

Material Safety Data Sheet

According to 878/2020/EC
1272/2008/EC (CLP/GHS) and 1907/2006/EC (REACH),



Product name: **GFZnP-ED**

Code: **900-GFZNP-ED-250**

Version: 1.0

Previous issue: -

Recent issue: 29.04.2026

1. Identification of the substance / preparation and company

1.1 Product type and intended use

Product name: **GFZnP-ED**

Product code: **900-GFZNP-ED-250**

Standard packaging size: 250 µL, 5 mM

GFZnP-ED is a water-soluble laboratory chemical, stable at neutral pH. It is a green fluorescent protein-based sensor for detecting Zn²⁺ in biological samples

Manufacturer / Supplier identification:

Manufacturer

BVC Nonprofit Ltd.

43-45. Liliom Street, Budapest, H-1094 HUNGARY

E-mail: info@brainvisioncenter.com

Distributor / Responsible for SDS:

Femtonics Ltd.: 9-12 Asztalos Sándor Street, Budapest H-1087, Hungary

Phone: +36 1 210-3349

E-mail: info@femtonics.eu

1.2 Emergency telephone number

Emergency phone number: +36 80 201199

Health Toxicological Information Service (ETTSZ H-1096 Budapest, Nagyvárad tér 2.)

Phone: +36 1 4766464 or +36 80 201199

Please check Health Toxicological Information Service in the country of usage.

2. Hazards identification

2.1 Classification of the Substance or Mixture

Classification according to Regulation (EC) No 1272/2008 (CLP/GHS):

Physical and chemical hazards: Not classified as a physical or chemical hazard

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP/GHS Regulation

Pictogram:



Signal word: WARNING

Hazard Statements (H-phrases):

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

Precautionary Statements (P-phrases):

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Effective date: 29.04.2026.

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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.

Supplementary hazard information: Not assigned.

2.3 Other hazards

This product does not meet the PBT/vPvB criteria of REACH, annex XIII.

3. Composition /information on ingredients

No components need to be disclosed according to the applicable regulations.

3.1 Substances

(Z)-5-((8-((2-(dimethylamino)ethyl)(methyl)amino)quinolin-2-yl)methylene)-2-(phenylamino)-3,5-dihydro-4H-imidazol-4-one

Formula: C₂₄H₂₆N₆O

Molecular Weight: 414.51 Da

CAS Number: 2781075-85-0

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of the danger area.

If inhaled

If breathed in, move person into fresh air. If breathing is irregular or not breathing, give artificial respiration or oxygen by trained personnel. Consult a physician.

In case of skin, eyes contact

Wash with plenty of water. Remove soaked clothing, shoes immediately. Check and remove contact lenses. Immediately flush eyes with running water extensively for at least 15 minutes, keeping eyelids open. Get medical attention.

If swallowed

Make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

No data available. Show this safety data sheet to the doctor in attendance.

5. Fire hazard / fire-fighting measures (54 / 2014. (XII. 5) BM)

Non-flammable class. Material is non-combustible.

5.1 Extinguishing media

Coordinate fire-fighting measures to the fire surroundings. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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5.2 Special hazards arising from the substance

Unusual Fire and Explosive Hazards: may emit toxic gases upon thermal decomposition.

5.3 Advice for firefighters

Wear protective clothing to prevent contact with skin and eyes. SCBA, keep adjacent containers cool by spraying with water. If possible, the product needs to be removed from danger. If possible, the extinguishing water should not be discharged into the drain.

5.4 Other information

No data available.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Use in a chemical fume hood. Avoid inhalation, contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Special clothing is required to deal with the spillage, follow the information in section 8.

6.2 Environmental precautions

Data not yet available – treat as potentially toxic if released into the environment. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Store in suitable, closed containers for disposal. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under disposal section (13).

6.4 Reference to other sections

For information on safe handling see section 7, for information on personal protective equipment see section 8 of this data sheet. For waste disposal information see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Keep general measures applied for normal operations with chemicals and for working in the laboratory. Do not eat, drink or smoke in work areas and wash hands after handling this product. Avoid contact with skin and eyes, wash hands after use.

Information about protection against explosions and fires

Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

Technical measures

Not determined.

Advice on general occupation and hygiene

Not determined.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and containers

The general regulations for storing chemicals must be observed. Store in the labelled, tightly closed, original containers, within the temperature range indicated on the label.

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Storage conditions

Store in the original closed container. Avoid direct light.

Incompatible materials

Not determined.

Packaging materials

Not determined.

7.3 Specific end use(s)

Use in a laboratory fume hood where possible. Refer to employer's risk assessment.

8. Exposure controls / personal protection

8.1 Control parameters (5/2020. (II. 6.) ITM decree)

Occupational exposure limits:

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

General industrial health good practice should be followed. Handle in accordance with good industrial hygiene and safety practices.

Adequate ventilation should be provided. Avoid prolonged contact with skin and eye, swallowing the product. Ensure washing facilities (warm water) after working hours and before breaks. Wash thorough hands after using the product. Laboratories where the product is used, should be equipped with a safety shower and eye wash station.

Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place it in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13.

Personal protective equipment

Protective equipment must be certified by an appropriately licensed organization.

Eye/face protection

Safety glasses recommended during usage. Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Provide eyewash bottle with clean water.

Skin protection

Protective clothing, general (lab. coat).

Hand protection

Handle with protective gloves (EN 374) (natural rubber, neoprene, nitril, PVC, etc.).

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.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.

Thermal hazard

No data available.

