

Safety Data Sheet

NST MIG/TIG ER80S Ni1

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : NST MIG/TIG ER80S Ni1
 Synonyms : AWS A5-28: NST MIG ER80S Ni1, NST TIG ER80S Ni1

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

Relevant identified uses

Main use category : Professional use
 Use of the substance/mixture : Welding wire

Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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nst.no

Contact person : Eyvind Røed (E.post: Eyvind@nst.no)

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182/+44 191 2606180 24H

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Not classified

2.2. Label elements

According to EC directives or the corresponding national regulations there is no labelling obligation for this product.

2.3. Other hazards

Other hazards not contributing to the classification : In the smoke emitted by use, there will be an additional risks if inhaled. Intensive exposure to welding fumes may cause lung disease, bronchitis, or worsen already existing inhalation problems. Intensified exposure to manganese (Mn) can damage the central nervous system or worsen existing health problems.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Manganese	(CAS-No.) 7439-96-6 (EC-No.) 231-105-1 (REACH-no) 01-2119449803-34	< 1.5	Not classified
Molybdate	(CAS-No.) 7439-98-7 (EC-No.) 231-107-2 (REACH-no) 01-2119472304-43	< 1	Not classified
Nickel	(CAS-No.) 7440-02-0;7440-02-0 (EC-No.) 231-111-4	< 1	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372
silicon	(CAS-No.) 7440-21-3;7440-21-3 (EC-No.) 231-130-8 (REACH-no) 01-2119480401-47	< 1	Not classified
Copper	(CAS-No.) 7440-50-8;7440-50-8 (EC-No.) 231-159-6	< 0.4	Not classified
Chromium	(CAS-No.) 7440-47-3;7440-47-3 (EC-No.) 231-157-5	< 0.2	Not classified

Full text of H-statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

First-aid measures general	: General first aid, rest, warmth and fresh air.
First-aid measures after inhalation	: Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell. Artificial respiration if indicated.
First-aid measures after skin contact	: Wash skin with soap and water. Get medical attention if irritation persists after washing. If burned, cool skin with ice or cold water.
First-aid measures after eye contact	: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if any discomfort continues.
First-aid measures after ingestion	: Rinse nose, mouth and throat with water.

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

Symptoms/effects after inhalation	: Overexposure to welding fumes may affect pulmonary function. Strong exposure to manganese may affect the nervous system.
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4.3. Indication of any immediate medical attention and special treatment needed

Electric shock: Disconnect and turn off the power. If the victim is conscious or has partial loss of consciousness, open the airways. If the breathing has stopped, give artificial respiration. If cardiac arrest, provide heart massage and artificial respiration.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Foam, carbon dioxide or dry powder.
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5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non flammable.
Hazardous decomposition products in case of fire	: Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide. Ozone. Oxides of: Manganese. Silicon. Molybdenum (Mo). Chromium. Nickel (Ni). copper. Titanium. Zirconium (Zr).

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper personal protective equipment, including respiratory protection.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Ensure adequate ventilation, especially in confined areas. Avoid contact with skin and eyes. Do not breathe vapour.
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For non-emergency personnel

Protective equipment	: Wear appropriate personal protective equipment - see Section 8.
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For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Do not discharge into drains.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Limit spread of spilled material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Mechanical ventilation or local exhaust ventilation is required. Do not breathe dust, fume, vapours. Avoid contact with skin and eyes. Do not touch electrical parts, such as welding wire and welding machine terminals. Wear appropriate personal protective equipment - see Section 8.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry place.

Incompatible materials : Acids. Moisture.

