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

1.1 Product identifier

- Product Name: **Azide Dextrose Broth**

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

Use of the substance/preparation: Laboratory chemical Laboratory and analytical use

Use advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

- Name of Manufacturer: Arena BioScien, SEA
- Address of Manufacturer: Block 5, Street 9 Ismailia free zone. Ismailia- Egypt
- Telephone: +202 21813500/ +201113102057
- Email: admin@arenabioscientific.com

SECTION 2 Hazards identification

2.1 Classification of the substance or mixtureClassification (29 CFR 1910.1200)

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]
- Not classified as hazardous for supply
- Classification (67/548/EEC, 1999/45/EC) (OSHA 29 CFR 1910.1200)
- Not classified as hazardous for supply
- **Classification according to Regulation (EC) No 1272/2008 (CLP)**

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.1O	Acute toxicity (oral)	4	Acute Tox. 4	H302
4.1C	Hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

Supplemental hazard information

Code	Supplemental hazard information
EUH032	contact with acids liberates very toxic gas

2.2 Label elements

- Signal Word: Warning
- Symbols:



- Hazard phrases:

H302 Harmful if swallowed
H412 Harmful to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P264 Wash thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P273 Avoid release to the environment

Precautionary statements - response

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell
P330 Rinse mouth

Precautionary statements - disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations

Supplemental hazard information

EUH032 Contact with acids liberates very toxic gas.

Hazardous ingredients for labelling: Sodium azide

Labelling of packages where the contents do not exceed 125 ml
Signal word: **Warning**
Hazard pictogram(s):



H412 Harmful to aquatic life with long lasting effects.

EUH032 Contact with acids liberates very toxic gas. contains:
Sodium azide

Labelling of packages where the contents do not exceed 10 ml

Signal word:	Not required
Hazard pictogram(s):	Not required
Hazard statements:	Not required
Precautionary statements:	Not required

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 3 Composition/information on ingredients

3.1 Substances

INGREDIENT	g/l
Peptone	15
Beef extract	4.5
Dextrose	7.5
Sodium chloride	7.5
Sodium azide	0.2

3.2 Mixtures

4 **Description of the mixture**

Name of sub-stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Sodium azide	CAS No 26628-22-8 EC No 247-852-1 Index No 011-004-00-7 REACH Reg. No 01-211945701937-xxxx	0,58	Acute Tox. 2 / H300 Acute Tox. 1 / H310 Acute Tox. 2 / H330 STOT RE 2 / H373 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		GHS-HC IOELV

5 GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

6 IOELV:Substance with a community indicative occupational exposure limit value

Name of sub-stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
Sodium azide	CAS No 26628-22-8 EC No 247-852-1 Index No 011-004-00-7	-	-	27 $^{mg}/_{kg}$ 20 $^{mg}/_{kg}$ >0,054 $^{mg}/_{l}$ /4h	oral dermal inhalation: dust/mist

SECTION 4 First aid measures

4.1 Description of first aid measures

- General

In case of doubt, or when symptoms persist, seek medical attention.
In general, this product is not hazardous to humans or animals, but like any other chemical, it should be treated with care, respect, and common sense.

- Contact with skin

Wash off with soap and plenty of water. Consult a physician.
If skin irritation or rash occurs: Get medical advice/attention. Contaminated clothing should be laundered before reuse.

- Contact with eyes
- Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.
- Ingestion
- Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
- Inhalation

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

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

- None

SECTION 5 Fire-fighting measures

5.1 Extinguishing media

- In case of fire: co-ordinate firefighting measures to the fire surroundings water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO_2), May produce toxic fumes of carbon monoxide if burning. Hydrogen chloride (HCl)

5.2 Advice for firefighters

- in case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Soak up with inert adsorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. **Reference to other sections** For disposal see Section 13.

6.4 Reference to other sections

- Hazardous combustion products: see section 5.
- Personal protective equipment: see section 8.
- Incompatible materials: see section 10.
- Disposal considerations: see section 13.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

- Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended Storage Temperature: On receipt store between 10-30°C

Incompatible substances or mixtures: Observe hints for combined storage.

Consideration of other advice: Ventilation requirements (Use local and general ventilation. Specific designs for storage rooms or vessels Recommended storage temperature: 15 – 25 °C Specific end use(s).

