

SAFETY DATA SHEET

According to Regulation (EU) No. 2020/878

Ad Ligase

Version
2.0

Revision Date:
2024/01/15

Date of last issue: 2024/01/15
Date of first issue: 2021/08/21

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

1.1 Product identifier

Product name: Ad Ligase

Product number: 530-000126-00, 530-000147-00

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

Recommended restrictions: For research users only

1.3 Details of the supplier of the safety data sheet

Company	Shenzhen MGI Biological Electronic Technology Co., Ltd.
Address	2/F, Building 11, Beishan Industrial Zone, No.146, Beishan Road, Yantian Street, Yantian District, Shenzhen, 518083, P.R. China
Zip code	518083
Web	https://en.mgi-tech.com
E-mail	MGI-service@mgi-tech.com
TEL.	+86 4000-966-988

1.4 Emergency telephone number

+86 4000-966-988

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Not a hazardous substance or mixture.

2.2 Label elements

Hazard pictograms: No

Signal word: No

Hazard statements:

Not a hazardous substance or mixture.

Precautionary statements:

Prevention:

Not CLP prevention statements.

Response:

Not CLP response statements.

Storage:

Not CLP storage statements.

Disposal:

Not CLP disposal statements.

2.3 Other hazards

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.

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SECTION 3: Composition/information on ingredients

Product Name: Ad Ligase				
ingredient	CAS-No.	EC No.	Concentration (% w/w)	Classification
Water	7732-18-5	231-791-2	45-55%	Not- Classified
Glycerol	56-81-5	200-289-5	45-55%	Not- Classified
EDTA	60-00-4	200-449-4	0-10%	Eye Irrit. 2
Other components	-	-	0.1-1%	Not- Classified

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SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water for at least 15 minutes and consult a physician if feel uncomfortable.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

4.2 Most important symptoms and effects, both acute and delayed

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

4.3 Indication of any immediate medical attention and special treatment needed

- 1.Treat symptomatically.
- 2.Symptoms may be delayed.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Extinguish with water mist, alcohol-resistant foam, dry powder or carbon dioxide
Unsuitable extinguishing media	NO DATA

5.2 Special hazards arising from the substance or mixture

Not considered a significant fire risk.

5.3 Advice for firefighters

- 1.As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2.Fight fire from a safe distance, with adequate cover.
- 3.Prevent fire extinguishing water from contaminating surface water or the ground water system.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

1. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
2. Do not touch or walk through spilled material.
3. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
4. Ensure adequate ventilation. Remove all sources of ignition.
5. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
6. Use personal protective equipment. Avoid breathing vapours, mist or gas.

6.2 Environmental precautions

1. Prevent product from entering drains.
2. Prevent further leakage or spillage if safe to do so.
3. If there is pollution in the sewer or waterway, please report to the local authorities.

6.3 Methods and material for containment and cleaning up

a lot of leaks:

- Use an inert absorbent material such as sand or soil to absorb spillage.
- Collect spilled product and place it in a sealable container or bucket for disposal.
- Clean contaminated areas and objects with plenty of water and detergent.

Small amount of leakage:

- Absorbing materials such as sand or soil absorb spillage.
- Collect spilled product and place it in a sealable container for disposal.
- Clean contaminated areas and objects with water and detergent

6.4 Reference to other sections

Treat recovered material as described in the section "Disposal considerations".

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid the formation of aerosols.
Do not breathe steam/dust.
Avoid contact - get special instructions before use.
Avoid contact with skin and eyes.
See section 8 for personal protection.
Smoking, eating and drinking areas should be prohibited during use.
Take precautions to prevent electrostatic discharge.
Provide adequate air exchange and/or exhaust in the workroom.
Dispose of rinse water in accordance with local and national regulations.
To prevent leakage or spillage, provide a suitable liquid retention system.

7.2 Conditions for safe storage, including any incompatibilities

Store in a low-temperature environment ranging from -25 °C to -15 °C.
Store in the original labeled container and keep the container closed when not in use.
Store the container upright, away from oxidizers, alkalis and food.
Check regularly for leaks.

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SECTION 8: Exposure controls/personal protection

8.1 Occupational Exposure Limits

This product has no specified occupational exposure limits for components.

8.2 Biological occupational exposure limits

This product has no specified occupational exposure limits for components.

8.3 Engineering measures

- 1.Ensure adequate ventilation, especially in confined areas.
- 2.Ensure that eyewash stations and safety showers are close to the workstation location.
- 3.Set up emergency exit and necessary risk-elimination area.
- 4.Handle in accordance with good industrial hygiene and safety practice.

