

Sonication beads

version number: GHS 2.0
replaces version of: 2021-12-16 (GHS 1)

revision: 2022-11-07

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

1.1 product identifier

trade name **Sonication beads**
product code(s) C01020031

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

relevant identified uses for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number

emergency information service +32 4 364 20 50
this number is only available during the following of-
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison centre		
country	name	telephone
United Kingdom	National Poisons Information Service	111

SECTION 2: Hazards identification

2.1 classification of the substance or mixture

classification acc. to GHS

section	hazard class	category	hazard class and category	hazard statement
3.11	acute toxicity (inhal.)	4	Acute Tox. 4	H332

for full text of abbreviations: see SECTION 16.

2.2 label elements

labelling

- signal word warning

- pictograms

GHS07



- hazard statements

H332

harmful if inhaled.

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- precautionary statements
 - P261 avoid breathing dust/fume/gas/mist/vapours/spray.
 - P271 use only outdoors or in a well-ventilated area.
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P312 call a POISON CENTRE/doctor if you feel unwell.

- hazardous ingredients for labelling Zirconium dioxide

2.3 other hazards

of no significance


SECTION 3: Composition/information on ingredients

3.1 substances

not relevant (mixture)

3.2 mixtures

description of the mixture

name of substance	identifier	wt%	classification acc. to GHS	pictograms
Zirconium dioxide	CAS No 1314-23-4 EC No 215-227-2	≤ 100	Acute Tox. 4 / H332	

name of substance	Specific Conc. Limits	M-Factors	ATE	exposure route
Zirconium oxide	-	-	11 mg _i /4h →4.3 mg _i /4h	inhalation: vapour inhalation: dust/mist

for full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 description of first aid measures

general notes

do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation

if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

wash with plenty of soap and water.

following eye contact

remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

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

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SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media
water, foam, ABC-powder

unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
remove persons to safety.

for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up

advice on how to contain a spill
covering of drains, take up mechanically

advice on how to clean up a spill
take up mechanically.

other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections

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

recommendations

- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas. ground/bond container and receiving equipment.
- specific notes/details

dust deposits may accumulate on all deposition surfaces in a technical room. the product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

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advice on general occupational hygiene

wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities

managing of associated risks

- explosive atmospheres

removal of dust deposits.

- ventilation requirements

keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

7.3 specific end use(s)

see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters

this information is not available.

8.2 exposure controls

appropriate engineering controls

general ventilation.

individual protection measures (personal protective equipment)

eye/face protection

wear eye/face protection.

skin protection

- hand protection

wear protective gloves.

- other protection measures

take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.

respiratory protection

in case of inadequate ventilation wear respiratory protection.

environmental exposure controls

use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

physical state	solid
colour	white
odour	characteristic
melting point/freezing point	not determined

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boiling point or initial boiling point and boiling range	not determined
flammability	non-combustible
lower and upper explosion limit	not determined
flash point	not applicable
auto-ignition temperature	not determined
decomposition temperature	not relevant
pH (value)	not applicable
kinematic viscosity	not relevant
solubility(ies)	not determined

partition coefficient

partition coefficient n-octanol/water (log value)	this information is not available
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vapour pressure	not determined
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density and/or relative density

density	not determined
relative vapour density	information on this property is not available

particle characteristics	no data available
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9.2 other information

information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 reactivity

concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability

see below "Conditions to avoid".

10.3 possibility of hazardous reactions

no known hazardous reactions.

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10.4 conditions to avoid

there are no specific conditions known which have to be avoided.

hints to prevent fire or explosion

the product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

10.5 incompatible materials

there is no additional information.

10.6 hazardous decomposition products

reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects

test data are not available for the complete mixture.

classification procedure

the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

classification acc. to GHS

acute toxicity

harmful if inhaled.

- acute toxicity estimate (ATE)

inhalation: vapour 11 mg/l/4h

acute toxicity estimate (ATE) of components of the mixture			
name of substance	CAS No	exposure route	ATE
Zirconium oxide	1314-23-4	inhalation: vapour	11 mg/l/4h
Zirconium oxide	1314-23-4	inhalation: dust/mist	→4.3 mg/l/4h

skin corrosion/irritation

shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation

shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation

shall not be classified as a respiratory or skin sensitiser.

germ cell mutagenicity

shall not be classified as germ cell mutagenic.

carcinogenicity

shall not be classified as carcinogenic.

reproductive toxicity

shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure

shall not be classified as a specific target organ toxicant (single exposure).

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specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

11.2 information on other hazards

there is no additional information.

SECTION 12: Ecological information

12.1 toxicity

shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability

data are not available.

12.3 bioaccumulative potential

data are not available.

12.4 mobility in soil

data are not available.

12.5 results of PBT and vPvB assessment

data are not available.

12.6 endocrine disrupting properties

information on this property is not available.

12.7 other adverse effects

data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods

sewage disposal-relevant information

do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings

completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks

please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number	not subject to transport regulations
14.2 UN proper shipping name	not relevant
14.3 transport hazard class(es)	none
14.4 packing group	not assigned
14.5 environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations

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14.6 special precautions for user

there is no additional information.

14.7 maritime transport in bulk according to IMO instruments

the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

International Maritime Dangerous Goods Code (IMDG) - additional information

not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture national regulations (GB)

list of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

restrictions according to GB REACH, Annex 17

dangerous substances with restrictions (GB REACH, Annex 17)			
name of substance	name acc. to inventory	CAS No	No
Zirconium oxide	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3

15.2 Chemical Safety Assessment

chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

indication of changes (revised safety data sheet)

section	former entry (text/value)	actual entry (text/value)	safety-relevant
1.1	registration number (REACH): not relevant (mixture)		yes
3.2		mixtures: change in the listing (table)	yes
14.7	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		national regulations (GB)	yes
15.1		list of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list: none of the ingredients are listed	yes
15.1		restrictions according to GB REACH, Annex 17	yes

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section	former entry (text/value)	actual entry (text/value)	safety-relevant
15.1		dangerous substances with restrictions (GB REACH, Annex 17): change in the listing (table)	yes
16		abbreviations and acronyms: change in the listing (table)	yes
16	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.transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	key literature references and sources for data: Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	yes

abbreviations and acronyms

abbr.	descriptions of used abbreviations
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)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
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)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
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
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
vPvB	Very Persistent and very Bioaccumulative

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key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). 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
H332	Harmful if inhaled.

disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.