Safety Data Sheet

NST TIG Cuni

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 6/10/2021 Revision date: 6/10/2021 Version: 1.0

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

1.1. Product identifier

Product form : Article
Product name : NST TIG Cuni

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 : Weldign wire

Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Norsk Sveiseteknikk AS
Postboks 109, 3301 Hokksund
T + 47 99 27 80 00 - F + 47 32 82 90 19
Thomas@nst.no - nst.no

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182 +44 191 2606180	Hours of operation: 24hrs

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

2.3. Other hazards

Other hazards which do not result in classification : In the smoke emitted during 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	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Copper	(CAS-No.) 7440-50-8 (EC-No.) 231-159-6 (REACH-no) 01-2119480154-42	50 - < 100	Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
Manganese	(CAS-No.) 7439-96-5 (EC-No.) 231-105-1 (REACH-no) 01-2119449803-34	1 - < 5	Not classified
silicon	(CAS-No.) 7440-21-3 (EC-No.) 231-130-8 (REACH-no) 01-2119480401-47	1 - < 5	Not classified
Tin	(CAS-No.) 7440-31-5 (EC-No.) 231-141-8 (REACH-no) 01-2119486474-28	0.1 - < 1	Not classified
Zinc	(CAS-No.) 7440-66-6 (EC-No.) 231-175-3 (REACH-no) 01-2119467174-37	0.1 - < 1	Not classified
Iron	(CAS-No.) 7439-89-6 (EC-No.) 231-096-4 (REACH-no) 01-2119462838-24	0.1 - < 1	Not classified

Comments : During use, by-products formed include; Carbon dioxide (124-38-9), Carbon monoxide (630-08-0), Nitrogen dioxide (10102-44-0), Ozone (10028-15-6), Manganese (7439-96-5), Copper (7440-50 -8). Limit values for these by-products are given in section 8.1.

Full text of H- and EUH-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. In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove victim immediately from source of exposure. Get medical attention if any discomfort continues.

First-aid measures after skin contact : Wash with plenty of soap and water. If burned, cool skin with ice or cold water. Burns must be treated by a physician. Get medical attention if any discomfort continues.

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. Do not rub eye. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Ingestion is unlikely due to product's physical state. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : Overexposure to welding fumes may affect pulmonary function. Strong exposure to manganese may affect the nervous system. Inhalation of vapours may cause respiratory irritation.

Symptoms/effects after skin contact : May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : Dust in the eyes causes risk of permanent eye damage.

Symptoms/effects after ingestion : Ingestion is unlikely due to product's physical state.

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: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Foam, carbon dioxide or dry powder.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not regarded as a fire hazard under current legislation.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2). Metallic oxides. Toxic gases/vapours/fumes.

5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper personal protective equipment, including respiratory protection (EN137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes. Provide good ventilation.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect all waste in suitable and labelled containers and dispose according to local legislation.

6.4. Reference to other sections

See section 13 for waste handling. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wear appropriate personal protective equipment - see Section 8. Ensure adequate ventilation. Forced ventilation or exhaust vacuum for handling that generates dust, smoke, vapors or mist. Avoid breathing dust and fumes generated during processing, and insure adequate ventilation of the workplace.

Hygiene measures : Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from moisture.

Incompatible materials : Acids. Bases. Oxidizing substances.

7.3. Specific end use(s)

No additional data. For professional use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Copper (7440-50-8)	
United Kingdom - Occupational Exposure Limits	
Local name	Copper
WEL TWA (OEL TWA) [1]	0.2 mg/m³ fume (as Cu) 1 mg/m³ and compounds, dusts and mists (as Cu)
WEL STEL (OEL STEL)	2 mg/m³ and compounds, dusts and mists (as Cu)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Tin (7440-31-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Tin
WEL TWA (OEL TWA) [1]	2 mg/m³ compounds, inorganic, except SnH4, (as Sn4) 0.1 mg/m³ compounds, organic, except Cyhexatin (ISO), (as Sn)
WEL STEL (OEL STEL)	4 mg/m³ compounds, inorganic, except SnH4, (as Sn4) 0.2 mg/m³ compounds, organic, except Cyhexatin (ISO), (as Sn)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