8.4 Personal protective equipment

Respiratory protection:	In the case of vapor formation use a respirator with an ap-proved filter.
Eye protection:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection:	Impervious clothing Choose body protection according to the amount and con-centration of the dangerous substance at the work place.
Hand protection:	Protective gloves Use specific protective gloves for specific locations.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance and shape:	Colorless transparent viscous liquid
odor:	No data
pH value:	No data
Melting point / freezing point:	No data
Boiling point:	No data
Flash point:	No data
Upper explosion limit:	No data
Lower explosion limit:	No data
Vapor Pressure:	No data
Vapor density	No data
density	No data
Solubility	Soluble in water
N-octanol/water partition coefficient	No data
Auto-ignition temperature	No data
Decomposition temperature	No data

Other information

None data.

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SECTION 10: Stability and reactivity

10.1 Reactivity

Contact with incompatible substances can cause decomposition or other chemical reactions.

10.2 Chemical Stability

Stable under the recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions when stored and handled within normal conditions of use.

10.4. Conditions to avoid

Avoid extremes of temperature and direct sunlight.

Avoid contact with incompatible materials.

10.5 Incompatible materials

Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.

10.6 Hazardous decomposition products

Oxides of carbon and nitrogen, smoke and other toxic fumes

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SECTION 11: Toxicological information

11.1 Acute toxicity

For Glycerol

Oral LD50(rats):	27200mg/kg bw
Dermal LD50(rabbit):	27500mL/kg bw
Inhalation LC50(rats):	56750 mg-min/liter

For Edetic acid (EDTA):

Oral LD50(rats):	4500 mg/kg bw
Inhalation LC50(rats)(6h):	30 mg/m ³

11.2 Skin corrosion/irritation

Based on available data, the classification criteria are not met

11.3 Serious eye damage/eye irritation

Based on available data, the classification criteria are not met

11.4 Respiratory or skin allergies

Based on available data, the classification criteria are not met

11.5 Germ cell mutagenicity

Based on available data, the classification criteria are not met

11.6 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.

11.7 Reproductive toxicity

Based on available data, the classification criteria are not met

11.8 Specific target organ toxicity (one exposure)

Based on available data, the classification criteria are not met

11.9 Specific target organ system toxicity (repeated exposure)

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Based on available data, the classification criteria are not met

11.10 Aspiration hazard

Based on available data, the classification criteria are not met

11.11 Additional information

No data

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SECTION 12: Ecological information

12.1 Ecotoxicity

For Glycerol:

Fish LC50 : 885 mg/L/96h

Aquatic Invertebrates EC50/LC50 : 1955 mg/L/48h

aquatic algae and cyanobacteria EC50: 2900 mg/L/96h

For Edetic acid (EDTA)

Fish LC50(96h): >100 mg/L(Danio rerio)

Aquatic invertebrates EC50(48h): 140mg/L (Daphnia magna

Algae and cyanobacteria EC50(72h): >60mg/L(Pseudokirchneriella subcapitata)

12.2 Persistence and degradability

No data available

12.3 Potential bioaccumulation

No data available

12.4 Soil migration

No data available

12.5 Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 2015/830)
Water	7732-18-5	not PBT/vPvB
Glycerol	56-81-5	not PBT/vPvB
EDTA	60-00-4	not PBT/vPvB

12.6 Other environmental harmful effects

No data available

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

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SECTION 14: Transport information

Label and Mark

Transporting Label	No
Marine pollutant	None

IMDG-CODE

UN number	No
UN proper shipping name	Not Restricted
Transport hazard class	No
Transport subsidiary hazard class	None
Packing group	No

ICAO/IATA-DGR

UN number	No
UN proper shipping name	Not Restricted
Transport hazard class	No
Transport subsidiary hazard class	None
Packing group	No

UN-ADR

UN number	No
UN proper shipping name	Not Restricted
Transport hazard class	No
Transport subsidiary hazard class	None
Packing group	No

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mix-true

<i>Regulation (EU) No. 2020/878:</i>
<i>Regulation (EC) No. 1907/2006:</i>
<i>Guidance on the compilation of SDS 2015.11</i>
<i>EU regulation No. 2015/830</i>

15.2 Other regulations

Please note that waste disposal should also comply with local regulations.

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SECTION 16: Other information

16.1 Abbreviations and acronyms

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial chemical Substances/European List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korea Existing Chemicals List

PICCS - The Philippine Inventory of Chemicals and Chemical Substances

AICS - The Australian Inventory of Chemical Substances

16.2 Key literature references and sources for data

ECHA: <http://echa.europa.eu/>

IFA GESTIS:

[http://gestis-en.itrust.de/nxt/gateway.dll?f=templates\\$fn=default.htm\\$vid=gestiseng:sdbeng](http://gestis-en.itrust.de/nxt/gateway.dll?f=templates$fn=default.htm$vid=gestiseng:sdbeng)

eChemPortal: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

HSDB: <http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

ICSC: <http://www.ilo.org/dyn/icsc/showcard.home>

NITE-CHIRIP: http://www.nite.go.jp/en/chem/chrip/chrip_search/srhInput

16.3 Full text of H-Statements:

NO data.

16.4 Training advice

NO data.

16.3 Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

END OF SDS.