Safety Data Sheet

According to Regulation (EC) No. 1907/2006

Printing date: 18.12.2025 Version 1 Revision date: 18.12.2025

1. Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : Stainless Steel Iron-base
Trade name/product code : LayrrSteel 17-4

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

Sector of use : Additive manufacturing
Identified uses : Additive manufacturing, metal working

1.3 Details of the supplier of the safety data sheet

Company : We Are Nium Ltd (trading as LAYRR)
Nanosphere HQ
126A Olympic Avenue
Milton Park
OX14 4SA
United Kingdom

1.4 Emergency telephone number

Emergency phone : +44 (0)870 8200418 (CHEMTREC)

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Carcinogen (Category 2)	H351 Suspected of causing cancer. Route of exposure: Inhalation
STOT – RE (Category 2)	H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
Skin Sensitiser (Category 1)	H317 May cause an allergic skin reaction.
Aquatic Chronic (Category 3)	H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the GB CLP regulation.

Pictogram

Signal Word Danger

Hazard Statements

H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer. Route of exposure: Inhalation.
H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
H412 Harmful to aquatic life with long lasting effects

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment

PBT : Not applicable.
vPvB : Not applicable.

3. Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
Description: Mixture of substances listed below with non-hazardous additions.

Component	Classification	Concentration
Chromium CAS: 7440-47-3 EINECS: 231-157-5 Reg.nr.: 01-2119485652-31	Substance with a Community workplace exposure limit	≥10-≤25%
Nickel CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7 Reg.nr.: 01-2119462838-24	Carc. 2, H351; STOT RE 1, H372; Skin Sens. 1, H317	≥2.5-<10%
Copper CAS: 7440-50-8	Aquatic Chronic 2, H411	≥2.5-<10%

EINECS: 231-159-6 Index number: 029-024-00-X Reg.nr.: 01-2119480154-42		
Manganese CAS: 7439-96-5 EINECS: 231-105-1 Reg.nr.: 01-2119449803-34	substance with a Community workplace exposure limit	≥2.5%
Silicon CAS: 7440-21-3 EINECS: 231-130-8 Reg.nr.: 01-2119480401-47	Flam. Sol. 2, H228	≥2.5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

4. First aid measures

4.1 Description of first aid measures

General information:
Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation
Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

After skin contact
Immediately wash with water and soap and rinse thoroughly.

After eye contact
Rinse opened eye for several minutes under running water.

After swallowing
If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed.
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents
Special powder for metal fires. Do not use water.

5.2 Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced. Product is not flammable. A high concentration of airborne dusts may form an explosive mixture with air.

5.3 Advice for firefighters

Protective equipment: Mouth respiratory protective device.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information

7. Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Prevent formation of aerosols. Avoid creating dust where possible. Ensure good dust ventilation during handling. If necessary, use local exhaust ventilation. Wet mopping or HEPA vacuuming is recommended to clean up any dusts that may be generated during handling and processing. Information about fire - and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:

Requirements to be met by storerooms and receptacles: Not determined.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep container tightly sealed.

7.3 Specific end use(s):

No further relevant information available.

8. Exposure controls/personal protection

8.1 Control parameters

Additional information about design of technical facilities: No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace

Component	CAS No.	WEL
Chromium	7440-47-3	Long-term value: 0.5 mg/m³
Nickel	7440-02-0	Long-term value: 0.5 mg/m³ as Ni; Sk; Carc
Copper	7440-50-8	Short-term value: 2** mg/m³ Long-term value: 0.2* 1** mg/m³ *fume **dusts and mists (as Cu)
Manganese	7439-96-5	Long-term value: 0.2* 0.05** mg/m³ as Mn *inhalable fraction **respirable fraction
Silicon	7440-21-3	Long-term value: 10* 4** mg/m³ *inhalable dust **respirable dust

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately.

Respiratory protection

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Safety glasses

Body protection

Protective work clothing

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	Powder
Colour	Grey
Odour	Odourless
Odour threshold	Not determined
pH value	Not applicable.
Melting point/freezing point	Undetermined.
Flash point	Not applicable.
Flammability (solid, gas)	Not determined.
Decomposition temperature	Not determined.
Auto-ignition temperature	Product is not self-igniting.
Explosive properties	Not determined.
Upper/lower explosive limits	Not determined.
Vapour pressure	Not determined.
Density at 20°C	7.29277-8.2945 g/cm³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in/miscibility with water	Soluble
Partition coefficient: n-octanol/water	Not determined.
Viscosity:	Dynamic: Not determined. Kinematic: Not determined.

9.2 Other safety information

No data available

10. Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No further relevant information available.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Metal oxide fumes

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

Skin corrosion/irritation
Based on available data, the classification criteria are not met.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation
May cause an allergic skin reaction.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Suspected of causing cancer. Route of exposure: Inhalation.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

Aspiration hazard
Based on available data, the classification criteria are not met.

12. Ecological information

12.1 Toxicity

Aquatic toxicity
No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:
General notes: Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or

sewage system. Danger to drinking water if even small quantities leak into the ground. Harmful to aquatic organisms.

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

13. Disposal considerations

13.1 Waste treatment methods
Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging
Recommendation: Disposal must be made according to official regulations.

14. Transport information

14.1	**UN number** ADR, ADN, IMDG, IATA	Not regulated
14.2	**UN proper shipping name** ADR, ADN, IMDG, IATA	Not regulated
14.3	**Transport hazard class(es)** ADR, ADN, IMDG, IATA, Class	Not regulated
14.4	**Packing group** ADR, IMDG, IATA	Not regulated
14.5	**Environmental hazards**	Not applicable
14.6	**Special precautions for user**	Not applicable
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable
	UN "Model Regulation"	Not regulated

15. Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I
None of the ingredients is listed.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H250 Catches fire spontaneously if exposed to air.
H251 Self-heating: may catch fire.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H360F May damage fertility.
H372 Causes damage to organs through prolonged or repeated exposure.
H413 May cause long lasting harmful effects to aquatic life.

Department issuing SDS

Environment protection department.

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Sol. 2: Flammable solids – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3