

# Sodium pentacyanonitrosferrate(III).2aq a.r. (Sodium nitroprussiate)

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Date of issue: 10/31/2018 Version: 1.0

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

#### 1.1. Product identifier

Product form	: Substance
Trade name	: Sodium pentacyanonitrosferrate(III).2aq a.r. (Sodium nitroprussiate)
CAS-No.	: 13755-38-9
Product code	: CL00.4004
Type of product	: Pure substance
Formula	: Na <sub>2</sub> (Fe(CN) <sub>5</sub> NO).2H <sub>2</sub> O
Synonyms	: disodium pentacyanonitrosylferrate, dihydrate / disodiumnitroprusside, dihydrate / disodiumpentacyanonitrosylferrate, dihydrate / ferrate(2-), pentakis(cyano-C)nitrosyl-, disodium, dihydrate, (OC-6-22)- / nipride, dihydrate / NPS, dihydrate / sodium iron(III) nitrosopentacyanide, dihydrate / sodium nitroiron(III) cyanide, dihydrate / sodium nitropentacyanoferrate, dihydrate / sodium nitroprussiate, dihydrate / sodium nitroprusside, dihydrate / sodium nitrosylpentacyanoferrate, dihydrate / sodium pentacyanonitrosylferrate (2-), dihydrate / sodium pentacyanonitrosylferrate (III), dihydrate / sodiumnitroferricyanide, dihydrate

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Chem-Lab nv  
Industriezone "De Arend" 2  
Zedelgem - Belgium  
T +32 50 288320  
[info@chem-lab.be](mailto:info@chem-lab.be) - [www.chem-lab.be](http://www.chem-lab.be)

#### 1.4. Emergency telephone number

Emergency number : +32 50 28 83 20

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 3 H301

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS06

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H301 - Toxic if swallowed.

Precautionary statements (CLP) :

P309+P311 - IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

EUH-statements

: EUH032 - Contact with acids liberates very toxic gas.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type : Mono-constituent

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sodium pentacyanonitrosferrate(III).2aq a.r. (Sodium nitroprussiate)	(CAS-No.) 13755-38-9	100	Acute Tox. 3 (Oral), H301

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Give activated charcoal. Victim is fully conscious: immediately induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital. Doctor: administration of chemical antidote.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: AFTER INHALATION OF DUST: Symptoms similar to those listed under ingestion.
Symptoms/effects after skin contact	: Slight irritation. Symptoms similar to those listed under ingestion.
Symptoms/effects after eye contact	: Slight irritation.
Symptoms/effects after ingestion	: Headache. Red skin. Nausea. Breath has characteristic odour. Abdominal pain. Diarrhoea. Myasthenia. Dizziness. Low arterial pressure. Disturbances of consciousness. Blue/grey discolouration of the skin. Cramps/uncontrolled muscular contractions. Respiratory collapse.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Feeling of weakness. Nausea. Vomiting. Diarrhoea. Mental confusion. Change in the haemogramme/blood composition. Cardiac and blood circulation effects. Enlargement/affection of the liver. Affection of the renal tissue.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

### 5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

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### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
Measures in case of dust release	: In case of dust production: keep upwind. In case of dust production: consider evacuation. Dust production: have neighbourhood close doors and windows.

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

#### 6.3. Methods and material for containment and cleaning up

For containment	: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Take account of toxic/corrosive precipitation water. On heating: dilute combustible/toxic gases/vapours.
Methods for cleaning up	: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed	: Pulverization rapidly increases toxic concentration.
Precautions for safe handling	: Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.
Hygiene measures	: Observe strict hygiene.

