Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Issue date: 09 August 2022 Version: 1.0



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

1.1. Product identifier

Product form : Mixture

Product name : LPS (Lipopolysaccharide) base

Product code : T-5065, N-5065

Other means of identification : NP-LPS (Lipopolysaccharide); TNP-LPS

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

1.2.1. Relevant identified uses

Research and development

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

US Address:

Biosearch Technologies, Inc 2199 South McDowell Boulevard Petaluma, CA 94954-6904 USA

EU Address:

Unite 1-2 Trident Industrial Estate Pindar Road Hoddesdon, EN110WZ England

1.4. Emergency telephone number

Emergency number : 1-888-575-9695 (Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 2 H300

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS06

Signal word (CLP) : Dang

Contains : Lipopolysaccharides, Escherichia coli

Hazard statements (CLP) : H300 - Fatal if swallowed.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



Precautionary statements (CLP) : P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P330 - Rinse mouth. P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lipopolysaccharides, Escherichia coli	CAS-No.: 93572-42-0 EC-No.: 297-473-0	80 – 100	Acute Tox. 2 (Oral), H300

SECTION 4: First Aid measures

4.1. Description of first aid measures

First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the

doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an

unconscious person.

First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Get medical attention. If breathing is difficult, supply oxygen. If breathing has stopped, give

artificial respiration.

First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention immediately.

: IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact

lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.

: IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from

poison control center or medical professional. Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Fatal if swallowed.

Symptoms/effects after inhalation : May cause respiratory irritation. Symptoms/effects after skin contact : May cause skin irritation. Symptoms/effects after eye contact : May cause eye irritation. Symptoms/effects after ingestion : Fatal if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

First-aid measures after eye contact

First-aid measures after ingestion



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder.

Unsuitable extinguishing media : Carbon dioxide (CO2). Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable

Explosion hazard : Product is not explosive.

Reactivity in case of fire : None known.

Hazardous decomposition products in case of fire : No information available.

5.3. Advice for firefighters

Precautionary measures fire : Eliminate all ignition sources if safe to do so.

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling

exposed containers. Do not dispose of fire-fighting water in the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained cleaning

personnel properly equipped with respiratory and eye protection.

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air

respirator, in case of emergency.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain solid spills with appropriate barriers and prevent migration and entry into sewers or

streams. Minimise generation of dust.

Methods for cleaning up : Wear suitable protective clothing. Take up mechanically (sweeping, shovelling) and collect

in suitable container for disposal. This material and its container must be disposed of in a

safe way, and as per local legislation.

6.4. Reference to other sections

See Sections 8 and 13.



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Do not handle until all safety precautions have been read and understood. Keep container closed when not in use. Avoid contact with skin and eyes. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Store in original container. Keep container closed when not in use. Store in a dry, cool and

well-ventilated place.

Incompatible materials

: Air. Moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Protective goggles. Protective clothing. [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eve protection:

Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles. Eye protection should be classified under EN 167(EU).



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



8.2.2.2. Skin protection

Skin and body protection:

Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure. [EN 14605:2005 and EN 13034:2005]

Hand protection

Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.

8.2.2.3. Respiratory protection

Respiratory protection:

Where vapour, mist, or dust exceed PELs or other applicable OELs, use the European Standard EN 529:2005 approved dust/particulate respiratory protective equipment.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Colour : Not applicable : Not applicable Odour Odour threshold : Not applicable Melting point : Not applicable Freezing point : Not applicable Boiling point : Not applicable Flammability : Not applicable **Explosive limits** : Not applicable : Not applicable Lower explosive limit (LEL) Upper explosive limit (UEL) : Not applicable : Not applicable Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : Not applicable pH solution : Not applicable Viscosity, kinematic : Not applicable Solubility : Not applicable Partition coefficient n-octanol/water (Log Kow) : Not applicable Vapour pressure : Not applicable Vapour pressure at 50 °C : Not applicable Density : Not applicable Relative density : Not applicable Relative vapour density at 20 °C : Not applicable : Not applicable Particle size Particle size distribution : Not applicable : Not applicable Particle shape Particle aspect ratio : Not applicable Particle aggregation state : Not applicable Particle agglomeration state : Not applicable Particle specific surface area : Not applicable Particle dustiness : Not applicable

