Safety Data Sheet

Complies Regulation (EC) No. 1907/2006 (REACH), Annex II, modified according to Regulation (EC) 453/2010 - Europe

ANTIGENES
Medizinische Labordiagnostika Soukou
Hustadtring 151
D-44801 Bochum
Germany
Tel.: +49 234-91795580
Fax: +49 234-91795581
Email: info@antigenes.de
Homepage: www.antigenes.de

SemenZinc

1. Identification of the substance/mixture and of the supplier

Product name: SemenZinc
Article number: ZR10400
Application: **Seminal zinc test**
***In vitro* diagnostics**
Manufacturer: ANTIGENES, Hustadtring 151, 44801 Bochum, Germany
Homepage: www.antigenes.de
E-Mail: info@antigenes.de
Distribution: ANTIGENES, Hustadtring 151, 44801 Bochum, Germany
Emergency call: For Germany
+49 (0) 551 - 19240 Giftinformationszentrum Nord

2. Hazards

2.1 Classification and labeling

Classification according to Regulation (EC) No. 1272/2008. Classification according to Directive 67/548 / EEC or Directive 1999/45 / EC. Labeling according to Regulation (EC) No. 1272/2008. The substance / product is classified and labeled according to the CLP Regulation.

Sodium carbonate

Harmful

Special risks and safety tips
R36 Irritating to eyes.
S2 Keep out of the reach of children.
S22 Do not breathe dust.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Hazard and safety instructions
H319 Causes serious eye irritation.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Sodium citrate

Special risks and safety tips
no R- and S-phrases
Hazard and safety instructions
no H-and P-phrases

5-Br-PAPS
[(2-5-bromo-2-pyridylazo)-5-(N-propyl-N-sulfo-propylamino) phenol]

Special risks and safety tips
no R- and S-phrases
Hazard and safety instructions
no H-and P-phrases

Dimethylglyoxim

Flammable

Special risks and safety tips
R11 Highly flammable.
no S-phrases
Hazard and safety instructions
H228 Flammable solid
no P-phrases

Salicylaldoxim

Harmful

Special risks and safety tips
R36+37+38 Irritating to eyes, respiratory system and skin.
no S-phrases
Hazard and safety instructions
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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Trichloroacetic acid (TCA)

Corrosive

Harmful

Enviromental Hazard

Special risks and safety tips
R35 Causes severe burns.
R50/R53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36+S37+S39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.
Hazard and safety instructions
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301/P330/P331 If swallowed: rinse mouth. Do NOT induce vomiting.
P305/P351/P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309/P310 If exposed or if you feel unwell: Immediately call a POISON CENTER or doctor.

Zinc sulfate

Corrosive

Harmful

Special risks and safety tips
R22 Harmful if swallowed.
R41 Risk of serious damage to eyes.
R50/R53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard and safety instructions
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects
P273 Avoid release to the environment.
P280 Avoid release to the environment.
P301+P312 F SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell.
P305/P351/P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337/P313 If eye irritation persists: Get medical advice/attention

2.2 Other hazard statements

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

3. Composition/ingredients

Compounds	Reagents	CAS-Code	Quantity
Solution 1	Sodium carbonate	144-55-8	<1 %
	Sodium citrate	6132-04-3	<1 %
	5-Br-PAPS	81608-06-2	<1 %
	Dimethylglyoxim	95-45-4	<1 %
	H_2O	7732-18-5	>99 %
Solution 2	Salicylaldoxim	94-67-7	<1 %
	H_2O	7732-18-5	>99 %

Solution 3	Trichloroacetic acid	76-03-9	<1 %
	H_2O	7732-18-5	>99 %
Solution 4	Zinc sulfate	7446-20-0	<1 %
	H_2O	7732-18-5	>99 %

4. First aid measures

4.1 Description of first aid measures

After inhalation of dusts: supply fresh air; if any symptoms occur seek medical advice.
After skin contact: wash with water.
After eye contact: rinse with open eyelid for 10 minutes under running water and seek medical advice.
After swallowing: rinse mouth and then drink water.
If symptoms persist seek medical advice.