silicon (7440-21-3)	
United Kingdom - Occupational Exposure Limits	
Local name	Silicon
WEL TWA (OEL TWA) [1]	4 mg/m³ respirable dust 10 mg/m³ inhalable dust
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Iron (7439-89-6)	
United Kingdom - Occupational Exposure Limits	
Local name	Iron salts
WEL TWA (OEL TWA) [1]	1 mg/m³ (as Fe)
WEL STEL (OEL STEL)	2 mg/m³ (as Fe)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Exposure limit values for the other components

carbon monoxide (630-08-0)		
United Kingdom - Occupational Exposure Limits		
Local name	Carbon monoxide	
WEL TWA (OEL TWA) [1]	23 mg/m³ 35 mg/m³ Limits applicable to underground mining & tunnelling industries ONLY until 21/8/23	
WEL TWA (OEL TWA) [2]	20 ppm 30 ppm Limits applicable to underground mining & tunnelling industries ONLY until 21/8/23	
WEL STEL (OEL STEL)	117 mg/m³ 232 mg/m³ Limits applicable to underground mining & tunnelling industries ONLY until 21/8/23	
WEL STEL (OEL STEL) [ppm]	100 ppm 200 ppm Limits applicable to underground mining & tunnelling industries ONLY until 21/8/23	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	

Ozon (10028-15-6)		
United Kingdom - Occupational Exposure Limits		
Local name	Ozone	
WEL STEL (OEL STEL)	0.4 mg/m³	
WEL STEL (OEL STEL) [ppm]	0.2 ppm	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station. Provide eyewash station.

8.2.2. Personal protection equipment

Personal protective equipment:
Safety glasses. Gloves.

8.2.2.1. Eye and face protection

Eye protection:
Wear safety glasses with high protection against UV radiation

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing. Wear thermal insulated gloves, shoes and other safety equipment designed for welding

Hand protection:
Wear suitable gloves. Heat-resistant glopves. STANDARD EN ISO 374-1:2016/A1:2018, EN ISO 374-2:2019, EN ISO 374-4:2019

8.2.2.3. Respiratory protection

Respiratory protection:
Respiratory protection must be used if air contamination exceeds acceptable level. Standard EN 143:2021

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:
Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	Not available
Appearance	:	Wire.
Odour	:	Not available
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Explosive limits	:	Not applicable
Lower explosive limit (LEL)	:	Not applicable
Upper explosive limit (UEL)	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available

pH	:	Not available
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50 °C	:	Not available
Density	:	Not available
Relative density	:	Not available
Relative vapour density at 20 °C	:	Not applicable
Particle size	:	Not available
Particle size distribution	:	Not available
Particle shape	:	Not available
Particle aspect ratio	:	Not available
Particle aggregation state	:	Not available
Particle agglomeration state	:	Not available
Particle specific surface area	:	Not available
Particle dustiness	:	Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Additional information : None to our knowledge.

SECTION 10: Stability and reactivity

10.1. Reactivity

No incompatible groups noted.

10.2. Chemical stability

Stable when used at recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Will not polymerise.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No contact with: strong acids, strong bases and strong oxidants.

10.6. Hazardous decomposition products

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Additional information	:	Based on available data, the classification criteria are not met

Manganese (7439-96-5)	
LD50 oral rat	9000 mg/kg

silicon (7440-21-3)	
LD50 oral rat	3160 mg/kg

Zinc (7440-66-6)	
LD50 oral rat	> 2000 mg/l
LC50 Inhalation - Rat	> 5.41 mg/l/4h

Iron (7439-89-6)	
LD50 oral rat	30000 mg/kg

Skin corrosion/irritation : Not classified
Additional information : Prolonged or repeated contact may cause skin to become dry or cracked
Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified
Additional information : Dust in the eyes causes risk of permanent eye damage.
Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified
Additional information : Overexposure to welding fumes may affect pulmonary function. Strong exposure to manganese may affect the nervous system
Inhalation of vapours may cause respiratory irritation
Based on available data, the classification criteria are not met

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

Carcinogenicity : Overexposure to welding fumes may affect pulmonary function. Strong exposure to manganese may affect the nervous system. Arc rays: Skin cancer has been reported.