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

Air contact. Moisture.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Fatal if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Lipopolysaccharides, Escherichia coli (93572-42-0)		
LD50 oral rat	48.3 mg/kg (source: NLM_CIP)	
Skin corrosion/irritation	: Not classified	
Serious eye damage/irritation	: Not classified	
Respiratory or skin sensitisation	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Not classified	
Reproductive toxicity	: Not classified	
STOT-single exposure	: Not classified	
STOT-repeated exposure	: Not classified	
Aspiration hazard	: Not classified	



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

Other information : No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No data available. Hazardous to the aquatic environment, short–term : Not classified

Hazardous to the aquatic environment, long-term

(chronic)

: Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

Other adverse effects : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not discharge to public wastewater systems without permit of pollution control

authorities. No discharge to surface waters is allowed without a permit.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the

product to be released into the environment.



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

 UN-No. (ADR)
 : UN 3462

 UN-No. (IMDG)
 : UN 3462

 UN-No. (IATA)
 : UN 3462

 UN-No. (ADN)
 : UN 3462

 UN-No. (RID)
 : UN 3462

14.2. UN proper shipping name

Proper Shipping Name (ADR) : TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. Proper Shipping Name (IMDG) : TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.

Proper Shipping Name (IATA) : Toxins, extracted from living sources, solid, n.o.s.

Proper Shipping Name (ADN) : TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. Proper Shipping Name (RID) : TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.

Transport document description (ADR)

: UN 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S., 6.1, II, (D/E)
Transport document description (IMDG)

: UN 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (contains:

Lipopolysaccharides, Escherichia coli), 6.1, II

Transport document description (IATA) : UN 3462 Toxins, extracted from living sources, solid, n.o.s. (contains: Lipopolysaccharides,

Escherichia coli), 6.1, II

Transport document description (ADN) : UN 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (contains:

Lipopolysaccharides, Escherichia coli), 6.1, II

Transport document description (RID) : UN 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (contains:

Lipopolysaccharides, Escherichia coli), 6.1, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 6.1 Danger labels (ADR) : 6.1

:



IMDG

Transport hazard class(es) (IMDG) : 6.1 Danger labels (IMDG) : 6.1

:



IATA

Transport hazard class(es) (IATA) : 6.1
Danger labels (IATA) : 6.1

:



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



ADN

Transport hazard class(es) (ADN) : 6.1
Danger labels (ADN) : 6.1

:



RID

Transport hazard class(es) (RID) : 6.1
Danger labels (RID) : 6.1

:



14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : T2 Special provisions (ADR) : 210, 274 Limited quantities (ADR) : 500g Excepted quantities (ADR) : E4 : P002, IBC08 Packing instructions (ADR) : B4 Special packing provisions (ADR) : MP10 Mixed packing provisions (ADR) Portable tank and bulk container instructions (ADR) : T3 Portable tank and bulk container special provisions : TP33

(ADR)

Tank code (ADR) : SGAH, L4BH
Tank special provisions (ADR) : TU15, TE19
Vehicle for tank carriage : AT

Vehicle for tank carriage : AT

Transport category (ADR) : 2

Special provisions for carriage - Packages (ADR) : V11

Special provisions for carriage - Loading, unloading : CV13, CV28

and handling (ADR)

Special provisions for carriage - Operation (ADR) : S9, S19 Hazard identification number (Kemler No.) : 60



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



Orange plates

60 3462

Tunnel restriction code (ADR) : D/E EAC code : 2X

Transport by sea (IMDG)

: 210, 274 Special provisions (IMDG) : 500 g Limited quantities (IMDG) Excepted quantities (IMDG) : E4 Packing instructions (IMDG) : P002 IBC packing instructions (IMDG) : IBC08 IBC special provisions (IMDG) : B21, B4 Tank instructions (IMDG) : T3 Tank special provisions (IMDG) : TP33 EmS-No. (Fire) : F-A EmS-No. (Spillage) : S-A Stowage category (IMDG) : B

Properties and observations (IMDG) : Toxins from plant, animal or bacterial sources which contain infectious substances or toxins

that are contained in infectious substances should be classified in class 6.2. Toxic if

swallowed, by skin contact or by inhalation.