4.2 The most important acute and delayed symptoms and effects

Cause irritation, cough, stomach and intestinal disorders

4.3 Indication of immediate medical attention and special treatment

Skin contact: rinse out quickly and thoroughly with water. Continue to monitor skin. Consult a doctor if any swelling occurs.
Revenue: immediately spit out and rinse thoroughly with water. If any discomfort is felt, consult a doctor immediately.
Eyes: Rinse immediately with an eyewash. Rinse the eyes thoroughly under running tap water. Keep an eye on the eyesight and look for a doctor during the deterioration.
Inhalation: Immediately breathe fresh air, rest and breathe in and out several times. Call a physician if the deterioration occurs.

5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Unsuitable extinguishing agents: for this substance / mixture no limitations of extinguishing agents are known.

5.2 Special hazards arising from the substance or mixture

Product non-combustible.
Ambient fire may liberate hazardous vapors.
In case of fire can be released: Carbon monoxide and carbon.

5.3 Advice for firefighters

Protective equipment: Wear self-contained breathing apparatus.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact. Do not breathe dust.

6.2 Environmental precautions

Do not flush into sewers or waterways.

6.3 Methods and material for containment and cleaning up

Pick up mechanically. Dispose of the captured material properly. Clean the area with gloves and masks with water and dry thoroughly. Air the room. Wash coat and contaminated clothing.

7 Handling and storage

Store at cold temperature (2-8°C).

8 Exposure controls/personal protection

Wear gloves, mask and coat while handling during the execution. Avoid smoking and acting with high heat-generating appliances.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

	Solution 1	Solution 2	Solution 3
Aggregate state	liquid	liquid	liquid
Color	pink	clear	clear
Odor	not determined	not determined	not determined
Melting point	not determined	not determined	not determined
Boiling point	not determined	not determined	not determined
Inflammability	not determined	not determined	not determined
Firing point	not determined	not determined	not determined
Steam pressure	not determined	not determined	not determined
Relative density	not determined	not determined	not determined
Solubility	not determined	not determined	not determined

Viscosity	not determined	not determined	not determined
Explosive properties	not determined	not determined	not determined
Oxidizing properties	not determined	not determined	not determined
Explosion limits	not determined	not determined	not determined

	Solution 4
Aggregate state	liquid
Color	clear
Odor	not determined
Melting point	not determined
Boiling point	not determined
Inflammability	not determined
Firing point	not determined
Steam pressure	not determined
Relative density	not determined
Solubility	not determined
Viscosity	not determined
Explosive properties	not determined
Oxidizing properties	not determined
Explosion limits	not determined

9.2 Other information: none

10 Stability and reactivity

	Solution 1	**Solution 2**
Reactivity	the product has not been tested	the product has not been tested
Chemical stability	stable when properly stored and handled	stable when properly stored and handled
Thermal decomposition / conditions to be avoided	no decomposition if used according to specifications	no decomposition if used according to specifications
Possibility of hazardous reactions	reactions with strong oxidizing agents	reactions with strong oxidizing agents
Conditions to avoid	avoid strong heating, no further relevant information available	avoid strong heating, no further relevant information available
Incompatible materials	oxidizing agents	oxidizing agents
Hazardous decomposition products	carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)	carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)

	Solution 3	**Solution 4**
Reactivity	the product has not been tested	the product has not been tested
Chemical stability	stable when properly stored and handled	stable when properly stored and handled
Thermal decomposition / conditions to be avoided	no decomposition if used according to specifications	no decomposition if used according to specifications
Possibility of hazardous reactions	reactions with strong oxidizing agents	reactions with strong oxidizing agents
Conditions to avoid	avoid strong heating, no further relevant information available	avoid strong heating, no further relevant information available
Incompatible materials	oxidizing agents	oxidizing agents
Hazardous decomposition products	carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)	carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)

11 Toxicological information (based on individual ingredients of the solution(s))

Sodium carbonate

Dangerous health effects
Classification-relevant LD_{50} / LC_{50} values:
LC_{50} 2.3 mg/l /2 h.(inhalative, rat)
LD_{50} 4090 mg/kg (oral, rat)
Subacute to chronic toxicity
Bacterial mutagenicity: Escherichia coli: negative.
Not harmful in animal experiments.
Skin contact: slight irritation
On contact with eyes: strong irritation
Ingestion: Irritation to the mouth mucous membranes, throat, esophagus and intestinal tract.
Additional toxicological information: After taking large amounts:

vomiting, vomiting, stomach pain, breathing problems, changes in blood, anxiety, convulsions, liver, kidney, heart and circulatory function disorders.