Storage temperature : 17 - 25 °C

7.3. Specific end use(s)

No additional data.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Manganese (7439-96-6)		
EU	Local name	Manganese
EU	IOELV TWA (mg/m³)	0.2 mg/m³ (inhalable fraction) 0.05 mg/m³ (respirable fraction)
EU	Notes	SCOEL Recommendations (2011)
United Kingdom	Local name	Manganese
United Kingdom	WEL TWA (mg/m³)	0.5 mg/m³ and its inorganic compounds (as Mn)
Chromium (7440-47-3;7440-47-3)		
EU	Local name	Chromium metal
EU	IOELV TWA (mg/m³)	2 mg/m³
United Kingdom	Local name	Chromium
United Kingdom	WEL TWA (mg/m³)	0.5 mg/m³ 0.5 mg/m³ Chromium (II) compounds (as Cr) 0.5 mg/m³ Chromium (III) compounds (as Cr) 0.05 mg/m³ Chromium (VI) compounds (as Cr)
Molybdate (7439-98-7)		
United Kingdom	Local name	Molybdenum
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ insoluble compounds (as Mo) 5 mg/m³ soluble compounds (as Mo)
United Kingdom	WEL STEL (mg/m³)	20 mg/m³ insoluble compounds (as Mo) 10 mg/m³ soluble compounds (as Mo)
Nickel (7440-02-0;7440-02-0)		
EU	Local name	Nickel metal
EU	IOELV TWA (mg/m³)	0.005 mg/m³ (respirable fraction) 0.01 mg/m³ (inhalable fraction)
EU	Notes	SCOEL Recommendations (2011)
United Kingdom	Local name	Nickel
United Kingdom	WEL TWA (mg/m³)	0.1 mg/m³ and its inorganic compounds (except nickel tetracarbonyl), water-soluble nickel compounds (as Ni) 0.5 mg/m³ and its inorganic compounds (except nickel tetracarbonyl), nickel and water insoluble nickel compounds (as Ni)
United Kingdom	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 (nickel oxides and sulphides)(Capable of causing cancer and/or heritable genetic damage. See paragraphs 49–51), Sen (nickel sulphate)(Capable of causing occupational asthma. See paragraphs 53–56)

silicon (7440-21-3;7440-21-3)		
United Kingdom	Local name	Silicon
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
Copper (7440-50-8;7440-50-8)		
EU	Local name	Copper
EU	IOELV TWA (mg/m ³)	0.01 mg/m ³ (respirable fraction)
EU	Notes	SCOEL Recommendations (2014)
United Kingdom	Local name	Copper
United Kingdom	WEL TWA (mg/m ³)	0.2 mg/m ³ fume (as Cu) 1 mg/m ³ and compounds, dusts and mists (as Cu)
United Kingdom	WEL STEL (mg/m ³)	2 mg/m ³ and compounds, dusts and mists (as Cu)

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Provide eyewash station. Working operations which cause formation of high volumes of vapour should take place in ventilation hood or with local exhaust ventilation. It is forbidden to weld in rooms where there are halogenated solvents in the working atmosphere.
Personal protective equipment	: Gloves. Safety glasses.
Materials for protective clothing	: Heatproof clothing
Hand protection	: Gloves made of insulating material. Heat-resistant gloves. EN 388. Chemical resistant gloves required for prolonged or repeated contact. STANDARD EN 374.
Eye protection	: Use approved safety goggles or face shield. Wear safety glasses with high protection against UV radiation. STANDARD EN 166.
Skin and body protection	: Använd värmeisolerande handskar, skor och annan säkerhetsutrustning avsedda för svetsning
Respiratory protection	: Vid svetsning bör användas friskluftsmask eller motor assisterad andningskydd med P2 eller P3-filter i kombination med brunt, gult och grått gassfilter. Andningskydd bör användas i samband med svetsning. Standard EN 143. STANDARD EN 149. EN 405. EN 139



Other information	: Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Wire.
Colour	: According to product specification.
Odour	: Odourless or no characteristic odour.
Odour threshold	: Not determined
pH	: Not relevant
Relative evaporation rate (butylacetate=1)	: Not relevant
Melting point	: ≈ 1500 °C
Freezing point	: ≈ 1500 °C
Boiling point	: Not determined
Flash point	: Not determined
Auto-ignition temperature	: Not determined
Decomposition temperature	: Not determined
Flammability (solid, gas)	: Not applicable
Vapour pressure	: Not determined
Relative vapour density at 20 °C	: Not determined
Relative density	: Not determined
Solubility	: Not soluble in water.
Log Pow	: Not determined

Viscosity, kinematic : Not relevant
 Viscosity, dynamic : Not relevant
 Explosive properties : Not explosive.
 Oxidising properties : Non flammable.
 Explosive limits : Not relevant

9.2. Other information

Additional information : None to our knowledge.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No incompatible groups noted.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Will not polymerise.

10.4. Conditions to avoid

Water, humidity.

