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## Material Safety Data Sheet

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifiers

Product name Ethyl levulinate  
Product number A020389  
Brand 3ASenrise  
CAS number 539-88-8

#### 1.2 Details of the supplier of the safety data sheet

Company: Anhui Senrise Technology Co., Ltd.  
Address: No.88 Weisan Road, High-Tech Industrial Development Zone, Anqing, Anhui  
Post code: 246003  
Tel: 400-005-6266  
Fax: 0556-5555368  
Email: service@3asenrise.com

#### 1.3 Emergency telephone

Emergency telephone: 0556-5500208

#### 1.4 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: For R&D use only. Not for pharmaceutical, household or other uses.

### 2 HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Skin corrosion/irritation (Category 2), H315  
Serious eye damage/eye irritation (Category 2A), H319

#### 2.2 GHS label elements, including precautionary statements

##### Pictogram



**Signal word: Warning**

##### Hazard statement(s)

H315 Causes skin irritation.  
H319 Causes serious eye irritation.

##### Precautionary statement(s)

##### Prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash hands thoroughly after handling.

##### Response

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P332+P313 IF SKIN irritation occurs: Get medical advice/attention.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

### **Storage**

No data available

### **Disposal**

No data available

## **2.3 Physical and chemical hazards**

No data available

## **2.4 Health hazards**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

## **2.5 Environmental hazards Code**

No data available

## **2.6 Other hazards**

No data available

# **3 COMPOSITION/INFORMATION ON INGREDIENTS**

## **Substance / Mixture: Substance**

### **3.1 Substance**

|                  |                  |
|------------------|------------------|
| Name             | Ethyl levulinate |
| Formula          | C7H12O3          |
| Molecular Weight | 144.17           |
| CAS              | 539-88-8         |
| Concentration    | 98%              |

# **4 FIRST AID MEASURES**

## **4.1 Description of first aid measures**

### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

### **In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

### **In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

### **If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## **4.2 Most important symptoms and effects, both acute and delayed**

No data available.

# **5 FIREFIGHTING MEASURES**

## **5.1 Extinguishing media**

Water Foam Carbon dioxide (CO2) Dry powder

## **5.2 Special hazards arising from the substance or mixture**

Carbon oxides Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## **6 ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

### **6.4 Reference to other section**

For disposal see section 13.

## **7 HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

#### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### **Hygiene measures**

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

### **7.2 Conditions for safe storage, including any incompatibilities**

#### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Long term storage: RT

## **8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

No data available.

### **8.2 Personal protective equipment**

#### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

#### **Body protection**

Flame retardant antistatic protective clothing.

#### **Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|                                                 |                                          |
|-------------------------------------------------|------------------------------------------|
| a) Appearance                                   | Colorless to yellow liquid               |
| b) Odor                                         | fruity                                   |
| c) pH                                           | No data available                        |
| d) Melting point/freezing point                 | < -60 ° C                                |
| e) Initial boiling point and boiling range      | 93 - 94 ° C at 24 hPa - lit.             |
| f) Upper/lower flammability or explosive limits | No data available                        |
| g) Flash point                                  | 94 ° C - closed cup                      |
| h) Evaporation rate                             | No data available                        |
| i) Vapor pressure                               | No data available                        |
| j) Vapor density                                | No data available                        |
| k) Density                                      | 1.016 g/cm <sup>3</sup> at 25 ° C - lit. |
| l) Water solubility                             | 170.7 g/l at 20 ° C                      |
| m) Partition coefficient: n-octanol/water       | No data available                        |
| n) Autoignition temperature                     | 460 ° C at 1,002.4 hPa                   |
| o) Decomposition temperature                    | No data available                        |
| p) Flammability                                 | No data available                        |

## 10 STABILITY AND REACTIVITY

### 10.1 Chemical stability

No data available.

### 10.2 Conditions to avoid

No data available.

### 10.3 Incompatible materials

No data available

### 10.4 Hazardous decomposition products

In the event of fire: see section 5.

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Acute toxicity

LD50 Oral

- Rat - female - > 2,000 mg/kg

LC50 Inhalation

No data available

LD50 Dermal

- Rabbit - > 5,000 mg/kg

### 11.2 Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE) Result: Skin irritation - 60 min

### 11.3 Serious eye damage/eye irritation

Eyes - In vitro study Result: Eye irritation - 28 min

### 11.4 Respiratory or skin sensitization

No data available

### 11.5 Germ cell mutagenicity

No data available

### 11.6 Carcinogenicity

No data available

### 11.7 Reproductive toxicity

No data available

### **11.8 Specific target organ toxicity - single exposure**

No data available

### **11.9 Specific target organ toxicity - repeated exposure**

No data available

### **11.10 Aspiration hazard**

no data available.

### **11.11 Additional Information**

RTECS: OI1700000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Hazardous properties cannot be excluded. Handle in accordance with good industrial hygiene and safety practice.

## **12 ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish:

No data available

Toxicity to daphnia and other aquatic:

No data available

Toxicity to algae:

static test ErC50 – Pseudokirchneriella subcapitata – 932.1 mg/l – 72 h

Toxicity to bacteria:

No data available

### **12.2 Persistence and degradability**

Biodegradability aerobic – Exposure time 28 d Result: 72 % – Readily biodegradable.

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

### **12.5 Other adverse effects**

No data available

## **13 DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

#### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Observe all federal, state and local regulations when disposing of the substance.

#### **Contaminated packaging**

Disposal must be made according to official regulations.

## **14 TRANSPORT INFORMATION**

### **14.1 UN number**

ADR/RID: – IMDG: – IATA: –

### **14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA-DGR: Not dangerous goods

### **14.3 Transport hazard class(es)**

ADR/RID: – IMDG: – IATA: –

### **14.4 Packaging group**

ADR/RID: - IMDG: - IATA: -

#### **14.5 Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

#### **14.6 Special precautions for user**

No data available

### **15. REGULATORY INFORMATION**

#### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Applicable regulations

Please pay attention to waste disposal and meet the requirements of local regulations.

### **16. OTHER INFORMATION**

#### **Abbreviations and acronyms**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Dangerous Goods

IATA: International Air Transport Association

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

CAS: Chemical Abstracts Service (division of the American Chemical Society)

#### **Further information**

The above safety technical information is for reference only, because many physical and chemical properties are not entirely clear. Please consult information carefully before use and use after confirmation.

Anhui Senrise Technology Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product. More terms of use, see invoice information for details.

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