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

STOT-single exposure : Not classified
Additional information : Dust may irritate throat and respiratory system and cause coughing.
Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Additional information : Overexposure to air contaminants may lead to their accumulation in the lungs. The severity of the change is proportional to the length of the exposure. TLong term exposure to welding and allied processes gasses, dusts and fumes may contribute to pulmonary irritation or pneumoconiosis. Long term overexposure to nickel fumes may also cause pulmonary fibrosis and edema. Chromium compounds have a corrosive action on the skin and mucous membranes. Liver damage and allergic skin rash have also been reported. Overexposure to manganese compounds may affect the central nervous system and is irreversible. Overexposure to copper fumes may lead to copper poisonin. Welding fumes (not otherwise specified) are possibly carcinogenic to humans.

Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

11.2.2 Other information

Potential adverse human health effects and symptoms : The International Agency for Research on Cancer (IARC) has determined welding fumes and ultraviolet radiation from welding are carcinogenic to humans (Group 1). According to IARC, welding fumes cause cancer of the lung and positive associations have been observed with cancer of the kidney. Also according to IARC, ultraviolet radiation from welding causes ocular melanoma. IARC identifies gouging, brazing, carbon arc or plasma arc cutting, and soldering as processes closely related to welding.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

Copper (7440-50-8)	
LC50 - Fish [1]	0.017 mg/l (96 hours - Rainbow trout)
EC50 - Crustacea [1]	0.0065 mg/l (48 hours -Daphnia hyalina)

ErC50 algae	0.392 mg/l (EC50, 72 hours - Selenastrum capricornutum)

Manganese (7439-96-5)	
LC50 - Fish [1]	2.91 mg/l (96 hours)
EC50 - Crustacea [1]	5.2 mg/l 48 hours
EC50 72h - Algae [1]	0.55 mg/l

Zinc (7440-66-6)	
LC50 - Fish [1]	0.116 mg/l
EC50 - Crustacea [1]	0.068 mg/l (48 hours - Daphnia magna)

Iron (7439-89-6)	
LC50 - Fish [1]	13.6 mg/l 96h (FeCl2) Morone saxatilis
EC50 - Crustacea [1]	5.2 mg/l 48h

12.2. Persistence and degradability

NST TIG Cuni	
Persistence and degradability	No data available.

Iron (7439-89-6)	
Persistence and degradability	There are no data on the degradability of this product.

12.3. Bioaccumulative potential

NST TIG Cuni	
Bioaccumulative potential	No data.

Copper (7440-50-8)	
Bioconcentration factor (BCF REACH)	29

Manganese (7439-96-5)	
Bioconcentration factor (BCF REACH)	59052

Tin (7440-31-5)	
Bioconcentration factor (BCF REACH)	800000

Zinc (7440-66-6)	
Bioconcentration factor (BCF REACH)	92

Iron (7439-89-6)	
Bioconcentration factor (BCF REACH)	140000

12.4. Mobility in soil

NST TIG Cuni	
Ecology - soil	The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

NST TIG Cuni
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

Component	
Iron (7439-89-6)	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Based on available data, the classification criteria are not met

12.7. Other adverse effects

Other adverse effects : None to our knowledge.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Product is not hazardous waste.

Waste treatment methods : Do not discharge into drains.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : The given LoW-code is a guiding, and the code depends on how the waste is formed. User must evaluate the choice of correct code.

European List of Waste (LoW) code : 12 01 13 - welding wastes

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

IBC code : No IBC-code for bulk transport offshore (MARPOL).

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list
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

15.1.2. National regulations

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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.