

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 SDS Ref.: E-00540 Date of issue: 27/09/2004 Revision date: 15/10/2019 Supersedes: 02/07/2019 Version: 9.0

| SECTION 1: 10 1.1. Product ide | | ance/mixture and of | the company/undertaking | | |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|-----------------------------------|--|
| Product form | entifier | : Mixture | | | |
| | | : SUPRANOX RS 316L | | | |
| Product name | | | | | |
| Product code | | : E-00540 | a substant to substant | | |
| | lentified uses of the substa | nce or mixture and use | es advised against | | |
| 1.2.1. Relevant id | | | | | |
| Main use category | | : Electric arc welding coated electrode | | | |
| ndustrial/Professi | • | | : Reserved for industrial and professional use | | |
| Function or use ca | ategory | : Welding and soldering | agents | | |
| 1.2.2. Uses advis | ed against | | | | |
| Restrictions on us | e | : No particular exclusio | ns are known | | |
| Lincoln Electric Eu Nieuwe Dukenbur 5534 AD Nijmeger F +31 243 522 91 | gseweg 20 n - The Netherlands | | | | |
| | y telephone number | : INRS +33 (0)1.45.42.59.5 | 9 | | |
| Country | Organisation/Company | Address | Emergency number | Comment | |
| United Kingdom | National Poisons Information Service (Belfast Centre) Royal Victoria Hospital | Grosvenor Road BT12 6BA Belfast | 0344 892 0111 | Available 24 hours/day | |
| United Kingdom | National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital | Penarth CF64 2XX Cardiff | 0344 892 0111 | Available 24 hours/day | |
| | lazards identification | | | | |
| | ion of the substance or mix | ture | | | |
| | cording to Regulation (EC) No. | | | | |
| | | | | | |
| Skin sensitisation, | • • | H317 | | | |
| Carcinogenicity, C | 0, | H351 | | | |
| Specific target org | an toxicity — Repeated exposure | e, Category 2 H373 | | | |
| Full text of H state | ements : see section 16 | | | | |
| | | | | | |
| Adverse physico No additional infor | chemical, human health and e mation available | nvironmental effects | | | |
| 2.2. Label elem | | | | | |
| However the form No labelling applic | | e market does not present | a danger, such preparations do no | t require a label. | |
| 2.3. Other haza | | | | | |
| | contributing to the classification | : Spatter and melting m | etal can cause burn injuries. UV, | IR radiations. Inhalation of vapo | |

Other hazards not contributing to the classification : Spatter and melting metal can cause burn injuries. UV, IR radiations. Inhalation of vapours may cause respiratory irritation. Excessive or prolonged inhalation of fumes may cause metal fever. Electric shocks can kill. Persons with a pacemaker should not go near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device.

SECTION 3: Composition/information on ingredients 3.1. Substances

Not applicable

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3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------|
| Chromium substance with a Community workplace exposure limit | (CAS-No.) 7440-47-3 (EC-No.) 231-157-5 | 10 - 25 | Not classified |
| nickel | (CAS-No.) 7440-02-0 (EC-No.) 231-111-4 (EC Index-No.) 028-002-00-7 (REACH-no) 01-2119438727-29 | 7 - 15 | Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 |
| Manganese substance with a Community workplace exposure limit | (CAS-No.) 7439-96-5 (EC-No.) 231-105-1 (REACH-no) 01-2119449803-34 | 1 - 3 | Not classified |
| nickel powder; [particle diameter < 1mm] | (CAS-No.) 7440-02-0 (EC-No.) 231-111-4 (EC Index-No.) 028-002-01-4 (REACH-no) 01-2119438727-29 | 0,1 - 1 | Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412 |