Air transport (IATA)

PCA Excepted quantities (IATA) : E4 PCA Limited quantities (IATA) : Y644 PCA limited quantity max net quantity (IATA) : 1kg PCA packing instructions (IATA) : 669 PCA max net quantity (IATA) : 25kg CAO packing instructions (IATA) : 676 CAO max net quantity (IATA) : 100kg Special provisions (IATA) : A3, A43 ERG code (IATA) : 6L

Inland waterway transport

Classification code (ADN) : T2

Special provisions (ADN) : 210, 274, 802
Limited quantities (ADN) : 500 g
Excepted quantities (ADN) : E4
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 2

Rail transport

Classification code (RID): T2Special provisions (RID): 210, 274Limited quantities (RID): 500gExcepted quantities (RID): E4

Packing instructions (RID) : P002, IBC08

Special packing provisions (RID) : B4
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T3
Portable tank and bulk container special provisions : TP33

(RID)

Tank codes for RID tanks (RID) : SGAH, L4BH Special provisions for RID tanks (RID) : TU15

Transport category (RID) : 2

Special provisions for carriage – Packages (RID) : W11



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878



Special provisions for carriage - Loading, unloading : CW13, CW28, CW31

and handling (RID)

Colis express (express parcels) (RID) : CE9
Hazard identification number (RID) : 60

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

LGC claims research and development (R&D) exemption status under the Toxic Substances Control Act (TSCA) for this product. It may contain ingredients that are not on the TSCA inventory and only be used exclusively for research and development activities in accordance with the R&D exemption requirements under TSCA found at 40 CFR 720.36. It is the end-user's responsibility to understand and follow these requirements.

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Lipopolysaccharides, Escherichia coli is listed

SZW-lijst van mutagene stoffen : None of the components are listed SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed SZW-lijst van reprotoxische stoffen – : None of the components are listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

Chemicals Ordinance (SR 813.11) : Group 1

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms		
ACGIH	American Conference of Governement Industrial Hygienists	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
CAS-No.	Chemical Abstract Service number	



Safety Data Sheet





Abbreviations and acronyms		
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
DNEL	Derived-No Effect Level	
EC50	Median effective concentration	
EC-No.	European Community number	
ED	Endocrine disrupting properties	
EN	European Standard	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LD50	Median lethal dose	
OEL	Occupational Exposure Limit	
OSHA	Occupational Safety and Health Administration	
РВТ	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STOT	Specific target organ toxicity	
TRGS	Technical Rules for Hazardous Substances	
vPvB	Very Persistent and Very Bioaccumulative	
WGK	Water Hazard Class	

ECHA (European Chemicals Agency).

Data sources

: Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Classification for the USA in accordance with 29 CFR 1910.1200 (2012). Classification for the EU in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Training advice

: Normal use of this product shall imply use in accordance with the instructions for use and corresponding product packaging.

Indication of changes:

Revision 1.0: New SDS Created

Other information

: Author: JAD.

SDS Prepared for LGC by:
Pace Analytical Services, Inc.
Product Regulatory Services Group
1800 Elm Street
Minneapolis, MN 55414
United States
612-656-1175
paceSDS@pacelabs.com



Safety Data Sheet





Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Acute toxicity (oral), Category 2	Calculation method

LGC EU SDS

This information is disclosed to the best of LGC's knowledge. Disposal should be in accordance with applicable regional, national and local laws and regulations.