

VRLA Lead-Acid Battery — AGM & GEL

Safety Data Sheet · According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS) · Issue date 2026-06-10 · Version 1.0

SECTION 1 Identification

1.1. Product identifier

Product form	Article
Trade name	VRB, VRLA, SLAB, Recombinant / Sealed Lead Acid — AGM: GP, DC, FT, HR, LC, 2V, Lead-Carbon (LDC), Start-Stop (SSL); GEL: Gel 12V / 2V (DCG) Series

1.2. Other means of identification

Other means of identification	Valve Regulated Sealed Non-Spillable Lead Acid Battery
-------------------------------	--

1.3. Recommended use and restrictions on use

Recommended use	Electric storage battery
Restrictions on use	All other uses not recommended above

1.4. Supplier's details

Supplier	ATB Power
Office address	95 Wai Yip Street, Kwun Tong, Hong Kong SAR
Factory address	No.4 Road, Nhon Trach 3 Industrial Park – Phase 2, Long Tho Commune, Nhon Trach District, Dong Nai Province, Viet Nam
Telephone	0084-02513566872-150
Web / Email	atbpower.com · info@atbpower.com

1.5. Emergency phone number

Emergency number	0084-02513566872-150 (business hours). For a hazardous-materials incident (spill, leak, fire, exposure, or accident), also contact local emergency services.
------------------	--

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture (GHS US)

HAZARD CLASS & CATEGORY	CODE	STATEMENT
In contact with water emits flammable gases, Category 2	H261	In contact with water releases flammable gas.
Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Acute toxicity (dermal), Category 4	H312	Harmful in contact with skin.
Acute toxicity (inhalation: dust, mist), Category 4	H332	Harmful if inhaled.
Skin corrosion/irritation, Category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Carcinogenicity, Category 1A	H350	May cause cancer.

HAZARD CLASS & CATEGORY	CODE	STATEMENT
Reproductive toxicity, Category 1A	H360	May damage fertility or the unborn child.
STOT — single exposure, Category 3 (respiratory tract irritation)	H335	May cause respiratory irritation.
STOT — repeated exposure, Category 1	H372	Causes damage to organs through prolonged or repeated exposure.

2.2. Label elements (GHS US)

Hazard pictograms



Signal word: **DANGER**

Hazard statements

H261 — In contact with water releases flammable gas. H302+H312+H332 — Harmful if swallowed, in contact with skin or if inhaled. H314 — Causes severe skin burns and eye damage. H335 — May cause respiratory irritation. H350 — May cause cancer. H360 — May damage fertility or the unborn child. H372 — Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not allow contact with water. Do not breathe dusts or mists. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective clothing, eye and face protection, and protective gloves. Immediately call a poison center or doctor. If swallowed: rinse mouth, do NOT induce vomiting. If on skin (or hair): take off immediately all contaminated clothing, rinse skin with water/shower; wash contaminated clothing before reuse. IF IN EYES: rinse cautiously with water for several minutes; remove contact lenses if present and easy to do; continue rinsing. If inhaled: remove person to fresh air and keep comfortable for breathing. If exposed or concerned: get medical advice/attention. In case of fire: use appropriate media to extinguish. Store in a dry, well-ventilated place; keep container tightly closed and locked up. Dispose of contents and container to a hazardous or special waste collection point in accordance with local, regional, national and international regulations.

2.3–2.5: No additional information available. Hazards apply to the contents if the article is compromised.

SECTION 3 Composition / Information on Ingredients

Mixture. Inorganic lead and the electrolyte (dilute sulfuric acid) are the primary components. GEL types additionally contain amorphous silicon dioxide used to immobilize the electrolyte. Other ingredients may be present depending on battery type.

