

SAFETY DATA SHEET

NSWE SM-65A

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

1.1. Product identifier

Trade name: NSWE SM-65A

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

Relevant identified uses of the substance or mixture: Welding wire
Restricted to professional and industrial use.

Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet

Company and address: **Norsk Sveiseteknikk AS**
Postboks 109
3301 Hokksund
Norway
T + 47 99 27 80 00
nst.no

Contact person:

E-mail: thomas@nst.no

Revision: 09/06/2026

SDS Version: 1.0

1.4. Emergency telephone number

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)

General public:

England - Dial 111 to reach NHS 111 (24 hour service)

Scotland - Dial 111 to reach NHS 24 (24 hour service)

Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)

See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. Classification of the substance or mixture

Skin Sens. 1; H317, May cause an allergic skin reaction.

Carc. 2; H351, Suspected of causing cancer.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

This product is exempted from labelling requirements as it is marketed in a massive form not presenting a hazard to the aquatic environment or to human health by inhalation, ingestion or contact with the skin.

2.2. Label elements

Hazard pictogram(s): Not applicable.

Signal word: Not applicable.

Hazard statement(s): Not applicable.

Precautionary statement(s):

General Not applicable.

Prevention Not applicable.

Response Not applicable.

Storage Not applicable.

Disposal Not applicable.

Hazardous substances: None known.

Additional labelling: Alloys in solid form are not required to be labeled according to the CLP regulation (1272/2008), Art. 23(d) and Annex I 1.3.4. These complex alloys in solid form have no known

toxicological properties other than causing allergic reactions in individuals sensitive to the metals in the alloys. Hazardous fumes or dust emissions may be released during remelting, grinding, cutting, or welding.

2.3. Other hazards

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.

Additional warnings: This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Iron	CAS No.: 7439-89-6 EC No.: 231-096-4 UK-REACH: 01-2119462838-24 Index No.:	90-100%		
Manganese	CAS No.: 7439-96-5 EC No.: 231-105-1 UK-REACH: 01-2119449803-34 Index No.:	<5%		
Nickel	CAS No.: 7440-02-0 EC No.: 231-111-4 UK-REACH: Index No.: 028-002-00-7	<5%	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372	[1], [3]
Silicon	CAS No.: 7440-21-3 EC No.: 231-130-8 UK-REACH: 01-2119480401-47 Index No.:	<1%		
Copper	CAS No.: 7440-50-8 EC No.: 231-159-6 UK-REACH: 01-2119480154-42 Index No.:	<1%	Aquatic Chronic 2, H411	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

Nickel, Note 7 : Alloys containing nickel are classified for skin sensitisation when the release rate of 0,5 µg Ni/cm²/week, as measured by the European Standard reference test method EN 1811, is exceeded.

Nickel, Note S : This substance may not require a label according to Article 17 (see section 1.3 of Annex I) (Table 3.1). This substance may not require a label according to Article 23 of Directive 67/548/EEC (see section 8 of Annex VI to that Directive) (Table 3.2).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: The product is an article and is unlikely to be of any chemical risk.
The following first aid measures apply in case of contact with the product in molten form.

Inhalation: Remove victim to fresh air. Call a POISON CENTER/doctor if you feel unwell. Give artificial respiration if necessary.

Skin contact:	Wash skin with soap and water. Seek medical attention if irritation persists after washing. For burns, cool skin with ice or cold water.
Eye contact:	Immediately flush with plenty of water for up to 15 minutes. Remove contact lenses, if present, and open the eye wide. Consult a physician if all discomfort persists. In case of burns: consult a physician immediately.
Ingestion:	Rinse nose, mouth and throat with water. In case of burns: consult a doctor immediately.
Burns:	Not applicable.

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

Overexposure to welding fumes may affect pulmonary function. Strong exposure to manganese may affect the nervous system.

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.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. **Extinguishing media**

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

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

Non flammable.

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

Oxides of: Iron, Manganese, Copper, Silicon.

5.3. **Advice for firefighters**

Do not enter the fire area without proper personal protective equipment, including self-contained breathing apparatus (EN137).

