

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Stainless steel powder

Revision Date: 3/25/2026

Version: 3

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	Stainless steel powder, Nanoform, 60-80 nm
Product code	NM-0035
CAS	65997-19-5
EC-Number	N/A
REACH No.	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration envisaged for a later registration deadline.

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

Identified uses Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Supplier	IoLiTec Ionic Liquids Technologies GmbH Im Zukunftspark 9 D – 74076 Heilbronn Germany
Telephone	+49 (0)7131-89839-0
Fax	+49 (0)7131-89839-109
Email	msds@iolitec.de

1.4 Emergency telephone number

Emergency telephone +49 (0)151-41255671

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2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable solids (Category 1),

Skin Sens. (Category 1),

Serious eye damage/Eye irritation, (Category 2),

Specific Target Organ Toxicity - Single exposure: Respiratory tract irritation,
(Category 3)

Carcinogen (Category 2),

Specific Target Organ Toxicity - Repeated exposure: Respiratory tract irritation,
(Category 2).

Hazardous respirable dust may be formed when used.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Pictogram



Signal word

Danger

Hazard statements

H-phrases

EUH212	Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
H228	Flammable solid.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

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H351	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H372	Causes damage to organs through prolonged or repeated exposure (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Precautionary statements

P phrases

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/ sparks/ open flames/ hot surfaces. - No smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof equipment.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.

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P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with soap and water.
P333 + P313	If skin irritation or a rash occurs: Get medical advice/attention.
P321	Specific treatment (see on the label).
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get Medical advice/attention if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use sand or fire extinguisher class D for extinction.
P403 + P233	Store in a well-ventilated place. Keep the container tightly closed.
P405	Store locked up.
P501	Dispose of contents/containerf in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.

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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.

Ecological information:

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.

Toxicological information:

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.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Stainless steel powder, 60-80 nm

CAS: 65997-19-5

EC-Number: N/A

Ingredient name	Contents	Classification
Stainless steel powder, 60-80 nm	99.9%	Flam. Sol. 1, Skin Sens. 1, Eye Irrit. 2, STOT SE 3, Carc. 2, STOT RE 2

Formula	Molecular Weight
Fe, 60-80 nm	55.85 g/mol

Composition/Data on components:

Elements	C	Mn	P	S	Si	Cr	Ni	Mo	Fe
Mw.-%	0.03	2.00	0.045	0.03	0.75	16-18	10-14	2-3	Balance

No components need to be disclosed according to the applicable regulations

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4 FIRST AID MEASURES

4.1 Description of first aid measures

General

Contaminated clothing should be removed and washed before being reused.

Contaminated clothing should not be allowed out of the work place.

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, provide artificial respiration/oxygen. [Get medical attention if you feel unwell.](#)

Ingestion

Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.

Skin

Wash the skin immediately with soap and water. [Get medical attention if you feel unwell.](#)

Eyes

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. [Get medical attention if you feel unwell.](#)

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 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use suitable fire-fighting measures depending on the surrounding environment.

Use: Dry chemicals, sand, dolomite etc.

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5.2. Special hazards arising from the substance or mixture

Avoid water in straight hose stream, will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Ambient fire may liberate hazardous vapours.

5.3. Advice for firefighters

Wear self-contained breathing apparatus as combustion may produce hazardous fumes.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing and avoid inhalation of vapor, skin or eye contact.

6.2 Environmental precautions

Avoid washing into water courses. Avoid contaminating public drains or water supply.

6.3 Methods and materials for containment and cleaning up

Avoid contact with skin or inhalation of spillage, dust or vapor. Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

6.4 Reference to other sections

For disposal see section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle under dry argon. Minimize dust generation and accumulation. Keep away from heat, sparks and open flame. Do not use in confined spaces without adequate ventilation and/or respirator.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store at moderate temperatures in dry, well-ventilated area. Chemical storage.

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Storage class

Storage class (TRGS 510): LGK . 4.1B: Flammable solid hazardous material.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters.

8.2 Exposure controls

Eye/face protection

Safety glasses with side-shields conforming to EN166 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious 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

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Physical state	Solid
b) Color	Black.
c) Odor	Odorless.
d) Melting point/freezing point	2400-2800° C
e) Initial boiling point	no data available
f) Flammability	Highly flammable.
g) Upper/lower explosive limits	no data available
h) Flash point	no data available
i) Autoignition temperature	no data available
j) Decomposition temperature	no data available
k) pH	no data available
l) Kinematic viscosity	no data available
m) Water solubility	Insoluble.
n) Partition coefficient	no data available
o) Vapor pressure	no data available
p) Density	no data available
q) Relative vapor density	no data available
r) Particle characteristics	Spherical. APS 60-80 nm
s) Explosive properties	no data available
t) Oxidizing properties	no data available

9.2 Other safety information

No data available.

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10 STABILITY AND REACTIVITY

10.1 Reactivity

No particular stability concerns if handled according to specifications.

10.2 Chemical stability

Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Strong oxidizing agents. Strong acids, Halogens, Bases, Palladium undergoes a violent reaction with arsenic, Methanol, Ethanol, Alcohols.

10.6 Hazardous decomposition products

In the event of fire: see section 5.

11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes

Acute toxicity

No data available.

Skin corrosion/irritation

Skin Sens. (Category 1),

Serious eye damage/eye irritation

Serious eye damage/Eye irritation, (Category 2),

Respiratory or skin sensitization

Skin Sens. (Category 1),

Respiratory tract irritation.

Germ cell mutagenicity

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No data available.

Carcinogenicity

Carcinogen (Category 2),

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

Specific Target Organ Toxicity - Single exposure: Respiratory tract irritation,
(Category 3)

Specific target organ toxicity - repeated exposure

Specific Target Organ Toxicity - Repeated exposure: Respiratory tract irritation,
(Category 2).

Aspiration hazard

Inhalation - May cause respiratory irritation.

Potential health effects

Inhalation May cause respiratory irritation.

Ingestion May be harmful if swallowed.

Skin Skin Sensitization.

Eyes Serious eye damage/Eye irritation.

Signs and Symptoms of Exposure

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

11.2 Additional Information

Endocrine disrupting properties

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.

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

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12 ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

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

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 CONSIDERATIONS

13.1 Waste treatment methods

Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical. [Do not dispose in communal waste water.](#)

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14 TRANSPORT INFORMATION

14.1 UN number

ADR/RID: UN3089

IMDG: UN3089

IATA: UN3089

14.2 UN proper shipping name

ADR/RID: METAL POWDER, FLAMMABLE, N.O.S. (STAINLESS STEEL POWDER)

IMDG: METAL POWDER, FLAMMABLE, N.O.S. (STAINLESS STEEL POWDER)

IATA: Metal powders, flammable, n.o.s. (stainless steel powder)

14.3 Transport hazard class(es)

ADR/RID: 4.1

IMDG: 4.1

IATA: 4.1

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available.

15 REGULATORY INFORMATION

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

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

15.2 Chemical safety assessment

No data available.

Country specific information

Germany

WGK: 2

(Self-Classification)

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16 OTHER INFORMATION

DISCLAIMER

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