Sodium citrate

Dangerous health effects
Classification-relevant LD_{50} / LC_{50} values: Quantitative data on the toxicity of this product are not available.
Primary irritation
On the skin: strong irritation, burns.
On the eye: slight irritation.
After inhalation: slight irritation.
Sensitization: no sensitizing effects known.
Additional toxicological information:
After swallowing large amounts, burns of the esophagus and stomach, bloody vomiting, disturbance of the electrolyte balance can occur.
Further information: The product must be handled with the care necessary with chemicals.

5-Br-PAPS

Dangerous health effects
Classification-relevant LD_{50} / LC_{50} values: Quantitative data on the toxicity of this product are not available.
Primary irritation:
On the skin: no data available
On the eye: no data available
After inhalation: no data available
Sensitization: no sensitizing effects known.
Aspiration hazard: no data available.
Additional toxicological information: no data available

Dimethylglyoxim

Dangerous health effects
Classification-relevant LD_{50} / LC_{50} values: Quantitative data on the toxicity of this product are not available.
Primary irritation:
On the skin: no irritation.
On the eye: no irritation.
After inhalation: no data available.
Sensitization: no sensitizing effects known.

Salicylaldoxim

Dangerous health effects
Classification-relevant LD_{50} / LC_{50} values: Quantitative data on the toxicity of this product are not available.
Primary irritation
Skin irritation or corrosion: causes skin irritation.
Eye irritation or corrosion: causes severe eye irritation.
Sensitization: no sensitizing effects known.
Germ cell mutagenicity: no effects known.
Carcinogenicity: no data are available on the classification of this substance for its carcinogenicity from EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: no effects known.
Specific target organ toxicity - repeated exposure: no effects known.
Specific target organ toxicity - single exposure: may cause respiratory irritation.
Aspiration hazard: no effects known.
Subacute to chronic toxicity: no effects known.
Additional toxicological information: To our current knowledge, the acute and chronic toxicity of this substance is not entirely known.

Trichloroacetic acid

Dangerous health effects
Classification-relevant LD_{50} / LC_{50} values: Quantitative data on the toxicity of this product are not available.
On the skin: strong caustic effect on skin and mucous membranes.
On the eye: burns, risk of blindness.
After inhalation: burns of mucous membranes, coughing, dyspnoea.

After swallowing: burns in the mouth, pharynx, esophagus and gastrointestinal tract. Risk of Perforation.
Primary irritant effect
Skin: burns.
Eyes: severe irritations.
Sensitization: no sensitizing effect known.

Zinc sulfate

Dangerous health effects
Classification-relevant LD_{50} / LC_{50} values: Quantitative data on the toxicity of this product are not available.
Primary irritation:
On the skin: slight irritation.
On the eye: strong irritation with danger of serious eye damage.
After inhalation: Mucosal irritation, cough, resorption. Pulmonary edema possible after latency.
Sensitization: no sensitizing effects known
Specific target organ toxicity: In case of single exposure: the substance or mixture is classified as non-target-toxic.
In case of repeated exposure: the substance or mixture is classified as non-target-toxic.
Additional toxicological information: Systemic effects: vomiting, diarrhea, pain. After ingestion of large amounts: blood pressure drop, cardiac circulatory disorders and / or circulatory collapse**.**

12 Ecological information

Potential damages unknown. Do not empty into drains / groundwater / soil.

13 Disposal considerations

Used solutions and solutions that are past life must be disposed of as hazardous waste, it is to follow the local guidelines; do not release to drains, groundwater and/or soil.

14 Transport information

Not classified in transport of dangerous goods.

15 Regulatory information

15.1 Safety, health and environmental regulations/specific legislation for the substances or mixture.
National regulations: no
Restriction of occupation: no
15.2 Chemical safety assessment

A chemical safety assessment has not been carried out

16 Other information

All chemicals are potentially dangerous. Therefore they have to be handled only by specially trained personnel with the necessary care. Although certain hazards are described herein, we cannot guarantee that these are the only hazards. This information is based on our present knowledge; however, it offers no assurance of product properties and establishes no contract legal rights. To our experience and the information provided the product does not have any harmful effects when used and handled according to specifications.