Full text of H-statements: see section 16

| SECTION 4: First aid measures | | |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 4.1. Description of first aid measures | | |
| First-aid measures after inhalation | : If breathing becomes difficult (due to inhalation of fume), take the patient to fresh air and get them to breathe deeply. Seek medical attention if symptoms persist. | |
| First-aid measures after skin contact | : In case of burn with hot metal, flush with plenty of water. Seek medical attention if burns develop. | |
| First-aid measures after eye contact | : In case of burn with hot metal, flush with plenty of water. Seek medical attention immediately. | |
| First-aid measures after ingestion | : Ingestion unlikely. Obtain emergency medical attention. | |
| 4.2. Most important symptoms and effects, both acute and delayed | | |
| Symptoms/effects | : See Heading 2.3. | |
| 4.3. Indication of any immediate medical attention and special treatment needed | | |
| Treat symptomatically. | | |
| | | |
| SECTION 5: Firefighting measures | | |

| SECTION 5. Firengining measures | |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 5.1. Extinguishing media | |
| Suitable extinguishing media | : Dry powder. |
| Unsuitable extinguishing media | : Water. |
| 5.2. Special hazards arising from the substa | ince or mixture |
| Fire hazard | : Not flammable. |
| Hazardous decomposition products in case of fire | : May release hazardous fumes. |
| 5.3. Advice for firefighters | |
| Precautionary measures fire | : Eliminate all ignition sources if safe to do so. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
| Other information | : Do not remove damaged packages. Move only undamaged packages out of fire zone. |

| SECTION 6: Accidental release measures 6.1. Personal precautions, protective equipment and emergency procedures | | |
|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 6.1.1. For non-emergency personnel Protective equipment Measures in case of dust release | : Wear recommended personal protective equipment. : Wear suitable respiratory equipment. | |
| 6.1.2. For emergency responders No additional information available | | |
| 6.2. Environmental precautions Avoid release to the environment. | | |
| 6.3. Methods and material for containment a | and cleaning up | |
| For containment | : Do not touch or walk on the spilled product. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). | |
| Other information | : Contain and collect as any solid. | |
| 6.4. Reference to other sections | | |
| See Heading 8. | | |

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| SECTION 7: Handling and storage | |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 7.1. Precautions for safe handling | |
| Additional hazards when processed | : Provide local exhaust or general room ventilation to minimize exposure to dust. |
| Precautions for safe handling | : Local exhaust and general ventilation must be adequate to meet exposure standards. |
| Hygiene measures | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |
| 7.2. Conditions for safe storage, including | g any incompatibilities |
| Storage conditions | : Store in dry protected location to prevent any moisture contact. Keep container closed |

when not in use. Keep only in original container.

7.3. Specific end use(s) Not applicable.

| SECTION 8: Exposure controls/personal protection 8.1. Control parameters | | |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------|
| Manganese (7439-96-5) | | |
| | | |
| EU - Occupational Exposure Limits Local name | Manganese | |
| IOELV TWA (mg/m ³) | 0,2 mg/m ³ (inhalable fraction) | |
| | 0,05 mg/m ³ (respirable fraction) | |
| Notes | (Year of adoption 2011) | |
| Regulatory reference | SCOEL Recommendations | |
| Germany - Occupational Exposure Limits (TRGS 90 | 10) | |
| TRGS 900 Local name | Mangan und seine anorganischen Verbindungen | |
| TRGS 900 Occupational exposure limit value (mg/m³) | 0,02 mg/m³ (A) 0,2 mg/m³ (E) | |
| TRGS 900 Limitation of exposure peaks | 8(II) | |
| TRGS 900 Remark | DFG,Y,10 | |
| TRGS 900 Regulatory reference | TRGS900 | |
| Portugal - Occupational Exposure Limits | | |
| Local name | Manganês e compostos inorgânicos, expressos em Mn | |
| OEL TWA (mg/m³) | 0,2 mg/m³ | |
| Regulatory reference | Norma Portuguesa NP 1796:2014 | |
| Spain - Occupational Exposure Limits | | |
| Local name | Manganeso | |
| VLA-ED (mg/m³) | 0,2 mg/m ³ elemental 0,2 mg/m ³ Compuestos inorgánicos de Manganeso, como Mn | |
| Chromium (7440-47-3) | | |
| EU - Occupational Exposure Limits | | |
| Local name | Chromium metal | |
| IOELV TWA (mg/m³) | 2 mg/m ³ | |
| Regulatory reference | COMMISSION DIRECTIVE 2006/15/EC | |
| France - Occupational Exposure Limits | | |
| Local name | Chrome (métal), composés de chrome inorganiques (II) et composés de chrome inorganiques (insolubles) (III) | |
| VME (mg/m³) | 0,001 mg/m ³ Chrome hexavalent et ses composés | |
| VLE (mg/m ³) | 0,005 mg/m ³ Chrome hexavalent et ses composés | |
| Note (FR) | Valeurs règlementaires indicatives | |
| Regulatory reference | Circulaire du Ministère du travail (réf.: INRS ED 984, 2016) | |
| Germany - Occupational Exposure Limits (TRGS 900) | | |
| TRGS 900 Local name | Chrom und anorganische Chrom und(III)-Verbindungen | |
| TRGS 900 Occupational exposure limit value (mg/m ³) | 2 mg/m³ | |
| 15/10/2019 (Version: 9.0) | EN (English) | 3/10 |