NAME	CAS-NO.	% WT.	GHS US CLASSIFICATION
Lead	7439-92-1	~50	Carc. 2, H351; Repr. 1A, H360; Lact., H362; Aquatic Acute 1, H400; Aquatic Chronic 1, H410
Lead dioxide (lead oxide)	1309-60-0	~23	Acute Tox. 4 (Oral), H302; Acute Tox. 4 (Inhalation: dust, mist), H332; Repr. 1A, H360; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410
Lead sulfate	7446-14-2	~3	Acute Tox. 4 (Oral), H302; Acute Tox. 4 (Inhalation: dust, mist), H332; Repr. 1A, H360; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410
Sulfuric acid (electrolyte)	7664-93-9	~13	Met. Corr. 1, H290; Skin Corr. 1, H314; Eye Dam. 1, H318; Carc. 1A, H350; STOT SE 3, H335; Aquatic Acute 3, H402; Aquatic Chronic 3, H412

NAME	CAS-NO.	% WT.	GHS US CLASSIFICATION
AGM glass-mat separator (AGM types)	65997-17-3	~8	Not classified
Silicon dioxide / gelled electrolyte (GEL types)	60676-86-0	5 – 6	Not classified
Battery case (ABS / polypropylene)	9003-56-9	~3	Aquatic Acute 3, H402; Aquatic Chronic 3, H412

Typical percentages by weight based on the manufacturer (Hengli) composition; exact proportions vary by model, size, and state of charge. AGM types use a glass-mat separator; GEL types use a gelled (silica) electrolyte in place of the AGM separator. Full text of H-statements: see Section 16.

SECTION 4 First-Aid Measures

4.1. Description of necessary first-aid measures

General	In the finished article form, no special first-aid measures are required. The measures below apply if the product is compromised. Call a physician immediately.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
Skin contact	Remove affected clothing and wash all exposed skin with mild soap and water, followed by a warm-water rinse. Call a physician immediately. Wash contaminated clothing before reuse.
Eye contact	Immediately rinse with water for a prolonged period while holding the eyelids wide open. Transport the casualty to an eye doctor/hospital; continue rinsing during transport with isotonic saline, alternatively with water.
Ingestion	Rinse mouth with water. If fully conscious, give water (240 mL) to drink. Never give an unconscious person anything to drink. Do not induce vomiting; if vomiting occurs keep the head low so vomit does not enter the lungs. Call a physician immediately.

4.2. Most important symptoms/effects

Inhalation: harmful if inhaled; may cause respiratory irritation. Skin: harmful; burns; possible irritation and blistering. Eyes: serious damage; stinging, redness, tears, blurred vision, swelling. Ingestion: harmful; burns; irritation to the digestive tract. Chronic: may damage fertility or the unborn child; may cause cancer.

4.3. Immediate medical attention / special treatment

Treat symptomatically.

SECTION 5 Fire-Fighting Measures

Suitable extinguishing media	Dry chemical, CO ₂ , dry sand, or alcohol-resistant foam.
Unsuitable extinguishing media	Do not use a heavy water stream. Do not apply CO ₂ directly onto cells.
Fire hazard	Batteries may reignite after a fire is suppressed; store fire-exposed batteries in a safe, restricted-access area for a minimum of 72 hours.
Explosion hazard	Hydrogen gas is generated during charging and operation. If ignited, batteries may explode, dispersing casing fragments and acid.
Hazardous combustion products	Heat or fire can release an explosive hydrogen/oxygen mixture, oxides of lead and lead compounds, and sulfur dioxide/trioxide from sulfuric acid; can emit highly toxic fumes when heated.

8.2. Appropriate engineering controls

Ensure good ventilation. Use general ventilation, local exhaust, or process enclosure to keep airborne concentrations below the permissible limits. Emergency eyewash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures (used if the product is compromised)

Hand protection	Acid-resistant gloves (rubber, neoprene, PVC, or natural rubber).
Eye protection	Chemical goggles or face shield.
Skin / body	Suitable protective clothing.
Respiratory	NIOSH-approved respirator if ventilation is inadequate; SCBA for emergency responders; full-face acid-gas respirator.



