

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version: 1.0

Revision date: 7-Feb-24

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Iron/Iron Oxide, nanopowder, 3-Aminopropyltriethoxysilane functionalized, Fe/FeOx/Si-NH<sub>2</sub>

Product Number : BF01-001

Brand : Nano Hybrids

REACH No. : 01-2119457646-28-XXXX

CAS-No. : 7439-89-6 / 1317-61-9 / 919-30-2

### 1.2 Relevant identified use 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

Company : Nano Hybrids B.V.  
Roetersstraat 35  
1018WB Amsterdam  
NETHERLANDS

Telephone : +31 658729987

E-mail : info@nano-hybrids.com

### 1.4 Emergency telephone

Emergency phone : +31  
112 (Dutch alarm number)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Skin corrosion, (Sub-category 1B) H314: Causes severe skin burns and eye damage.

Serious eye damage, (Category 1) H318: Causes serious eye damage.

### 2.2 Label elements

Pictogram



Signal Word	Danger
Hazard Statements	
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
Precautionary Statements	
P261	Avoid breathing mist or vapors.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

### 2.3 Other hazards

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

Ecological information:

The substance 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.

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## SECTION 3: Composition/information on ingredients



### 3.1 Substance

Synonyms : NH<sub>2</sub> functionalized iron/iron oxide NPs  
 Formula : Fe / FeO<sub>x</sub> / APTES  
 Molecular weight : 55,85 g/mol / 159,69 g/mol / 221.37 g/mol  
 CAS-No. : 7439-89-6 / 1317-61-9 / 919-30-2  
 EC-No. : 231-096-4 / 215-277-5 / 213-048-4  
 No components need to be disclosed according to the applicable regulations.\*

*\*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.*

3.2	Mixtures		
	Component	Classification	Concentration
	<b>Triethoxy(3-aminopropyl)silane</b>		
	CAS-No. 919-30-2 EC-No. 213-048-4 Registration number 01-2119480479-24- XXXX	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; H302, H314, H318, H317	>= 5 - < 15 %

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

#### General Advice

In each of these aid measures seek medical attention (especially if symptoms or/and injury occurs).

#### If inhaled

Remove person from exposure source, get fresh air/supply oxygen.

#### In case of skin contact

Wash with flowing water for 15 minutes.

#### In case of eye contact

Rinse thoroughly with plenty of flowing water for 15 minutes.

#### If swallowed

Do not vomit.

### 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

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### **Unsuitable extinguishing media**

For this substance no limitations of extinguishing agents are given.

#### 5.2 Special Hazards arising from the substance or mixture

Iron oxides.

Not combustible.

Ambient fire may liberate hazardous vapours.

#### 5.3 Advice to firefighters

In the event of fire, wear self-contained breathing apparatus.

#### 5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

#### 6.2 Environmental precautions

No special precautionary measures necessary.

#### 6.3 Methods and materials for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10). Take up dry.

Dispose of properly. Clean up affected area. Avoid generation of dusts.

#### 6.4 Reference to other sections

For disposal see section 13.



## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Work under a fume hood. Avoid generation of aerosols.

Wash hands after working with substance.

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.

Take precautionary measures against static discharge.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection.

Wash hands and face after working with substance.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from moisture environment (rust formation).

#### Storage class

Storage class (TRGS 510): 13: Non-Combustible Solids.

### 7.3 Specific end use(s)

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

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

### 8.2 Personal protective equipment

#### Eye/face protection

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

#### Skin protection

Nitrile/rubber gloves required

#### Body protection

Flame retardant antistatic protective clothing.

#### Respiratory protection

Required when vapours/aerosols are generated.



Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended filter type: FPP2/FPP3,

**Control of environmental exposure**

Do not let product enter drains.

**SECTION 9: Physical/Chemical properties**

a)	Physical state	Solid powder
b)	Color	Black
c)	Odor	Odorless
d)	Melting point/freezing point	No data available
e)	Initial boiling point and boiling range	No data available
f)	Flammability	No data available
g)	Flammability/explosive limits	The product is not flammable
h)	Flash point	Not applicable
i)	Autoignition temperature	No data available
j)	Decomposition temperature	No data available
k)	pH value	No data available
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m)	Water solubility	No data available
n)	Partition coefficient	Not applicable for inorganic substances
o)	Vapor pressure	No data available
p)	Density	No data available
q)	Particle characteristics	No data available
r)	Oxidizing properties	None
s)	Explosive properties	Not classified as explosive

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature).

**10.3 Possibility of hazardous reactions**



No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

Strong acids, Peroxides, Chloroformates

**10.6 Hazardous decomposition products**

In the event of fire: see section 5

**SECTION 11: Toxicology**

**11.1 Information on toxicological effects**

**Pure**

**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**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**

**Product:**



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

Long term inhalation exposure to iron (oxide fume or dust) can cause siderosis. Siderosis is considered to be a benign pneumoconiosis and does not normally cause significant physiologic impairment. Siderosis can be observed on x-rays with the lungs having a mottled appearance.

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

Other dangerous properties cannot be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12: Ecological information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bio accumulative 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, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

#### Product:

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

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## SECTION 13: Disposal considerations

<b>13.1</b>	<b>Waste treatment methods</b>
	Dispose of contents/container following an approved waste disposal procedure.
<b>13.2</b>	<b>Spillage</b>
	Clean with soap and absorbing paper. Dispose paper in hazard container.

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## SECTION 14: Transport

### 14.1 UN number

ADR/RID: -                      IMDG: -                      IATA: -

### 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: -                      IMDG: -                      IATA: -

### 14.4 Packaging group

ADR/RID: -                      IMDG: -                      IATA: -

### 14.5 Environmental hazards

ADR/RID: No                      IMDG: No                      IATA: No

### 14.6 Special precautions for user

No data available

#### Further information

Not classified as dangerous in the meaning of transport regulations.

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## SECTION 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.

## 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16: Remaining information

### Full text of H-Statements

### Full text of other abbreviations

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardization; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IATA - International Air Transport Association; IMDG – International Maritime Dangerous Goods; n.o.s. - Not Otherwise Specified; PBT - Persistent, Bio accumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SDS - Safety Data Sheet; UN- United Nations; vPvB - Very Persistent and Very Bio accumulative

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