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| Chromium (7440-47-3) | | |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------|--|
| TRGS 900 Limitation of exposure peaks | 1(I) | |
| TRGS 900 Remark | 10,EU | |
| TRGS 900 Regulatory reference | TRGS900 | |
| Netherlands - Occupational Exposure Limits | | |
| Local name | Chroom (metallisch) | |
| Grenswaarde TGG 8H (mg/m ³) | 0,5 mg/m³ | |
| Regulatory reference | Arbeidsomstandighedenregeling 2018 | |
| Slovakia - Occupational Exposure Limits | | |
| Local name | Chróm anorg. zlúč. chrómu (II) a (III) – nerozpustné (ako Cr) | |
| NPHV (priemerná) (mg/m³) | 2 mg/m³ | |
| Regulatory reference | Nariadenie vlády č. 33/2018 Z.z. | |
| USA - ACGIH - Occupational Exposure Limits | | |
| ACGIH TWA (mg/m³) | Chromium metal: 0.5; Chromium (VI) Inorganic compound, as Cr, certain water insoluble: 0.05 | |
| nickel (7440-02-0) | | |
| EU - Occupational Exposure Limits | | |
| Local name | Nickel metal | |
| IOELV TWA (mg/m ³) | 0,005 mg/m ³ (respirable fraction) | |
| Notes | (Year of adoption 2011) | |
| Regulatory reference | SCOEL Recommendations | |
| Czech Republic - Occupational Exposure Limits | | |
| Local name | Nikl | |
| Expoziční limity (PEL) (mg/m ³) | 0,5 mg/m³ | |
| Expoziční limity (NPK-P) (mg/m ³) | 1 mg/m ³ | |
| Remark (CZ) | S (látka má senzibilizační účinek), V (vdechovatelná frakce aerosolu) | |
| Regulatory reference | Nařízení vlády č. 361/2007 Sb. (zapracovány změny č. 246/2018 Sb.) | |
| France - Occupational Exposure Limits | | |
| Local name | Nickel (métal) | |
| VME (mg/m ³) | 1 mg/m ³ | |
| Note (FR) | Valeurs recommandées/admises; substance classée cancérogène de catégorie 2 | |
| Regulatory reference | Circulaire du Ministère du travail (réf.: INRS ED 984, 2016) | |
| Germany - Occupational Exposure Limits (TRGS 90 | | |
| TRGS 900 Local name | Nickelmetall | |
| TRGS 900 Occupational exposure limit value (mg/m ³) | 0,006 mg/m³ (A) | |
| TRGS 900 Limitation of exposure peaks | 8(II) | |
| TRGS 900 Remark | AGS;24;Sh;Y | |
| TRGS 900 Regulatory reference | TRGS900 | |
| Portugal - Occupational Exposure Limits | | |
| Local name | Níquel, expresso em Ni Elementar | |
| OEL TWA (mg/m ³) | 1,5 mg/m ³ I (Fraçao inalável) | |
| Regulatory reference | Norma Portuguesa NP 1796:2014 | |
| United Kingdom - Occupational Exposure Limits | | |
| Local name | Nickel | |
| | | |

