# Chemical Safety Data Sheet MSDS / SDS

# Levulinic acid

Revision Date: 2024-12-21 Revision Number: 1

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **Product identifier**

Product name : Levulinic acid

CBnumber : CB3213533

CAS : 123-76-2

EINECS Number : 204-649-2

Synonyms : Levulinic acid,LA

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

#### **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 400-158-6606

# SECTION 2: Hazards identification

### GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word Warning

#### Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

Continuerinsing.

P309 IF exposed or if you feel unwell:

P310 Immediately call a POISON CENTER or doctor/physician.

#### **Hazard statements**

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H315 Causes skin irritation

H318 Causes serious eye damage

# SECTION 3: Composition/information on ingredients

#### **Substance**

Product name : Levulinic acid
Synonyms : Levulinic acid,LA

CAS : 123-76-2
EC number : 204-649-2
MF : C5H8O3
MW : 116.12

# SECTION 4: First aid measures

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### Indication of any immediate medical attention and special treatment needed

No data available

# **SECTION 5: Firefighting measures**

# Special hazards arising from the substance or mixture

Carbon oxides

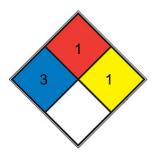
# Advice for firefighters

No data available

#### **Further information**

No data available

#### **NFPA 704**



HEALTH 3

Short exposure could cause serious temporary or moderate residual injury (e.g. <u>liquid hydrogen, sulfuric acid</u>, <u>calcium</u>

hypochlorite, hexafluorosilicic acid)

	FIRE	1	can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. mineral oil, ammonia)
	REACT	1	Normally stable, but can become unstable at elevated temperatures and pressures (e.g. propene)
	SPEC.		
	HAZ.		
	•		

# SECTION 6: Accidental release measures

# Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

#### **Environmental precautions**

No data available

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

No data available

#### Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

## Precautions for safe handling

For precautions see section 2.2.

### Conditions for safe storage, including any incompatibilities

Light sensitive.

### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# control parameter

### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

# SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	solid
Odour	No data available
Odour Threshold	No data available
рН	No data available
Melting point/freezing point	Melting point/range: 30 - 33 °C - lit.
Initial boiling point and boiling range	245 - 246 °C - lit.
Flash point	163,5 °C - Pensky-Martens closed cup - Regulation (EC) No. 440/2008, Annex, A.9
Evaporation rate	No data available
Flammability (solid, gas)	The product is not flammable Test N.1: Test method for readily combustible solids
Upper/lower flammability or explosive	No data available
limits	
Vapour pressure	0,004 hPa at 20 °C - OECD Test Guideline 104
Vapour density	No data available
Relative density	1,14 at 20 °C - OECD Test Guideline 109
Water solubility	791,3 g/l at 20 °C - OECD Test Guideline 105
Partition coefficient: n-octanol/water	log Pow: -0,497 at 20 °C - OECD Test Guideline 107 - Bioaccumulation is not expected.
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	No data available
Oxidizing properties	No data available

# Other safety information

No data available

# SECTION 10: Stability and reactivity

# Reactivity

No data available

# **Chemical stability**

No data available

# Possibility of hazardous reactions

No data available

#### **Conditions to avoid**

No data available

# Incompatible materials

Bases, Oxidizing agents, Reducing agents

# Hazardous decomposition products

# **SECTION 11: Toxicological information**

#### Information on toxicological effects

#### **Acute toxicity**

LD50 Oral - Rat - female - 300 - 2.000 mg/kg (OECD Test Guideline 423)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)

#### Skin corrosion/irritation

(OECD Test Guideline 439)

#### Serious eye damage/eye irritation

Eyes - Bovine cornea

Result: Causes serious eye damage. (OECD Test Guideline 437)

#### Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: positive

(OECD Test Guideline 442B)

#### Germ cell mutagenicity

Result: negative

In vitro mammalian cell gene mutation test Chinese hamster lung cells

Result: negative

#### Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

# Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

### Specific target organ toxicity - repeated exposure

No data available

#### **Aspiration hazard**

No data available

### **Toxicity**

LD50 orally in Rabbit: 1850 mg/kg LD50 dermal Rabbit > 5000 mg/kg

# **SECTION 12: Ecological information**

#### **Toxicity**

No data available

#### Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: > 60 % - Readily biodegradable. (OECD Test Guideline 301F)

### **Bioaccumulative potential**

No data available

# Mobility in soil

No data available

# Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### Other adverse effects

No data available

# **SECTION 13: Disposal considerations**

#### Waste treatment methods

#### **Product**

No data available

# **SECTION 14: Transport information**

#### **UN** number

ADR/RID: - IMDG: - IATA: -

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

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

#### Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

#### **Packaging group**

ADR/RID: - IMDG: - IATA: -

#### **Environmental hazards**

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

# Special precautions for user

### **Further information**

Not classified as dangerous in the meaning of transport regulations.

# **SECTION 15: Regulatory information**

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

#### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: https://www.mem.gov.cn/

#### Measures for Environmental Management of New Chemical Substances

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: https://www.epa.gov/

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: https://www.mee.gov.cn/

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: https://echa.europa.eu/

EC Inventory:Listed.

New Zealand Inventory of Chemicals (NZIoC):Listed. website: https://www.epa.govt.nz/

Korea Existing Chemicals List (KECL):Listed. website: http://ncis.nier.go.kr

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: https://emb.gov.ph/

Vietnam National Chemical Inventory:Listed. website: https://chemicaldata.gov.vn/

### SECTION 16: Other information

#### Abbreviations and acronyms

CAS: Chemical Abstracts Service

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

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

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

#### References

[1] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

 $\hbox{\hbox{$\tt [2]$ ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp}}\\$ 

[3] ECHA - European Chemicals Agency, website: https://echa.europa.eu/

[4] eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en

[5] ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

[6] Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

[7] HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

[8] IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

[9] IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

【10】 Sigma-Aldrich, website: https://www.sigmaaldrich.com/

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.