SECTION 6: Accidental release measures

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

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Avoid contact with skin and eyes. Avoid inhalation of welding fumes.

6.2. **Environmental precautions**

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

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

Not applicable due to the physical state of the product (article).

6.4. **Reference to other sections**

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. **Precautions for safe handling**

Ensure good ventilation of the work station. Mechanical ventilation or local exhaust ventilation is required. Avoid breathing vapours, fume. Avoid contact with skin and eyes. Do not touch electrical parts, such as welding wire and welding machine terminals.

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 any incompatibilities**

Storage conditions: Store in a dry place.

Incompatible materials: Acids

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

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Iron

Long term exposure limit (8 hours) (mg/m³): 5 mg/m³ fume (as Fe) / 10 mg/m³ fume (as Fe)

Manganese

Long term exposure limit (8 hours) (mg/m³): 0,2 (inhalable fraction as Mn) / 0,05 (respirable fraction as Mn)

Nickel

Long term exposure limit (8 hours) (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)

Silicon

Long term exposure limit (8 hours) (mg/m³): 10(inhalable) / 4(respirable)

Copper

Long term exposure limit (8 hours) (mg/m³): 0,2(fume)/1(dust) (as Cu) / 1 mg/m³ and compounds, dusts and mist (as Cu)

Short term exposure limit (15 minutes) (mg/m³): 2 (dusts, mists) (as Cu)

Welding fumes

Long term exposure limit (8 hours) (mg/m³): 5 mg/m³

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.
EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures: Avoid contact with skin and eyes. Avoid inhalation of welding fumes.
Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene measures: In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure: No special when used as intended.

Individual protection measures, such as personal protective equipment

Generally: Use only UKCA marked protective equipment.

Respiratory Equipment:

Type	Class	Colour	Standards
During welding supplied- 2 air respirator or motor assisted respirators with P2 or P3-filter should be used in combination with brown, yellow and gray gas filter. Respiratory protection should be used in conjunction with welding hood.		White, brown, yellow, gray	EN 143:2021, EN 149:2001 + A1:2009, EN 405, EN 139

Skin protection:

Recommended	Type/Category	Standards	
Heat-resistant clothing. Use heat-insulating gloves, footwear, and other protective equipment intended for welding.			
Hand protection:			
Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Gloves made of insulating material. Heat-resistant gloves. Chemical resistant gloves required for prolonged or repeated contact.	-	-	EN 12477:300+A1:2005, EN ISO 374-1:2016/A1:2018, EN ISO 374-2:2019, EN ISO 374-4:2019
Eye protection:			
Type	Standards		
Wear safety glasses with EN 166:2001 high protection against UV radiation.			

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Article Wire
Colour:	Metall
Odour / Odour threshold:	None
pH:	Not applicable due to the physical state of the product (article).
Density (g/cm ³):	No data available.
Kinematic viscosity:	Not applicable due to the physical state of the product (article).
Particle characteristics:	Not applicable due to the physical state of the product (article).

Phase changes

Melting point/Freezing point (°C):	Not applicable due to the physical state of the product (article).
Softening point/range (°C):	Not applicable due to the physical state of the product (article).
Boiling point (°C):	No data available.
Vapour pressure:	No data available.
Relative vapour density:	Not applicable due to the physical state of the product (article).
Decomposition temperature (°C):	No data available.

Data on fire and explosion hazards

Flash point (°C):	Not applicable due to the physical state of the product (article).
Flammability (°C):	Not applicable due to the physical state of the product (article).
Auto-ignition temperature (°C):	Not applicable due to the physical state of the product (article).
Lower and upper explosion limit (% v/v):	Not applicable due to the physical state of the product (article).

Solubility

Solubility in water:	Insoluble
n-octanol/water coefficient (LogKow):	No data available.
Solubility in fat (g/L):	No data available.

9.2. Other information

Oxidizing properties:	No data available.
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Other physical and chemical parameters:

No data available.