SECTION 9 Physical and Chemical Properties

Physical state	Solid (battery in plastic case)
Color	Black / gray (varies)
Odor	Odorless when sealed; sharp/pungent if electrolyte is released
pH	< 2 (electrolyte)
Melting point	327 °C / 621 °F (lead)
Flash point	Not applicable
Flammability	In contact with water releases flammable gas; hydrogen evolved on charge is flammable/explosive
Relative density	1.25 – 1.32 (electrolyte)
Explosion limits (hydrogen)	Lower 4 vol-% · Upper 75 vol-%
Solubility	Sulfuric acid miscible with water

Values relate to the electrolyte and metallic components; an intact sealed battery presents no exposure.

SECTION 10 Stability and Reactivity

Reactivity	Sulfuric acid is a strong oxidizer and reactive with many materials. Lead is relatively stable under normal conditions. During charging, hydrogen gas is generated, which is extremely flammable and forms explosive mixtures with air.
Chemical stability	Stable under normal conditions. At high temperature may liberate dangerous gases.
Possibility of hazardous reactions	Container damage may cause leakage. Electrolyte reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water; contact with metals may produce toxic sulfur dioxide and release flammable hydrogen.
Conditions to avoid	Prolonged overcharge; excessive shock and vibration; heat, hot surfaces, sparks, open flames, and other ignition sources; temperature extremes.
Incompatible materials	Strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, reducing agents, and metals.

Hazardous decomposition products	None under normal storage/use. When heated/burned: explosive hydrogen/oxygen mixture, oxides of lead, sulfur dioxide/trioxide, carbon monoxide/dioxide.
----------------------------------	---

SECTION 11 Toxicological Information

ENDPOINT	DATA
Acute toxicity	Harmful by oral, dermal, and inhalation routes. ATE (oral) 500 mg/kg; ATE (dermal) 1100 mg/kg; ATE (dust/mist) 1.5 mg/L/4h.
Lead	LD50 oral > 2000 mg/kg; LD50 dermal > 2000 mg/kg; LC50 inhalation > 5.05 mg/L. IARC 2B; NTP — reasonably anticipated human carcinogen.
Lead dioxide	Inorganic lead compound; LD50 (oral, rat) > 2000 mg/kg. IARC 2A (lead compounds, probably carcinogenic).
Sulfuric acid	LD50 oral 2140 mg/kg; LC50 inhalation (vapors) 0.375 mg/L/4h; pH 0.3. IARC Group 1 / NTP known human carcinogen (strong inorganic acid mist).
Skin / eye	Causes severe skin burns and serious eye damage (electrolyte, pH < 2).
Carcinogenicity	May cause cancer. Reproductive toxicity: may damage fertility or the unborn child. STOT (repeated): causes damage to organs through prolonged or repeated exposure.

SECTION 12 Ecological Information

Ecology — general	Battery cells and internal materials remain in the environment; do not bury or discard into the environment.
Aquatic toxicity (acute)	Very toxic to aquatic life.
Aquatic toxicity (chronic)	Very toxic to aquatic life with long-lasting effects.
Lead	LC50 fish 107 – 1170 µg/L; NOEC chronic fish 108.8 µg/L. Not rapidly degradable.
Sulfuric acid	LC50 fish 16 – 28 mg/L; NOEC chronic fish 0.31 mg/L. Not rapidly degradable.
Mobility / persistence	Lead persists and is strongly retained in soil; bioaccumulates in aquatic and terrestrial organisms.

SECTION 13 Disposal Considerations

Disposal must follow official regulations. The battery should not be released to the environment; recycle wherever possible or dispose of as hazardous waste at an appropriate collection site. Batteries are not ordinary trash; do not dissect, pierce, or crush. Send spent batteries to a secondary lead smelter for recycling. Spent lead-acid batteries are not regulated as hazardous waste when the requirements of 40 CFR § 266.80 are met; spilled sulfuric acid is a characteristic hazardous waste. Place neutralized electrolyte slurry into sealed acid-resistant containers and dispose of as hazardous waste as applicable.