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| nickel (7440-02-0) | | |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| WEL TWA (mg/m³) | 0,1 mg/m ³ and its inorganic compounds (except nickel tetracarbonyl): water-soluble nickel compounds (as Ni) 0,5 mg/m ³ and its inorganic compounds (except nickel tetracarbonyl): nickel and water insoluble nickel compounds (as Ni) | |
| Remark (WEL) | Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity), Carc (Capable of causing cancer and/or heritable genetic damage (nickel oxides and sulphides)), Sen (Capable of causing occupational asthma (nickel sulphate)) | |
| Regulatory reference | EH40/2005 (Third edition, 2018). HSE | |
| nickel powder; [particle diameter < 1mm] (744 | 40-02-0) | |
| EU - Occupational Exposure Limits | | |
| Local name | Nickel metal | |
| IOELV TWA (mg/m ³) | 0,005 mg/m ³ (respirable fraction) | |
| Notes | (Year of adoption 2011) | |
| Regulatory reference | SCOEL Recommendations | |
| Czech Republic - Occupational Exposure Limits | | |
| Local name | Nikl | |
| Expoziční limity (PEL) (mg/m³) | 0,5 mg/m³ | |
| Expoziční limity (NPK-P) (mg/m ³) | 1 mg/m ³ | |
| Remark (CZ) | S | |
| Regulatory reference | Nařízení vlády č. 361/2007 Sb. (zapracovány změny č. 246/2018 Sb.) | |
| France - Occupational Exposure Limits | | |
| Local name | Nickel (métal) | |
| VME (mg/m³) | 1 mg/m ³ | |
| Note (FR) | Valeurs recommandées/admises; substance classée cancérogène de catégorie 2 | |
| Regulatory reference | Circulaire du Ministère du travail (réf.: INRS ED 984, 2016) | |
| Germany - Occupational Exposure Limits (TRGS 90 | 00) | |
| TRGS 900 Local name | Nickelmetall | |
| TRGS 900 Occupational exposure limit value (mg/m ³) | 0,006 mg/m³ (A) | |
| TRGS 900 Limitation of exposure peaks | 8(II) | |
| TRGS 900 Remark | AGS;24;Sh;Y | |
| TRGS 900 Regulatory reference | TRGS900 | |
| Portugal - Occupational Exposure Limits | | |
| Local name | Níquel, expresso em Ni Elementar | |
| OEL TWA (mg/m ³) | 1,5 mg/m ³ | |
| Regulatory reference | Norma Portuguesa NP 1796:2014 | |
| United Kingdom - Occupational Exposure Limits | | |
| Local name | Nickel and its inorganic compounds (except nickel tetracarbonyl) | |
| WEL TWA (mg/m³) | 0,5 mg/m³ nickel and water insoluble nickel compounds (as Ni) | |
| Remark (WEL) | Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity), Carc (Capable of causing cancer and/or heritable genetic damage. See paragraphs 49–51) (nickel oxides and sulphides) Sen (nickel sulphate) | |
| Regulatory reference | EH40/2005 (Third edition, 2018). HSE | |
| 8.2. Exposure controls | | |
| Materials for protective clothing: | | |
| Wear suitable protective clothing. | | |

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Skin and body protection:

Skin protection appropriate to the conditions of use should be provided.

Respiratory protection:

Do not exceed the occupational exposure limits (OEL). In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Do not exceed the occupational exposure limits (OEL).

| SECTION 9: Physical and chemical properties | | |
|------------------------------------------------------------|---------------------|--|
| 9.1. Information on basic physical and chemical properties | | |
| Physical state | : Solid | |
| Colour | : Grey. | |
| Odour | : odourless. | |
| Odour threshold | : No data available | |
| рН | : No data available | |
| Relative evaporation rate (butylacetate=1) | : No data available | |
| Melting point | : Ca 1500 °C | |
| Freezing point | : No data available | |
| Boiling point | : No data available | |
| Flash point | : No data available | |
| Auto-ignition temperature | : No data available | |
| Decomposition temperature | : No data available | |
| Flammability (solid, gas) | : No data available | |
| Vapour pressure | : No data available | |
| Relative vapour density at 20 °C | : No data available | |
| Relative density | : No data available | |
| Density | : 6 - 8 | |
| Solubility | : Insoluble. | |
| 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 | | |

No additional information available

| SECTION 10: Stability and reactivity | |
|------------------------------------------|--|
| 10.1. Reactivity | |
| None under normal conditions. | |
| 10.2. Chemical stability | |
| Stable under normal conditions of use. | |
| 10.3. Possibility of hazardous reactions | |
| Not applicable. | |
| 10.4. Conditions to avoid | |
| None under normal conditions. | |
| 10.5. Incompatible materials | |

Keep away from oxidising agents and strongly alkaline and strongly acidic materials.