10.5. Incompatible materials

Acids. oxidizing materials.

10.6. Hazardous decomposition products

The most ordinary chimney gases include: Ozone. Carbon dioxide. Carbon monoxide. Oxides of: Chromium. Iron. Manganese. Molybdenum (Mo). Nickel (Ni). Silicon (Si). Titanium.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity : Not classified
 Based on available data, the classification criteria are not met

Manganese (7439-96-6)	
LD50 oral rat	9000 mg/kg
Chromium (7440-47-3;7440-47-3)	
LD50 oral rat	19.8 mg/m³
Nickel (7440-02-0;7440-02-0)	
LD50 oral rat	> 5000 mg/kg
silicon (7440-21-3;7440-21-3)	
LD50 oral rat	3160 mg/kg

Skin corrosion/irritation : Not classified
 Based on available data, the classification criteria are not met
 pH: Not relevant

Serious eye damage/irritation : Not classified
 Dust from this product may cause eye irritation
 Vapor may irritate eyes
 pH: Not relevant

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified
 Based on available data, the classification criteria are not met

Carcinogenicity : Not classified
 Prolonged and repeated inhalation of welding fumes may cause an increased risk of developing lungrelated cancers.

Reproductive toxicity : Not classified
 Based on available data, the classification criteria are not met

STOT-single exposure : Not classified
 In the smoke emitted by use, there will be an additional risks if inhaled. Intensive exposure to welding fumes may cause lung disease, bronchitis, or worsen already existing inhalation problems. Intensified exposure to manganese (Mn) can damage the central nervous system or worsen existing health problems.
 Inhalation of fumes or vapours may cause respiratory irritation

STOT-repeated exposure	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Manganese (7439-96-6)	
LC50 fish 1	2.91 mg/l (96 hours)
EC50 Daphnia 1	5.2 mg/l 48 hours
IC50 algae	0.55 mg/l (IC50, 72 hours)
Molybdate (7439-98-7)	
LC50 fish 1	2600 mg/l LC50-96 h - fish [mg/l]
Nickel (7440-02-0;7440-02-0)	
LC50 fish 1	> 100 mg/l (96 hours - Brachydanio rerio, zebra-fish)
EC50 Daphnia 1	> 100 mg/l Daphnia magna, 48 hours
IC50 algae	0.18 mg/l (IC50, 72 hours - Selenastrum capricornutum)

12.2. Persistence and degradability

NST MIG/TIG ER80S Ni1	
Persistence and degradability	The product is not biodegradable.

12.3. Bioaccumulative potential

NST MIG/TIG ER80S Ni1	
Log Pow	Not determined
Bioaccumulative potential	No data available on bioaccumulation.
Manganese (7439-96-6)	
Bioconcentration factor (BCF REACH)	59052
Nickel (7440-02-0;7440-02-0)	
Bioconcentration factor (BCF REACH)	16
Log Pow	< 0
Copper (7440-50-8;7440-50-8)	
Bioconcentration factor (BCF REACH)	29

12.4. Mobility in soil

NST MIG/TIG ER80S Ni1	
Ecology - soil	The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

NST MIG/TIG ER80S Ni1	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

Other adverse effects : None to our knowledge.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to a hazardous or special waste collection point.
European List of Waste (LoW) code	: 12 01 13 - welding wastes

SECTION 14: TRANSPORT INFORMATION

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

14.1. UN number	
Not regulated for transport	

14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group
14.5. Environmental hazards
No supplementary information available

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: REGULATORY INFORMATION

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

EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

27. Nickel	NST MIG/TIG ER80S Ni1
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Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

National regulations

EC-regulation 2015/830 /EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: OTHER INFORMATION

Indication of changes:

Regulatory information. Label elements.

2.2	Labelling according to Regulation (EC) No. 1272/2008 [CLP]	Removed	
3.2	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Removed	

Data sources : EC-regulation 2015/830 /EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.

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Signature : A. Åsebø Murel

Full text of H- and EUH-statements:

Carc. 2	Carcinogenicity, Category 2
Skin Sens. 1	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
EUH208	Contains . May produce an allergic reaction
EUH210	Safety data sheet available on request

The information in this safety data sheet is based on information from the manufacturer/supplier, present european and national legislation, and presupposes that the product is used within the specified area of application.