SAFETY DATA SHEET

NSWE SF-3AM

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

1.1. Product identifier

Trade name: NSWE SF-3AM

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 users.

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: 11/11/2025

SDS Version: 3.0

Date of previous version: 11/11/2025 (2.0)

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

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

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.
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:

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: Index No.:	<100%		
Titanium dioxide	CAS No.: 13463-67-7 EC No.: 236-675-5 UK-REACH: Index No.: 022-006-00-2	<10%		
Manganese	CAS No.: 7439-96-5 EC No.: 231-105-1 UK-REACH: Index No.:	<5%		
Sodium fluoride	CAS No.: 7681-49-4 EC No.: 231-667-8 UK-REACH: Index No.: 009-004-00-7	< 1%	EUH032 Acute Tox. 3, H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319	
Nickel	CAS No.: 7440-02-0 EC No.: 231-111-4 UK-REACH: Index No.: 028-002-00-7	< 1%	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372	[1], [3]
Aluminium(III)oxide	CAS No.: 1344-28-1 EC No.: 215-691-6 UK-REACH: Index No.:	<1%		
Copper	CAS No.: 7440-50-8 EC No.: 231-159-6 UK-REACH: Index No.:	<1%	Aquatic Chronic 2, H411	
Magnesium	CAS No.: 7439-95-4 EC No.: 231-104-6 UK-REACH: Index No.: 012-002-00-9	<1%	Pyr. Sol. 1, H250 Water-react. 1, H260	[20]
Silicon	CAS No.: 7440-21-3 EC No.: 231-130-8 UK-REACH: Index No.:	<1%		
Silicon dioxide	CAS No.: 14808-60-7 EC No.: 643-043-6 UK-REACH: Index No.:	<1%		
Aluminium	CAS No.: 7429-90-5 EC No.: 231-072-3 UK-REACH: Index No.:	<1%	Flam. Sol. 1, H228 Water-react. 2, H261	[20]

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.
[20] The physical hazards of the substance will not be taken into account as this substance is marketed in a form, which does not have the physical hazards indicated by the classification in the entry in Part 3 of the CLP Regulation (Annex VI, note T).
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. aluminium. Titanium. copper. Zirconium (Zr). Silicon. Nickel (Ni).

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

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.
Keep unauthorized persons away from the spill

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)

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

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)

Aluminium(III)oxide
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)

Magnesium
Long term exposure limit (8 hours) (mg/m³): 4 mg/m³ (as Mg) fume and respirable dust
Short term exposure limit (15 minutes) (mg/m³): 10 mg/m³ (as Mg) inhalable dust fume

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

Silicon dioxide
Long term exposure limit (8 hours) (mg/m³): 0,1 (respirable fraction)
Annotations:
Carc = Capable of causing cancer and/or heritable genetic damage.

Zirconium dioxide
Long term exposure limit (8 hours) (mg/m³): 5 (Compounds, as Zr)
Short term exposure limit (15 minutes) (mg/m³): 10 (Compounds, as Zr)

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

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

Manganese

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	2.1 µg/kg bw/day
Long term – Systemic effects - Workers	Dermal	4.14 µg/kg bw/day
Long term – Local effects - General population	Inhalation	41 µg/m³
Long term – Local effects - Workers	Inhalation	200 µg/m³
Long term – Systemic effects - General population	Inhalation	1.79 µg/m³
Long term – Systemic effects - Workers	Inhalation	10.1 µg/m³
Short term – Local effects - Workers	Inhalation	200 µg/m³
Long term – Systemic effects - General population	Oral	91.4 µg/kg bw/day

Aluminium

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	3.72 mg/m³
Long term – Systemic effects - Workers	Inhalation	3.72 mg/m³
Long term – Systemic effects - General population	Oral	3.95 mg/kg bw/day

Aluminium(III)oxide

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	750 µg/m³
Long term – Local effects - Workers	Inhalation	3 mg/m³
Long term – Systemic effects - General population	Inhalation	750 µg/m³
Long term – Systemic effects - Workers	Inhalation	3 mg/m³
Long term – Systemic effects - General population	Oral	1.32 mg/kg bw/day

Copper

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	137 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	137 mg/kg bw/day
Short term – Systemic effects - General population	Dermal	273 mg/kg bw/day
Short term – Systemic effects - Workers	Dermal	273 mg/kg bw/day
Long term – Local effects - General population	Inhalation	1 mg/m³
Long term – Local effects - Workers	Inhalation	1 mg/m³
Short term – Local effects - General population	Inhalation	1 mg/m³
Short term – Local effects - Workers	Inhalation	1 mg/m³
Long term – Systemic effects - General population	Oral	41 µg/kg bw/day

Iron

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	1.5 mg/m³
Long term – Local effects - Workers	Inhalation	3 mg/m³
Long term – Systemic effects - General population	Oral	710 µg/kg bw/day

Magnesium

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Dermal	1.25 mg/cm²
Long term – Local effects - Workers	Dermal	2.5 mg/cm²
Long term – Systemic effects - General population	Dermal	2.5 mg/kg bw/day

