

**Sonication beads**

version number: GHS 1.0

date of compilation: 2022-11-07

**SECTION 1: Identification**

**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 center		
country	name	telephone
United States	American Association of Poison Control Centers	1-800-222-1222

**SECTION 2: Hazard(s) identification**

**2.1 classification of the substance or mixture**

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

section	hazard class	category	hazard class and category	hazard statement
A.11	acute toxicity (inhal.)	4	Acute Tox. 4	H332

for full text of abbreviations: see SECTION 16.

**2.2 label elements**

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- signal word warning

- pictograms

GHS07



- hazard statements

H332 harmful if inhaled.

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- precautionary statements
  - P261 avoid breathing dust/fume/gas/mist/vapors/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 center/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	≤ 100	Acute Tox. 4 / H332	

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: Fire-fighting 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. coordinate 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 vapors/dust/aerosols/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.

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.

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### 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 vapors 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

#### appearance

physical state	solid
color	white
odor	characteristic

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**other safety parameters**

pH (value)	not applicable
melting point/freezing point	not determined
initial boiling point and boiling range	not determined
flash point	not applicable
evaporation rate	not determined
flammability (solid, gas)	non-combustible
explosion limits of dust clouds	not determined
vapor pressure	not determined
density	not determined
vapor density	this information is not available
relative density	information on this property is not available
solubility(ies)	not determined

partition coefficient

- n-octanol/water (log KOW)	this information is not available
auto-ignition temperature	not determined
viscosity	not relevant (solid matter)
explosive properties	none
oxidizing properties	none

<b>9.2 other information</b>	there is no additional information
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**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.

**10.4 conditions to avoid**

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

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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 OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

acute toxicity

harmful if inhaled.

- acute toxicity estimate (ATE)

inhalation: vapor 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: vapor	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 sensitization

shall not be classified as a respiratory or skin sensitizer.

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).

specific target organ toxicity - repeated exposure

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

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

### 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/packages  
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

- |  |   |
|--|---|
| <b>14.1 UN number</b>                                      | not subject to transport regulations                                  |
| <b>14.2 UN proper shipping name</b>                        | not relevant  |
| <b>14.3 transport hazard class(es)</b>                     | not assigned  |
| <b>14.4 packing group</b>                                  | not assigned  |
| <b>14.5 environmental hazards</b>                          | non-environmentally hazardous acc. to the dangerous goods regulations |
| <b>14.6 special precautions for user</b>                   | there is no additional information.                                   |
| <b>14.7 transport in bulk according to IMO instruments</b> | the cargo is not intended to be carried in bulk.                      |

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**Information for each of the UN Model Regulations**

**transport of dangerous goods by road or rail (49 CFR US DOT) - additional information**

not subject to transport 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 specific for the product in question**

**industry or sector specific available guidance(s)**

**NPCA-HMIS® III**

Hazardous Materials Identification System. American Coatings Association.

category	rating	description
Chronic	/	none
Health	1	irritation or minor reversible injury possible
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

category	degree of hazard	description
Flammability	0	material that will not burn under typical fire conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

**15.2 Chemical Safety Assessment**

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

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**SECTION 16: Other information, including date of preparation or last revision**

**abbreviations and acronyms**

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
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)
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
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
vPvB	Very Persistent and very Bioaccumulative

**key literature references and sources for data**

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

transport of dangerous goods by road or rail (49 CFR US DOT). 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.