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

Storage temperature	: < 20 °C
Heat and ignition sources	: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. moisture.
Storage area	: Store in a cool area. Store in a dry area. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Sodium pentacyanonitrosferrate(III).2aq a.r. (Sodium nitroprussiate) (13755-38-9)

Country	Limit value (mg/m <sup>3</sup> )	Limit value (ppm)
Belgium	Limit value (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
France	VME (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (als CN)
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (als CN)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	0.02 ppm

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### 8.2. Exposure controls

#### Materials for protective clothing:

GIVE GOOD RESISTANCE: nitrile rubber

#### Hand protection:

Gloves

#### Eye protection:

Face shield. In case of dust production: protective goggles

#### Skin and body protection:

Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

#### Respiratory protection:

Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid.
Molecular mass	: 297.95 g/mol
Colour	: Red.
Odour	: Almost odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: > 160 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 1.7
Density	: 1720 kg/m <sup>3</sup>
Solubility	: Soluble in water. Water: 40 g/100ml
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

VOC content	: 0 %
Other properties	: Translucent.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with (strong) oxidizers. Decomposes slowly on exposure to water (moisture).

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

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### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Reacts with (some) acids: release of toxic/combustible gases/vapours (hydrogen cyanide). On heating: release of toxic/combustible gases/vapours (hydrogen cyanide).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Oral: Toxic if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Toxic if swallowed. Slightly irritant to skin. Slightly irritant to respiratory organs. Slightly irritant to eyes. Caution! Substance is absorbed through the skin.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Groundwater pollutant. Water pollutant (surface water). No data available on ecotoxicity.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

### 12.2. Persistence and degradability

#### Sodium pentacyanonitrosferrate(III).2aq a.r. (Sodium nitroprussiate) (13755-38-9)

Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### 12.3. Bioaccumulative potential

#### Sodium pentacyanonitrosferrate(III).2aq a.r. (Sodium nitroprussiate) (13755-38-9)

Bioaccumulative potential	No bioaccumulation data available.
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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dissolve or mix with a combustible solvent.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
European List of Waste (LoW) code	: 15 01 10* - packaging containing residues of or contaminated by dangerous substances 16 03 03* - inorganic wastes containing dangerous substances

### SECTION 14: Transport information

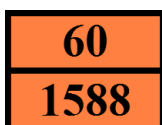
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1588	1588	1588	1588	1588
<b>14.2. UN proper shipping name</b>				
Cyanides, inorganic, solid, n.o.s.	Cyanides, inorganic, solid, n.o.s.	Cyanides, inorganic, solid, n.o.s.	Cyanides, inorganic, solid, n.o.s.	Cyanides, inorganic, solid, n.o.s.
<b>Transport document description</b>				
UN 1588 Cyanides, inorganic, solid, n.o.s., 6.1, II, (D/E)	UN 1588 Cyanides, inorganic, solid, n.o.s., 6.1, II, MARINE POLLUTANT	UN 1588 Cyanides, inorganic, solid, n.o.s., 6.1, II	UN 1588 Cyanides, inorganic, solid, n.o.s., 6.1, II	UN 1588 Cyanides, inorganic, solid, n.o.s., 6.1, II
<b>14.3. Transport hazard class(es)</b>				
6.1	6.1	6.1	6.1	6.1
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : Yes	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

#### 14.6. Special precautions for user

##### Overland transport

Transport regulations (ADR)	: Subject to the provisions
Classification code (ADR)	: T5
Hazard identification number (Kemler No.)	: 60
Orange plates	:



Tunnel restriction code (ADR)	: D/E
EAC code	: 2X

##### Transport by sea

Transport regulations (IMDG)	: Subject to the provisions
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-A

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### Air transport

Transport regulations (IATA) : Subject to the provisions

### Inland waterway transport

Classification code (ADN) : T5

### Rail transport

Transport regulations (RID) : Subject to the provisions

Classification code (RID) : T5

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Sodium pentacyanonitrosferrate(III).2aq a.r.

(Sodium nitroprussiate) is not on the REACH Candidate List

Sodium pentacyanonitrosferrate(III).2aq a.r.

(Sodium nitroprussiate) is not on the REACH Annex XIV List

VOC content : 0 %

Directive 2012/18/EU (SEVESO III)

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

TA Luft : 5.2.2 Inorganic Particulate Substances. Class III

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
H301	Toxic if swallowed.
EUH032	Contact with acids liberates very toxic gas.

SDS Zonder Big

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*