SECTION 8 Exposure controls/personal protection

8.1 Control limits

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [mg/m³]	STEL [mg/m³]	Ceiling-C [mg/m³]	Notation	Source
EU	sodium azide	26628-228	IOELV	0,1	0,3		H	2000/39/EC
MT	sodium azide	26628-228	OELV	0,1	0,3		H	CAP. 424

Ceiling-C Ceiling value is a limit value above which exposure should not occur
H Absorbed through the skin
STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15minute period (unless otherwise specified)
TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Sodium azide	26628-22-8	DNEL	0,164 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Sodium azide	26628-22-8	DNEL	46,7 µg/kg	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Sodium azide	26628-22-8	PNEC	0,35 µg/l	aquatic organisms	freshwater	short-term (single instance)
Sodium azide	26628-22-8	PNEC	30 µg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Sodium azide	26628-22-8	PNEC	16,7 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Sodium azide	26628-22-8	PNEC	0,72 µg/kg	aquatic organisms	marine sediment	short-term (single instance)

8.2 Control parameters

- Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects

8.3 Exposure controls

- Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).
- Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
- Wear safety glasses approved to standard for ANSI Z87 or EN 166.
- Wear suitable protective clothing in accordance with good chemical hygiene practices.


Gloves


Safety Glasses


Lab Coat

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Homogenous, free-flowing.
- Odor: Characteristic
- pH: 7.2 ± 0.2
- Melting point/Range: No information available
- Boiling Point/Range: Not applicable
- Flashpoint: No information available
- Evaporation Rate: Not applicable
- Flammability: this material is combustible, but will not ignite readily
- Vapor Pressure: No information available
- Vapor Density: No information available
- Specific Gravity: No information available
- Solubility in water: Completely soluble in water
- Partition Coefficient (n-Octanol/Water): No information available
- Autoignition Temperature: Product is not self-igniting
- Viscosity: Product is free flowing powder
- Explosive Properties: Product does not present an explosion hazard
- Oxidizing Properties: No information available

9.2 Other information

- No information available

SECTION 10 Stability and reactivity

10.1 Reactivity

- No data available

10.2 Chemical stability

No data available

10.3 Conditions to avoid

No data available

10.4 Incompatible materials

No data available

10.5 Hazardous combustion products: see section 5

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Harmful if swallowed.

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
Sodium azide	26628-22-8	oral	27 mg/kg
Sodium azide	26628-22-8	dermal	20 mg/kg
Sodium azide	26628-22-8	inhalation: dust/mist	>0,054 mg/l/4h

Acute toxicity of component s

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Sodium azide	26628-22-8	inhalation: dust/mist	LC50	>0,054 – <0,52 mg/l/4h	rat
Sodium azide	26628-22-8	oral	LD50	27 mg/kg	rat
Sodium azide	26628-22-8	dermal	LD50	20 mg/kg	rat

- Contact with skin: No data available
- Contact with eyes: No data available
- Ingestion: No data available
- Inhalation: No data available
- Carcinogenicity: IARC: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- Mutagenicity: No evidence of mutagenic effects.
- Teratogenicity: No information available

SECTION 12 Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components

Name of sub-stance	CAS No	Endpoint	Value	Species	Exposure time
Sodium azide	26628-22-8	LC50	2,75 mg/l	fish	96 h
Sodium azide	26628-22-8	EC50	0,35 mg/l	algae	96 h

Aquatic toxicity (chronic) of components

Name of sub-stance	CAS No	Endpoint	Value	Species	Exposure time
Sodium azide	26628-22-8	EC50	79,3 mg/l	microorganisms	3 h
Sodium azide	26628-22-8	NOEC	0,244 mg/l	microorganisms	3 h

12.2 Persistence and degradability

- No information available

12.3 Bioaccumulation Potential

- No information available

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

This substance or mixture contains no components considered to be persistent,bioaccumulating nor toxic (PBT) at levels of 0.1% or higher.

12.6 Other Adverse Effects

- To the best of our knowledge, the properties of this material have not been fully evaluated.
- On available data, substance is not harmful to the environment.

12.7 Additional information

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Offer surplus and non- recyclable solutions to a licenced company. Contact a licenced professional waste disposal service to dispose off this material.