Hazardous waste code	D008: Lead
----------------------	------------

SECTION 14 Transport Information

In accordance with DOT / IMDG / IATA.

14.1. UN number	UN2800 (DOT, IMDG, IATA)
14.2. Proper shipping name	Batteries, wet, non-spillable, electric storage
14.3. Transport hazard class	8

14.4. Packing group	Not applicable
14.5. Environmental hazards	Marine pollutant: No · Dangerous for the environment: No
Special provisions / packing	DOT: 49 CFR 173.159a · IMDG: SP 238, PI P003 · IATA: A67, PI 872

NON-SPILLABLE — NOT RESTRICTED AS DANGEROUS GOODS

ATB VRLA AGM and GEL batteries are non-spillable. Batteries meeting **49 CFR 173.159a** (DOT), **Special Provision 238** (IMDG) and **A67 / Packing Instruction 872** (IATA) are **not subject** to the dangerous-goods requirements of 49 CFR Parts 171–180 (or the corresponding IMDG/IATA provisions) when: the batteries have passed the vibration and pressure-differential performance tests; have passed the ruptured-case test for non-spillable designation; the terminals are protected against short circuit; and the outer packaging is marked "NON-SPILLABLE" or "NON-SPILLABLE BATTERY". Under these conditions the battery ships as non-dangerous (non-DG). Confirm current carrier requirements before each shipment.

Damaged, leaking, or short-circuited batteries do not qualify for the non-spillable exemption and must be shipped under full Class 8 requirements.

SECTION 15 Regulatory Information

15.1. Federal regulations (US)

All components are listed as Active on the US EPA TSCA inventory. Contains chemicals subject to TSCA 12(b) export notification. The following are subject to SARA Title III Section 313 reporting (40 CFR Part 372): Lead (7439-92-1), Lead sulfate (7446-14-2), and Sulfuric acid (7664-93-9). Lead is listed as an EPA Hazardous Air Pollutant.

COMPONENT	CERCLA RQ	SARA 302 TPQ
Lead (7439-92-1)	10 lb	—
Lead sulfate (7446-14-2)	10 lb	—
Sulfuric acid (7664-93-9)	1000 lb	1000 lb

15.2. International regulations

All components are listed on the Canadian DSL and the Mexican INSQ. Lead and sulfuric acid are listed by IARC and NTP.

15.3. State regulations

CALIFORNIA PROPOSITION 65 — WARNING

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Lead and lead compounds are also listed on the Massachusetts, New Jersey, New York City, and Pennsylvania Right-to-Know lists.

SECTION 16 Other Information

Full text of H-statements (Sections 2 and 3)

H261 In contact with water releases flammable gas · H290 May be corrosive to metals · H302 Harmful if swallowed · H312 Harmful in contact with skin · H314 Causes severe skin burns and eye damage · H318 Causes serious eye damage · H332 Harmful if inhaled · H335 May cause respiratory irritation · H350/H351 May cause / Suspected of causing cancer · H360 May damage fertility or the unborn child · H362 May cause harm to breast-fed children · H372/H373 Causes / May cause damage to organs through prolonged or repeated exposure · H400 Very toxic to aquatic life · H402 Harmful to aquatic life · H410/H412 Very toxic / Harmful to aquatic life with long-lasting effects.

Prepared by	ATB Power
Issue date / Version	2026-06-10 · Version 1.0
Format reference	29 CFR § 1910.1200 (HCS) / GHS, 16-section format

DISCLAIMER

The information above is believed to be accurate and represents the best information currently available. It is offered for the safe handling, use, storage, transport, and disposal of the product and does not constitute a warranty of any property. Composition percentages, classifications, and exposure limits are typical for VRLA lead-acid batteries and may vary by model, alloy, and jurisdiction. Users should make their own investigations to determine suitability for their purposes and must comply with all applicable regulations. ATB Power assumes no liability resulting from the use of this sheet. Verify model-specific data, the emergency contact number, and current regulatory limits before relying on this document.