10.6. Hazardous decomposition products

Formation of dangerous fumes during use. Welding fumes are classified carcinogen by the IARC (International Agency for Research on Cancer) : Group 1. Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. These hazardous products could include those from the reaction or oxidation of the components listed in section 3 or included in base material. The amount of fumes generated change with the welding parameters and the diameters of the consumable. Refer to applicable national exposure limits for fume compounds and national exposure limits for fumes. In case of work on parts covered by coatings such as: Lubrificants, Solvent, Paint, metalic compounds, Grease, etc... The thermal or photochemical decomposition products of these elements cumulate with the dust and fumes emitted by the melting of the welding product. The solution to adopt must be, in any case, preceeded by a spot study. Refer to the document "Health and Safety in Welding" published by the International Institute of Welding.

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| SECTION 11: Toxicological information | |
|--------------------------------------------|----------------------------------------|
| 11.1. Information on toxicological effects | |
| Acute toxicity (oral) | : Not classified |
| 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 | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Suspected of causing cancer. |

| nickel powder; [particle diameter < 1mm] (7440-02-0) | | |
|------------------------------------------------------|----------------------------------------------------------------------|--|
| IARC group | 2B - Possibly carcinogenic to humans | |
| Reproductive toxicity | : Not classified | |
| STOT-single exposure | : Not classified | |
| STOT-repeated exposure | : May cause damage to organs through prolonged or repeated exposure. | |
| Aspiration hazard | : Not classified | |

| 12.1. Toxicity Hazardous to the aquatic environment, short-term (acute) Hazardous to the aquatic environment, long-term (chronic) : Not classified | SECTION 12: Ecological information | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------|
| (acute) Hazardous to the aquatic environment, long-term : Not classified | 12.1. Toxicity | |
| 1 7 5 | | : Not classified |
| | 1 2 | : Not classified |

| nickel powder; [particle diameter < 1mm] (7440-02-0) | | |
|-------------------------------------------------------------------------|----------------------------------------|--|
| LC50 fish 1 | > 100 mg/l Brachadanio rerio | |
| LC50 fish 2 | ≈ 0,23 mg/l Pimephales promelas | |
| EC50 Daphnia 1 | > 100 mg/l Daphnia magna | |
| EC50 96h algae (1) | ≈ 0,012 mg/l Selenastrum capricornutum | |
| 12.2. Persistence and degradability No additional information available | | |
| 12.3. Bioaccumulative potential | | |
| nickel powder; [particle diameter < 1mm] (7440-02-0) | | |
| Bioconcentration factor (BCF REACH) ≈ 270 | | |
| 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

| SECTION 13: Disposal considerations | |
|-------------------------------------|-----------------------------------------------------------------------------------------------|
| 13.1. Waste treatment methods | |
| Regional legislation (waste) | : Dispose in a safe manner in accordance with local/national regulations. |
| Additional information | : 12 01 13 Welding wastes (Q8). 16 01 17 Ferrous metal (Q1). 16 01 18 Non-ferrous metal (Q1). |
| Ecology - waste materials | : Avoid release to the environment. |

| SECTION 14: Transport information | |
|--------------------------------------------------|------------------|
| In accordance with ADR / RID / IMDG / IATA / ADN | |
| 14.1. UN number | |
| UN-No. (ADR) | : Not applicable |
| UN-No. (IMDG) | : Not applicable |
| UN-No. (IATA) | : Not applicable |
| UN-No. (ADN) | : Not applicable |
| UN-No. (RID) | : Not applicable |
| | |