Disposal considerations Classification (REACH)

- Waste Codes in accordance with the European Waste catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier.The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.

SECTION 14 Transport information

14.1 UN Number
- Not classified as hazardous for transport

14.2 UN Proper Shipping Name
- Not applicable

14.3 Transport hazard class(es)
- Not applicable

14.4 Packing group
- Not applicable

14.5 Environmental hazards
- Not Classified

14.6 Special precautions for user
- Not Classified

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
- Not Classified

14.8 Domestic Surface Transport (US DOT)
- Proper Shipping Name: Not applicable
- DOT UN No.: Not applicable
- DOT Hazard Class: Not applicable
- DOT Packing Group: Not applicable

14.9 International Road/Rail (ADR/RID)
- Proper Shipping Name: Not applicable
- ADR UN No.: Not applicable
- ADR Hazard Class: Not applicable
- ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

14.10 Ocean/Sea (IMO/IMDG)
- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable
- IMDG Hazard Class: Not applicable
- IMDG Packing Group: Not applicable

14.11 Air (ICAO/IATA)
- Proper Shipping Name: Not applicable
- ICAO Un No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

SECTION 15 Regulatory information

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII none of the ingredients are listed

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list none of the ingredients are listed

Seveso Directive

2012/18/EU (Seveso III)			
No	**Dangerous substance/hazard categories**	**Qualifying quantity (tonnes) for the application of lower and upper-tier requirements**	**Notes**
	not assigned		

Deco-Paint Directive

VOC content	0 %

Industrial Emissions Directive (IED)

VOC content	0 %

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR) none of the ingredients are listed

Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	**Name acc. to inventory**	**CAS No**	**Listed in**	**Remarks**
Sodium azide	Metals and their compounds		a)	

a) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors none of the ingredients are listed **Regulation on drug precursors** none of the ingredients are listed

Regulation on substances that deplete the ozone layer (ODS) none of the ingredients are listed

Regulation concerning the export and import of hazardous chemicals (PIC) none of the ingredients are listed

Regulation on persistent organic pollutants (POP) none of the ingredients are listed

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	not all ingredients are listed
CA	DSL	not all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	not all ingredients are listed
VN	NCI	all ingredients are listed

Legend

AIIC Australian Inventory of Industrial Chemicals
CICR Chemical Inventory and Control Regulation
CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)
DSL Domestic Substances List (DSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC Inventory of Existing Chemical Substances Produced or Imported in China
INSQ National Inventory of Chemical Substances
ISHA-ENCS Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI Korea Existing Chemicals Inventory NCI
National Chemical Inventory
NZIoC New Zealand Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)

REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory
TSCA Toxic Substance Control Act

15.2 Chemical safety assessment

According to REACH, Article 14 (1) a chemical safety assessment has been carried out for this substance or components of this mixture when the substance has been registered in quantities of 10 tonnes or more per year per registrant.

SECTION 16 Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safetyrelevant
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Hazard pictogram(s):	yes
2.2		Hazard pictogram(s):: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 10 ml	yes
2.2		Signal word: Not required	yes
2.2		Hazard pictogram(s): Not required	yes
2.2		Hazard statements: Not required	yes
2.2		Precautionary statements: Not required	yes
2.3	Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
14.8	Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information: Not subject to ADR, RID and ADN.		yes
15.1	List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list: None of the ingredients are listed. (Or Concentration of the substance in a mixture: <0.1 % Mass concentration)	List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list: none of the ingredients are listed	yes
15.1		Other information: Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.	yes
15.1		National inventories: change in the listing (table)	yes

15.2	Chemical Safety Assessment: Chemical safety assessments for substances in this mixture were not carried out.	Chemical safety assessment: According to REACH, Article 14 (1) a chemical safety assessment has been carried out for this substance or components of this mixture when the substance has been registered in quantities of 10 tonnes or more per year per registrant.	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
Acute Tox.	Acute toxicity
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
CAP. 424	Occupational Health and Safety Authority Act (CAP. 424)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
Abbr.	**Descriptions of used abbreviations**
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer

NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU. Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture.
Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Date of Preparation: January 2024
Revision: Rev. 0
Replaces: New issue

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ARENA BioScien

Safety Data Sheet