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8.3 Environmental exposure control

Avoid product release to live waters public sewers or the soil.

9. Physical and chemical properties

9.1 Appearance

Physical state:	powder
Colour:	light brown
Odour:	odourless
Melting point:	not applicable
Boiling point:	not applicable

9.2 Others

Lower:	not applicable
Upper:	not applicable
Explosive properties:	not explosive
Flash point (COC):	not applicable
Ignition temperature:	not applicable
Autoignition:	not applicable
Decomposition temperature:	not determined
pH:	not applicable
Oxidizing properties:	not applicable
Evaporation rate:	not determined
Vapour pressure at 20°C:	not applicable
Density at 20°C:	not applicable
Solubility in water:	miscible, soluble in water up to 50 mM
Organic solvents:	Ethanol to 0.1 M
Phosphate buffered saline	to 80 mM
Partition coefficient:	not determined
Viscosity:	
Dynamic:	not determined
Kinematics:	not determined

10. Stability and reactivity

We can only offer a general guide as information on product stability, especially in solution, has sporadically been reported. Our general recommendations are:

Reactivity:	Stable under recommended transport or storage conditions.
Chemical stability:	No decomposition under normal conditions if handled and stored properly.
Possibility of hazardous reactions:	Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.
Conditions to avoid:	Heat, moisture, direct light.
Incompatible materials:	Strong acids/alkalis, strong oxidising/reducing agents.
Hazardous decomposition products:	May emit toxic gases such as carbon dioxide, carbon monoxide and nitrogen oxide upon thermal decomposition. Sonication or gentle warming (45-60 °C) accelerates dissolution.
Solubility Advice:	

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11. Toxicological information

Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	No data available.
Skin corrosion/ Skin irritation	May cause skin irritation.
Serious eye damage/eye irritation	The substance may cause eye damage.
Respiratory or skin sensitization	May cause irritation mucous membranes, upper respiratory tract.
Germ cell mutagenicity	Classification criteria are not met based on available data.
Carcinogenicity IARC:	Classification criteria are not met based on available data.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	Toxicological properties have not been fully investigated.
Specific target organ toxicity - repeated exposure	Toxicological properties have not been fully investigated.
Aspiration hazard	May cause upper respiratory tract

Information on likely routes of exposure

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be mild irritation at the site of contact.
Eyes	May be irritation and redness.
Sensitization	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. May emit toxic gases such as carbon dioxide, carbon monoxide and nitrogen oxide upon thermal decomposition.

Mixture versus substance information

Not applicable.

Information on other hazards

RTECS: No data available. To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

12. Ecological information

The product is not classified as hazardous to the environment.

12.1 Toxicity

No data available.

12.2 Persistence and degradability

May emit toxic gases such as carbon dioxide, carbon monoxide and nitrogen oxide upon thermal decomposition.

12.3 Bioaccumulative potential

Will not bio-accumulate. Partition coefficient - not determined.

12.4 Mobility in soil

Product is mobile in soil as it is water soluble.

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12.5 Results of PBT and vPvB assessment

This product does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

Not determined. The product does not contain substances that deplete the ozone layer.

13. Disposal considerations

Notes: classification of product waste is also dependent on the conditions of application. Disposal must be in compliance with national and local regulations.

13.1 Product disposal

Transfer to a suitable container and arrange for collection by a specialized disposal company in accordance with National legislation. Waste identification number: EWC code: 07 05 13 solid wastes containing hazardous substances.

13.2 Packaging disposal

Containers with product residue should also be treated according to EU directives and national regulations. Packaging EWC: 15 01 10* packaging waste containing or contaminated with hazardous substances as residues.

14. Transport information

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID and IATA.

14.1 UN number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

14.3 Transport hazard class(es)

ADR/RID: Not applicable.

IMDG: Not applicable.

IATA: Not applicable.

14.4 Packing group

Product not hazardous for transport - no information required.

14.5 Environmental hazards

This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

14.6 Special precautions for user

Product not hazardous for transport – no data available.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Product not hazardous for transport - no information required.

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15. Regulatory information

This safety datasheet complies with the requirements of Regulation No. 1907/2006/EC, No. 1272/2008/EC (CLP/GHS) and No. 2020/878 (EC), No. 453/2010/EC.

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

The product is not subject to REACH restrictions.

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as amended, incorporating all amendments up to, and including, Regulation (EC) No 588/2018 and Regulation (EC) No 589/2018. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures as amended, incorporating all amendments up to, and including, Regulation (EC) No 776/2017. 453/2010/EC amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2 Chemical safety assessment

No chemical safety assessment for this product has been carried out.

15.3 Danger symbol(s) and indication(s)

See in section 2.

15.4 Hazardous components

Mandatory statements on label:

H-phrases:

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

P-phrases:

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.

15.5 Seveso category

Not classified.

15.6 Storage category

Storage category 12: not flammable powder.

16. Other information

16.1 Training advice

Product should only be handled by trained operators.

16.2 Additional information

The above information describes only the safety requirements of the product and is based on our current best knowledge. The purpose of the information is to provide advice on the safe handling, storage, processing, transport and disposal of the product named in this safety data sheet. The information cannot

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be transferred to other products. In the case of mixing or processing of the product with other products, the information contained in this safety data sheet may not necessarily apply to the newly formulated material.

It is the responsibility of the user to observe all current regulations and consider recommendations on the use of application of product.

Revisions:			
Section	Subject of change	Date	Version
1-16	Initial version	29.04.2026	1.0