SECTION 10: Stability and reactivity

- 10.1. Reactivity**
No data available.
- 10.2. Chemical stability**
The product is stable under the conditions, noted in section 7 "Handling and storage".
- 10.3. Possibility of hazardous reactions**
None known.
- 10.4. Conditions to avoid**
Avoid moisture and humidity to prevent corrosion.
- 10.5. Incompatible materials**
Acids
- 10.6. Hazardous decomposition products**
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Product/substance	Iron
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	30000 mg/kg

Product/substance	Manganese
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	9000 mg/kg

Product/substance	Nickel
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	> 5000 mg/kg

Product/substance	Silicon
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	3160 mg/kg

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

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.

Aspiration hazard

Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

Alloys in solid form are not required to be labeled according to the CLP regulation (1272/2008), Art. 23(d) and Annex I 1.3.4. These complex alloys in solid form have no known toxicological properties other than causing allergic reactions in individuals sensitive to the metals in the alloys. Hazardous fumes or dust emissions may be released during remelting, grinding, cutting, or welding.

11.2. Information on other hazards

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

Nickel has been classified by IARC as a group 2B.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	Iron
Species:	Fish, <i>Morone saxatilis</i>
Duration:	96 hours
Test:	LC50
Result:	13,6 mg/l

Product/substance	Iron
Species:	Crustacean
Duration:	48 hours
Test:	EC50
Result:	5,2 mg/l

Product/substance	Manganese
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	2,91 mg/l

Product/substance	Manganese
Species:	Crustacean
Duration:	48 hours
Test:	EC50
Result:	5,2 mg/l

Product/substance	Nickel
Species:	Fish, <i>Brachydanio rerio</i>
Duration:	96 hours
Result:	> 100 mg/l

Product/substance	Nickel
Species:	Crustacean, <i>Daphnia magna</i>
Duration:	48 hours
Test:	EC50
Result:	> 100 mg/l

Based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Product/substance	NSWE SM-65A
Conclusion:	Not relevant for inorganic compounds.

12.3. Bioaccumulative potential

Product/substance	NSWE SM-65A
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Conclusion: Not relevant for inorganic compounds.

Product/substance Manganese
BCF: 59052
Conclusion: -

Product/substance Nickel
BCF: 16
LogKow: <1
Conclusion: -

12.4. Mobility in soil

The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

Waste treatment methods

Product is not covered by regulations on dangerous waste.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

12 01 13 Welding wastes

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR/AD - N/RID	-	-	-	-	-
IMDG -	-	-	-	-	-
IATA -	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR/ADN/RID, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application: Restricted to professional users.

Demands for specific education: No specific requirements.

Control of Major Accident: Not applicable.

Hazards (COMAH) -
Categories / dangerous
substances:

UK-REACH, Annex XVII:	Nickel is subject to restrictions, UK-REACH annex XVII (entry 27).
Additional information:	Not applicable.
Sources:	The Management of Health and Safety at Work Regulations 1999. The Health and Safety at Work etc. Act 1974 Regulations 2013. Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H317, May cause an allergic skin reaction.
H351, Suspected of causing cancer.
H372, Causes damage to organs through prolonged or repeated exposure.
H411, Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = Effective concentration
ED = Effective dose
EINECS = European Inventory of Existing Commercial chemical Substances
EL = Effective Loading
ErC = Concentration associated with x% growth rate response
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
HP = Hazardous Property code
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IC = X maximum inhibitory concentration
IMDG = International Maritime Dangerous Goods
LC = Lethal concentration
LCLo = Value is the lowest concentration of a material in air reported to have caused the death of animals or humans
LD = Lethal dose
LOAEC = Lowest Observed Adverse Effect Concentration
LOAEL = Lowest Observed Adverse Effect Level
LOEC = Lowest Observed Effect Concentration
LogKow = logarithm of the n-octanol/water coefficient
LL = Lethal Loading
M = For multiplication factor
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOAEC = No Observed Adverse Effect Concentration
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
NOELR = No Observable Effect Loading Rate

OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

In accordance with UK-REACH, a safety data sheet is not required for this product. This safety data sheet has been created on a voluntary basis to distribute relevant information as required by UK-REACH.

The safety data sheet is validated by

Safety Data Sheet Consulting AS

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle. The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products. It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en