SAFETY DATA SHEET

1 – IDENTIFICATION OF SUBSTANCE / AGENT AND COMPANY / FIRM

1.1 Identification of substance / agent
Name: Zinc dust
Product code: 5001

1.2 Identified uses of the relevant substance or mixture and uses advised against
Use: Zinc dust is auxiliary agent for diagnostic kits containing test NIT.

1.3 Details of the supplier of the safety data sheet
Name: DIAGNOSTICS s.r.o.
Address: Hodská 68, 924 01 Galanta
Tel.: +421 917 742 927
E-mail: info@diagnostics.sk

1.3 Emergency link
Organization: National toxicological information centre, Limbová 5, 833 05 Bratislava
Tel.: +421-2-54 774 166

2 – IDENTIFICATION OF HAZARDS

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410
2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram:

Signal Word: Warning
Hazard statement(s)
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)
P273 Avoid release to the environment.
P391 Collect spillage.
P501 Dispose of contents/ container to an approved waste disposal plant.
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3 – COMPOSITION / INFORMATION ON INGREDIENTS

Product contains: VP 1a: 1 – naphthol, VP 1b: Ethyl alcohol, VP 2: Potassium chloride

CAS No.	Component	Percentage	Index No	ES No.
7440-66-6	Zinc dust	100%	030-001-01-9	231-175-3

4 – FIRST AID MEASURES

4.1 Description of first-aid measures
No data available
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
No data available

5 – FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Special powder against metal fire Sand Cement
Unsuitable extinguishing media
Water Foam
5.2 Special hazards arising from the substance or mixture
Zinc/zinc oxides
Combustible.
5.3 Advice for firefighters
No data available
5.4 Further information
No data available

6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
For personal protection see section 8.
6.2 Environmental precautions
No data available
6.3 Methods and materials for containment and cleaning up
No data available
6.4 Reference to other sections
For disposal see section 13.

7 – HANDLING AND STORAGE

7.1 Precautions for safe handling
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Handle and store under inert gas. Air and moisture sensitive.
Storage class
Storage class (TRGS 510): 11: Combustible Solids
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Ingredients with workplace control parameters
8.2 Exposure controls
Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must
be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges, or type ABEK (EN 14387) as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Physical state	dust
b) Color	dark grey
c) Odor	odorless
d) Melting point/freezing point	
	Melting point/range: 420 °C
e) Initial boiling point and boiling range	
	907 °C at 1.013,25 hPa
f) Flammability (solid,gas)	
	May form combustible dust concentrations in airg) Upper/lower flammability or explosive limits
h) Flash point	Not applicable
i) Autoignition temperature	
	does not ignite
j) Decomposition temperature	
	No data available
k) pH	Not applicable
l) Viscosity	Viscosity, kinematic: No data available
	Viscosity, dynamic: > 500 mPa.s at 417 °C
m) Water solubility	0,0001 g/l at 20 °C - OECD Test Guideline 105- slightly soluble
n) Partition coefficient:	Not applicable for inorganic substances
o) Vapor pressure	1,33 hPa at 487 °C
p) Density	7,133 g/cm3 at 25 °C
Relative density	6,9 at 22 °C
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

9.2 Other safety information

No data available

10 – STABILITY AND REACTIVITY

10.1 Reactivity
No data available
10.2 Chemical stability
No data available

Contains the following stabilizer(s):
Zinc oxide (<=33 %)

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents, Acids and bases

10.6 Hazardous decomposition products
In the event of fire: see section 5

11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

VP 1a : 1-naphthol

Acute toxicity
LD50 Oral - Rat - male and female - > 2.000 mg/kg (zinc powder, zinc dust stabilized)
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - > 5,41 mg/l - dust/mist
(zinc powder, zinc dust stabilized)
(OECD Test Guideline 403)
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit (zinc powder, zinc dust stabilized)
Result: No skin irritation - 5 d
Remarks: (in analogy to similar products)
(ECHA)
The value is given in analogy to the following substances: Zinc oxide

Serious eye damage/eye irritation
Eyes - Rabbit (zinc powder, zinc dust stabilized)
Result: No eye irritation - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
Maximization Test - Guinea pig (zinc powder, zinc dust stabilized)
Result: negative
(OECD Test Guideline 406)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: Zinc oxide

Germ cell mutagenicity
Test Type: Ames test
(zinc powder, zinc dust stabilized)
Test system: Escherichia coli/Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: Zinc sulphateTest Type: In vitro mammalian cell gene mutation test
(zinc powder, zinc dust stabilized)
Test system: mouse lymphoma cells
Metabolic activation: without metabolic activation
Result: negative
Remarks: (in analogy to similar products)
(ECHA)
The value is given in analogy to the following substances: zinc chlorideTest Type: Chromosome aberration test in vitro
(zinc powder, zinc dust stabilized)
Test system: Other cell types
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (in analogy to similar products)

(ECHA)
The value is given in analogy to the following substances: zinc chloride (zinc powder, zinc dust stabilized)
Test Type: Micronucleus test
Species: Mouse
Cell type: Red blood cells (erythrocytes)
Application Route: Intraperitoneal
Result: negative
Remarks: (in analogy to similar products)(ECHA)
The value is given in analogy to the following substances: Zinc sulphate

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Assessment : The substance/mixture does not containcomponents considered to have endocrine disrupting properties according to REACH Article57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU)018/605 at levels of 0.1% or higher.
Repeated dose toxicity - Rat - male and female - Oral - 13 Weeks - NOAEL (No observed adverse effect level) - 31,52 mg/kg - LOAEL (Lowest observed adverse effect level) - 53,8 mg/kg (zinc powder, zinc dust stabilized) RTECS: ZG8600000
Effects due to ingestion may include:, chills, dry throat, sweet taste, Fever, Cough, Nausea, Vomiting, Weakness, Contact with eyes or skin may cause:, Irritation (zinc powder, zinc dust stabilized)
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (zinc powder, zinc dust stabilized)

12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish flow-through test LC50 - other fish - 0,439 mg/l - 96 h (zinc powder, zinc dust stabilized) Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebratesstatic test EC50 - Ceriodaphnia dubia (water flea) - 0,155 mg/l – 48 h (zinc powder, zinc dust stabilized)
(US-EPA)
Toxicity to algae static test NOEC - Pseudokirchneriella subcapitata (green algae) - 0,05 mg/l - 3 d (zinc powder, zinc dust stabilized)(OECD Test Guideline 201)
Toxicity to bacteria static test NOEC - activated sludge - 0,1 mg/l - 4 h (zinc powder, zinc dust stabilized)(ISO 9509)
Remarks: (in analogy to similar products)

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

13 – DISPOSAL INFORMATION

13.1 Waste treatment methods

No data available

14 – TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc powder, zinc dust stabilized, Zinc oxide)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc powder, zinc dust stabilized, Zinc oxide)

IATA: Environmentally hazardous substance, solid, n.o.s. (zinc powder, zinc dust stabilized, Zinc oxide)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15 – REGULATORY INFORMATION

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : ENVIRONMENTAL HAZARDS

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16 – OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.H319 Causes serious eye irritation.

Information stated in this safety data sheet is based on current state of our knowledge.
It characterises product with consideration on adequate safety measures. It does not represent warranty of material properties.