

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 09/16/2016

Reviewed on 09/16/2016

### 1 Identification

- **Product Identifier**
- **Trade name: VRLA "Rechargeable Sealed Lead Acid Battery"**
- **Relevant identified uses of the substance or mixture and uses advised against:**  
No further relevant information
- **Product Description** Hard Plastic Shell – Used for Electronics Applications
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
Baccus Global, LLC  
1 N. Federal Hwy  
St. 200  
Boca Raton, FL 33432  
561-367-3750
- **Emergency telephone number:** Chemtrec 1-800-424-9300 or outside USA 1-703-527-3887

### \* 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS06 Skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Additional information:**

As a solid manufactured article, exposure to hazardous ingredients is not expected with normal use. This battery is an article pursuant to 29 CFR 1910.1200 and as such is not subject to the OSHA Hazard Communication Standard requirements. The information contained in this material safety data sheet contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

- **Label elements:**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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**Trade name: VRLA "Rechargeable Sealed Lead Acid Battery"**

· **Hazard pictograms:**



GHS05 GHS06 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**

Lead  
sulfuric acid

· **Hazard statements:**

H302 Harmful if swallowed.  
H330 Fatal if inhaled.  
H314 Causes severe skin burns and eye damage.  
H351 Suspected of causing cancer.

· **Precautionary statements:**

P260 Do not breathe dusts or mists.  
P284 [In case of inadequate ventilation] wear respiratory protection.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear eye protection / face protection.  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P320 Specific treatment is urgent (see supplementary first aid instructions on this Safety Data Sheet).  
P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P363 Wash contaminated clothing before reuse.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.

· **Hazard description:**

This product includes both 6 and 12 volt sealed rechargeable lead acid batteries.  
Health Hazards: Not dangerous with normal use. This battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

These chemicals are contained in a sealed enclosure. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by inhalation, ingestion, eye contact and skin contact.

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- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

### \* 3 Composition/Information on Ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

CAS: 7439-92-1	Lead	60-90%
RTECS: OF 7525000	☠ Acute Tox. 2, H330; ☠ Carc. 2, H351; ⚠ Acute Tox. 4, H302	
CAS: 7664-93-9	sulfuric acid	15-35%
	☠ Skin Corr. 1A, H314	

· **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

### 4 First-Aid Measures

· **Description of first aid measures:**

These chemicals are contained in a sealed enclosure. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by inhalation, ingestion, eye contact and skin contact.

If the contents of an opened battery contacts skin, eyes, are ingested or are inhaled, GET MEDICAL ATTENTION IMMEDIATELY.

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

In case of unconsciousness place patient stably in side position for transportation.

Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause burns to the skin.

· **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause burns to the eye.

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· **After swallowing:**

Do not induce vomiting; immediately call for medical help.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract and could be fatal.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed:**

Lead: Exposure can result in lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; encephalopathy; kidney disease; hypertension.

· **Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

### \* 5 Fire-Fighting Measures

· **Extinguishing media:**

· **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture:** No further relevant information available.

· **Advice for firefighters:**

· **Protective equipment:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

### 6 Accidental Release Measures

· **Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/surface or ground water.

· **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Use neutralizing agent.

Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

· **Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### 7 Handling and Storage

· **Handling**

· **Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· **Information about protection against explosions and fires:** Keep protective respiratory device available.

· **Conditions for safe storage, including any incompatibilities:**

· **Storage**

· **Requirements to be met by storerooms and receptacles:** Store in the original container.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Store in dry conditions.

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- **Specific end use(s):** No further relevant information available.

### \* 8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters:**

· **Components with occupational exposure limits:**

#### 7439-92-1 Lead

PEL	Long-term value: 0.05* mg/m <sup>3</sup> *see 29 CFR 1910.1025
REL	Long-term value: 0.05* mg/m <sup>3</sup> *8-hr TWA ;See PocketGuide App.C
TLV	Long-term value: 0.05* mg/m <sup>3</sup> *and inorganic compounds, as Pb; BEI

#### 7664-93-9 sulfuric acid

PEL	Long-term value: 1 mg/m <sup>3</sup>
REL	Long-term value: 1 mg/m <sup>3</sup>
TLV	Long-term value: 0.2* mg/m <sup>3</sup> *as thoracic fraction

· **Ingredients with biological limit values:**

#### 7439-92-1 Lead

BEI	30 µg/100 ml blood not critical Lead
	10 µg/100 ml blood not critical Lead (women of child bearing potential)

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Not necessary under normal conditions.

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not necessary under normal conditions.

· **Protection of hands:** Not necessary under normal conditions.

· **Material of gloves:** Not applicable

· **Eye protection:** Not necessary under normal conditions.

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### \* 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:** Plastic shell  
· **Color:** See product specification

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· **Melting point/Melting range:** Not determined.

· **Boiling point/Boiling range:** Not determined.

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· **Lower:** Not determined.

· **Upper:** Not determined.

· **Vapor pressure:** Not determined.

· **Density:** Not determined.

· **Relative density:** Not determined.

· **Vapor density:** Not determined.

· **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with:**

· **Water:** Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

· **Solvent content:**

· **Organic solvents:** 0

· **Solids content:** 70.0 %

· **Other information:** No further relevant information available.

### \* 10 Stability and Reactivity

· **Reactivity:** No further relevant information available.

· **Chemical stability:** Stable under normal conditions.

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions:** No dangerous reactions known.

