMATION

The advice is given by JCB Ltd, who accepts no legal liability for it, the information contained herein is based on the present state of knowledge and current national legislation. It provides guidance on Health, Safety and environmental aspects of the product and should not be constructed as any guarantee of specific properties, technical performance or suitability for particular applications.