Safety Data Sheet
NSSW Flux Cored Wires

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

1.1. Product identifier

Trade name : NSSW Flux Cored Wires

Synonyms : SF-1A, SF-1E, SF-3A, SF-3M, SF-3AM, SF-3AMSR, SF-3E, SF-36E, SF-36EA, SM-3A, SF-50A

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

Norsk Sveiseteknikk AS
Postboks 171, 3371 Vikersund
T + 47 99 27 80 00 - F + 47 32 82 90 19
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

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

Precautionary statements (CLP) : P261 - Avoid breathing dust, fume
P271 - Use only outdoors or in a well-ventilated area
P285 - In case of inadequate ventilation wear respiratory protection

EUH-statements : EUH210 - Safety data sheet available on request
EUH208 - Contains Nickel(7440-02-0). May produce an allergic reaction

2.3. Other hazards

Other hazards not contributing to the classification : In the smoke emitted by use, there will be am 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. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
silicondioxide, amorphous	(CAS No) 14808-60-7 (EC no) 238-878-4 (REACH-no) N/A	1 - 15	Not classified
titanium dioxide	(CAS No) 13463-67-7 (EC no) 236-675-5 (REACH-no) 01-2119489379-17	2 - 10	Not classified
Manganese	(CAS No) 7439-96-5 (EC no) 231-105-1 (REACH-no) 01-2119449803-34	< 5	Not classified
silicon	(CAS No) 7440-21-3 (EC no) 231-130-8 (REACH-no) 01-2119480401-47	< 2	Not classified
zirconium dioxide	(CAS No) 1314-23-4 (EC no) 215-227-2 (REACH-no) 01-2119486976-14	< 2	Not classified
Fluorides	(CAS No) 16984-48-8	< 1	Not classified
Nickel	(CAS No) 7440-02-0 (EC no) 231-111-4	< 1	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372
aluminium oxide (III)	(CAS No) 1344-28-1 (EC no) 215-691-6 (REACH-no) N/A	< 1	Not classified
Copper	(CAS No) 7440-50-8 (EC no) 231-159-6 (REACH-no) 01-2119480154-42	< 0.5	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. Move to fresh air. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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.

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. Fluorides. Oxides of: Iron. Manganese. aluminium. Titanium. copper. Zirconium (Zr). Silicon.

5.3. Advice for firefighters

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

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.

For non-emergency personnel

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

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".

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. Avoid inhalation of vapours. Avoid contact with skin and eyes. Do not touch electrical parts, such as welding wire and welding machine terminals.

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.

7.3. Specific end use(s)

Contact supplier for more information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

silicon (7440-21-3)		
United Kingdom	Local name	Silicon
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ inhalable dust 4 mg/m³ respirable dust
Fluorides (16984-48-8)		
United Kingdom	WEL TWA (mg/m³)	2.5 mg/m³
Copper (7440-50-8)		
United Kingdom	WEL TWA (mg/m³)	0.2 mg/m³
ironoxide (1309-37-1)		
United Kingdom	Local name	Iron oxide
United Kingdom	WEL TWA (mg/m³)	5 mg/m³ fume (as Fe) 4 mg/m³ Rouge, respirable 10 mg/m³ Rouge, total inhalable
United Kingdom	WEL STEL (mg/m³)	10 mg/m³ fume (as Fe)

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. 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 andningsskydd med P2 eller P3-filter i kombination med brunt, gult och grått gassfilter. Andningsskydd bör användas i samband med svetsning huva.

Other information : Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Wire.
Colour	:	Metal. copper.
Odour	:	Odourless or no characteristic odour.
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	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Not soluble in water.
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

Additional information : None to our knowledge

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No additional information available

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.

10.6. Hazardous decomposition products

The most ordinary chimney gases include: Carbon dioxide. Fluorides. Ozone. Oxides of: Iron. Manganese. Aluminium. Titanium. copper. Zirconium (Zr). Silicon (Si).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity : Not classified

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

titanium dioxide (13463-67-7)	
LD50 oral rat	> 100000
LD50 dermal rabbit	> 10000
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 4.68 mg/l/4h

titanium dioxide (13463-67-7)	
LD50 oral rat	> 100000
silicon (7440-21-3)	
LD50 oral rat	3160 mg/kg
zirconium dioxide (1314-23-4)	
LD50 oral rat	> 8800 mg/kg
Nickel (7440-02-0)	
LD50 oral rat	> 5000 mg/kg
aluminium oxide (III) (1344-28-1)	
LD50 oral rat	> 5000 mg/kg

Skin corrosion/irritation : Not classified
May cause a sensitization

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified
Allergenic

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified
Contains component(s) with carcinogenic properties

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified
In the smoke emitted by use, there will be am 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

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Manganese (7439-96-5)	
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)
titanium dioxide (13463-67-7)	
LC50 fish 1	> 1000 (96 hours - Fundulus heteroclitus)
EC50 Daphnia 1	> 1000 (48 hours - Daphnia magna)
silicondioxide, amorphous (14808-60-7)	
LC50 fish 1	(96 hours - Brachydanio rerio, zebra-fish)
EC50 Daphnia 1	7600 mg/l (48 hours - Daphnia magna)
Nickel (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)
aluminium oxide (III) (1344-28-1)	
LC50 fish 1	> 100 mg/l LC50 96h fish Salmo trutta
EC50 Daphnia 1	> 100 Daphnia magna, 48 hours
IC50 algae	> 100 mg/l (IC50, 72 hours - Selenastrum capricornutum)
Copper (7440-50-8)	
LC50 fish 1	0.017 mg/l (96 hoursr - Rainbow trout)
EC50 Daphnia 1	0.0065 mg/l (48 hours -Daphnia hyalina
IC50 algae	0.392 mg/l (IC50, 72 hours - Selenastrum capricornutum)

12.2. Persistence and degradability

NSSW Flux Cored Wires	
Persistence and degradability	The product is not biodegradable.

12.3. Bioaccumulative potential

NSSW Flux Cored Wires	
Bioaccumulative potential	No data available on bioaccumulation.
Manganese (7439-96-5)	
Bioconcentration factor (BCF REACH)	59052
silicondioxide, amorphous (14808-60-7)	
Log Pow	0.53
Nickel (7440-02-0)	
Bioconcentration factor (BCF REACH)	16
Log Pow	< 0
Copper (7440-50-8)	
Bioconcentration factor (BCF REACH)	29

12.4. Mobility in soil

NSSW Flux Cored Wires	
Ecology - soil	The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

NSSW Flux Cored Wires	
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	
titanium dioxide (13463-67-7)	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) : Product is not hazardous waste.

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

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

Dangerous for the environment : No

Other information : 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

Contains no substance on the REACH candidate list

National regulations

EC-regulation 453/2010/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

Data sources	:	EC-regulation 453/2010/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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Version	:	
Signature	:	K. Helen Sundeng

Full text of H- and EUH-statements:

Carc. 2	Carcinogenicity, Category 2
Skin Sens. 1	Sensitisation — Skin, 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.