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| according to Regulation (EC) No. 1907/2006 (REACH, |) with its amendment Regulation (EO) 2015/830 | |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|
| 14.2. UN proper shipping name | | |
| Proper Shipping Name (ADR) | : Not applicable | |
| Proper Shipping Name (IMDG) | : Not applicable | |
| Proper Shipping Name (IATA) | : Not applicable | |
| Proper Shipping Name (ADN) | : Not applicable | |
| Proper Shipping Name (RID) | : Not applicable | |
| 14.3. Transport hazard class(es) | | |
| ADR | | |
| Transport hazard class(es) (ADR) | : Not applicable | |
| IMDG | | |
| Transport hazard class(es) (IMDG) | : Not applicable | |
| ΙΑΤΑ | | |
| Transport hazard class(es) (IATA) | : Not applicable | |
| ADN | | |
| Transport hazard class(es) (ADN) | : Not applicable | |
| RID | | |
| Transport hazard class(es) (RID) | : Not applicable | |
| 14.4. Packing group | | |
| Packing group (ADR) | : Not applicable | |
| Packing group (IMDG) | : Not applicable | |
| Packing group (IATA) | : Not applicable | |
| Packing group (ADN) | : Not applicable | |
| Packing group (RID) | : Not applicable | |
| 14.5. Environmental hazards | | |
| Dangerous for the environment | : No | |
| Marine pollutant | : No | |
| Other information | : No supplementary information available | |
| 14.6. Special precautions for user | | |
| Overland transport | | |
| No data available | | |
| Transport by sea | | |
| No data available | | |
| Air transport | | |
| No data available | | |
| Inland waterway transport | | |
| No data available | | |
| Rail transport | | |
| No data available | | |
| 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

| The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006: | | |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------|
| Reference code Applicable on Entry title or description | | |
| 27. | nickel ; nickel powder; [particle diameter < 1mm] | Nickel and its compounds |

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

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15.1.2. National regulations

| Germany | |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Reference to AwSV | : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV, Annex 1) |
| 12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV | : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance) |
| Netherlands | |
| SZW-lijst van kankerverwekkende stoffen | : None of the components are listed |
| SZW-lijst van mutagene stoffen | : None of the components are listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding | : None of the components are listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid | : Manganese is listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling | : Manganese is listed |
| Denmark | |
| Danish National Regulations | : Young people below the age of 18 years are not allowed to use the product |
| | Pregnant/breastfeeding women working with the product must not be in direct contact with the product |
| | The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal |
| 15.2 Chemical safety assessment | |

15.2. Chemical safety assessment No additional information available

| SECTION 16: Other informat | ion | |
|-----------------------------|---------------------------------------------------------------------------------------------------|--|
| Indication of changes: | | |
| 8.1. Control parameters. | | |
| Abbreviations and acronyms: | | |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways | |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road | |
| ATE | Acute Toxicity Estimate | |
| BCF | Bioconcentration factor | |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 | |
| DMEL | Derived Minimal Effect level | |
| DNEL | Derived-No Effect Level | |
| EC50 | Median effective concentration | |
| ARC | International Agency for Research on Cancer | |
| АТА | International Air Transport Association | |
| MDG | International Maritime Dangerous Goods | |
| .C50 | Median lethal concentration | |
| .D50 | Median lethal dose | |
| OAEL | Lowest Observed Adverse Effect Level | |
| NOAEC | No-Observed Adverse Effect Concentration | |
| NOAEL | No-Observed Adverse Effect Level | |
| NOEC | No-Observed Effect Concentration | |
| DECD | Organisation for Economic Co-operation and Development | |
| РВТ | Persistent Bioaccumulative Toxic | |
| PNEC | Predicted No-Effect Concentration | |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 | |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail | |
| SDS | Safety Data Sheet | |

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| STP | Sewage treatment plant | |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| TLM | Median Tolerance Limit | |
| vPvB | Very Persistent and Very Bioaccumulative | |
| Other information | : The product must not be used for any application that is not allowed, in this case we will not be responsible for any damage caused. The user must respect current Safety, Health and Environmental legislation. | |

| Full text of H- and EUH-statements: | | | | |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------|--|--|
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 | | | |
| Carc. 2 | Carcinogenicity | , Category 2 | | |
| Skin Sens. 1 | Skin sensitisatio | Skin sensitisation, Category 1 | | |
| STOT RE 1 | Specific target organ toxicity — Repeated exposure, Category 1 | | | |
| H317 | May cause an allergic skin reaction. | | | |
| H351 | Suspected of causing cancer. | | | |
| H372 | Causes damage to organs through prolonged or repeated exposure. | | | |
| H373 | May cause damage to organs through prolonged or repeated exposure. | | | |
| H412 | Harmful to aquatic life with long lasting effects. | | | |
| Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: | | | | |
| Skin Sens. 1 | H317 | Calculation method | | |
| Carc. 2 | H351 | Calculation method | | |
| STOT RE 2 | H373 | Calculation method | | |

SDS EU (REACH Annex II)

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.