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- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### \* 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**7439-92-1 Lead**

Inhalative	LC50/96 hours (static)	0.44 mg/l (Cyprinus carpio) 1.17 mg/l (Oncorhynchus mykiss)
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**7664-93-9 sulfuric acid**

Oral	LD50 Oral	2140 ml/kg (rat)
Inhalative	LC50/96 hours	375 mg/l (rat) Sulfuric acid is harmful by all routes of entry.

- **Primary irritant effect:**
- **On the skin:** Strong caustic effect on skin and mucous membranes.
- **On the eye:**  
Strong irritant with the danger of severe eye injury.  
Corrosive effect.  
Causes serious eye irritation.
- **Subacute to chronic toxicity:**  
Lead: Exposure can result in lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; encephalopathy; kidney disease; hypertension.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Corrosive  
Irritant  
Very toxic  
Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**  
Group 1 - Carcinogenic to humans  
Group 2A - Probably carcinogenic to humans  
Group 2B - Possibly carcinogenic to humans  
Group 3 - Not classifiable as to its carcinogenicity to humans  
Group 4 - Probably not carcinogenic to humans

7439-92-1	Lead	2B
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- **NTP (National Toxicology Program):**

7439-92-1	Lead	R
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- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

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### \* 12 Ecological Information

- **Toxicity:**

- **Aquatic toxicity:**

<b>7664-93-9 sulfuric acid</b>
EC50   22 mg/l (daphnia)

- **Persistence and degradability:** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential:** No further relevant information available.

- **Mobility in soil:** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even extremely small quantities leak into the ground.

- **Results of PBT and vPvB assessment:**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects:** No further relevant information available.

### \* 13 Disposal Considerations

- **Waste treatment methods:**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Observe all federal, state and local environmental regulations when disposing of this material.

- **Uncleaned packagings**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport Information

- **UN-Number:**

- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material

- **UN proper shipping name:**

- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material

- **Transport hazard class(es):**

- **DOT, ADR, ADN, IMDG, IATA**

- **Class:** Non-Regulated Material

- **Packing group:**

- **DOT, ADR, IMDG, IATA** Non-Regulated Material

- **Environmental hazards:** Not applicable.

- **Special precautions for user:** Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

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**Trade name: VRLA "Rechargeable Sealed Lead Acid Battery"**
**· Transport/Additional information:**

- |                                 |  |
|---------------------------------|--|
| <b>· DOT</b>                    | "NON-SPILLABLE" per 49 CFR 173.159 (f).  |
| <b>· ADR</b>                    | "NON-SPILLABLE".<br>New and spent batteries are exempt from all ADR/RID (special provision 598).   |
| <b>· IMDG</b>                   | If "NON-SPILLABLE" batteries meet the Special Provision 238.1 and 238.2, they are exempted from all IMDG codes provided that the batteries' terminals are protected against short circuits.          |
| <b>· IATA</b>                   | If "NON-SPILLABLE" batteries meet the Special Provision A48, A67, A164, A183, they are exempted from all IATA DGR codes provided that the batteries' terminals are protected against short circuits. |
| <b>· UN "Model Regulation":</b> | Not restricted.<br>Packing Instruction 872.<br>Non-Regulated Material  |

**\* 15 Regulatory Information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

**· Section 355 (extremely hazardous substances):**

7664-93-9	sulfuric acid
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**· Section 313 (Specific toxic chemical listings):**

All ingredients are listed.
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**· TSCA (Toxic Substances Control Act):**

All ingredients are listed or exempt from listing.
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**· California Proposition 65:**
**· Chemicals known to cause cancer:**

7439-92-1	Lead
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**· Chemicals known to cause reproductive toxicity for females:**

7439-92-1	Lead
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**· Chemicals known to cause reproductive toxicity for males:**

7439-92-1	Lead
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**· Chemicals known to cause developmental toxicity:**

7439-92-1	Lead
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**· New Jersey Right-to-Know List:**

All ingredients are listed.
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**· New Jersey Special Hazardous Substance List:**

7439-92-1	Lead		CA, TE
7664-93-9	sulfuric acid		CA, CO, R2

**· Pennsylvania Right-to-Know List:**

All ingredients are listed.
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<b>· Pennsylvania Special Hazardous Substance List:</b>		
7439-92-1	Lead	E
7664-93-9	sulfuric acid	E

**· Carcinogenic categories:**

<b>· EPA (Environmental Protection Agency):</b>		
7439-92-1	Lead	B2

**· TLV (Threshold Limit Value established by ACGIH):**

7439-92-1	Lead	A3
7664-93-9	sulfuric acid	A2

**· NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

**· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms:**


GHS05 GHS06 GHS08

**· Signal word: Danger**
**· Hazard-determining components of labeling:**

 Lead  
 sulfuric acid

**· Hazard statements:**

 H302 Harmful if swallowed.  
 H330 Fatal if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H351 Suspected of causing cancer.

**· Precautionary statements:**

P260	Do not breathe dusts or mists.
P284	[In case of inadequate ventilation] wear respiratory protection.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection / face protection.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P320	Specific treatment is urgent (see supplementary first aid instructions on this Safety Data Sheet).
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P363	Wash contaminated clothing before reuse.

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**Trade name: VRLA "Rechargeable Sealed Lead Acid Battery"**

P308+P313	IF exposed or concerned: Get medical advice/attention.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**· National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**\* 16 Other Information**

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 09/16/2016 / 5

**· Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
BEI: Biological Exposure Limit  
Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 2: Acute toxicity – Category 2  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Carc. 2: Carcinogenicity – Category 2  
Carc. 2: Carcinogenicity – Category 2

· **\* Data compared to the previous version altered.**

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