Long term – Systemic effects - Workers	Dermal	5 mg/kg bw/day
Short term – Local effects - General population	Dermal	1.25 mg/cm²
Short term – Local effects - Workers	Dermal	2.5 mg/cm²
Short term – Systemic effects - General population	Dermal	40 mg/kg bw/day
Short term – Systemic effects - Workers	Dermal	80 mg/kg bw/day
Long term – Local effects - General population	Inhalation	5 mg/m³
Long term – Local effects - Workers	Inhalation	10 mg/m³
Long term – Systemic effects - General population	Inhalation	5 mg/m³
Long term – Systemic effects - Workers	Inhalation	10 mg/m³
Short term – Local effects - General population	Inhalation	5 mg/m³
Short term – Local effects - Workers	Inhalation	10 mg/m³
Short term – Systemic effects - General population	Inhalation	5 mg/m³
Short term – Systemic effects - Workers	Inhalation	10 mg/m³
Long term – Systemic effects - General population	Oral	3.6 mg/kg bw/day
Short term – Systemic effects - General population	Oral	100 mg/kg bw/day

Nickel

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Dermal	35 µg/cm²
Long term – Local effects - Workers	Dermal	35 µg/cm²
Long term – Local effects - General population	Inhalation	60 ng/m³
Long term – Local effects - Workers	Inhalation	50 µg/m³
Long term – Systemic effects - General population	Inhalation	60 ng/m³
Long term – Systemic effects - Workers	Inhalation	50 µg/m³
Short term – Local effects - General population	Inhalation	800 µg/m³
Short term – Local effects - Workers	Inhalation	11.9 mg/m³
Long term – Systemic effects - General population	Oral	11 µg/kg bw/day
Short term – Systemic effects - General population	Oral	370 µg/kg bw/day

Sodium fluoride

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - Workers	Dermal	360 µg/kg bw/day
Short term – Systemic effects - Workers	Dermal	360 µg/kg bw/day
Long term – Local effects - Workers	Inhalation	2.5 mg/m³
Short term – Systemic effects - Workers	Inhalation	2.5 mg/m³

Titanium dioxide

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	28 µg/m³
Long term – Local effects - Workers	Inhalation	170 µg/m³

PNEC

Manganese

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		22-34 µg/L
Freshwater sediment		108-3300 µg/kg
Intermittent release (freshwater)		28-280 µg/L
Intermittent release (marine water)		28 µg/L
Marine water		2.2-3.4 µg/L
Marine water sediment		10.8-340 µg/kg
Sewage treatment plant		100 mg/L

Soil	8.74-3400 µg/kg

Aluminium

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		20 mg/L

Aluminium(III)oxide

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		20 mg/L

Copper

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		6.3 µg/L
Freshwater sediment		87 mg/kg
Marine water		5.2 µg/L
Marine water sediment		676 mg/kg
Sewage treatment plant		230 µg/L
Soil		65 mg/kg

Magnesium

Route of exposure:	Duration of Exposure:	PNEC:
Air		10 mg/m³
Freshwater		410-2000 µg/L
Freshwater sediment		87.8-268 mg/kg
Intermittent release (freshwater)		1.4-2 mg/L
Marine water		410-26500 µg/L
Marine water sediment		8.78-268 mg/kg
Predators		212 mg/kg
Sewage treatment plant		10.8 mg/L
Soil		28.7-268 mg/kg

Nickel

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		7.1 µg/L
Freshwater sediment		109 mg/kg
Intermittent release (freshwater)		0 ng/L
Intermittent release (marine water)		0 ng/L
Marine water		8.6 µg/L
Marine water sediment		109 mg/kg
Predators		120 µg/kg
Sewage treatment plant		330 µg/L
Soil		29.9 mg/kg

Sodium fluoride

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		900 µg/L
Sewage treatment plant		51 mg/L
Soil		11 mg/kg

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-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.	2	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 high protection against UV radiation.	EN 166:2001

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Article Wire
Colour:	Metal. Copper.
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.
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	Titanium dioxide
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	>10000 mg/kg

Product/substance	Titanium dioxide
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (4 hours)
Result:	>6.82 mg/L

Product/substance	Manganese

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

Product/substance	Aluminium(III)oxide
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	>5000 mg/kg

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

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

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

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory sensitisation

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

Skin sensitisation

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

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

STOT-single exposure

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

STOT-repeated exposure

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

11.2. Information on other hazards

Long term effects

None known.

Endocrine disrupting properties

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

Other information

Titanium dioxide has been classified by IARC as a group 2B carcinogen.
Nickel has been classified by IARC as a group 2B carcinogen.
Silicon dioxide has been classified by IARC as a group 1 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	Titanium dioxide
Species:	Fish, Fundulus heteroclitus

Duration:	96 hours
Test:	LC50
Result:	>1000 mg/L

Product/substance	Titanium dioxide
Species:	Crustacean, Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	>1000 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	Aluminium(III)oxide
Species:	Fish, Salmo trutta
Test:	LC50
Result:	>100 mg/L

Product/substance	Aluminium(III)oxide
Species:	Crustacean, Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	>100 mg/L

Product/substance	Silicon dioxide
Species:	Crustacean, Daphnia magna
Test:	EC50
Result:	7600 mg/L

Product/substance	Silicon dioxide
Species:	Algae, Selenastrum capricornutum
Duration:	72 hours
Test:	ErC50
Result:	440 mg/L

Product/substance	Aluminium
Species:	Fish
Test:	LC50
Result:	>100 mg/L

Product/substance	Aluminium
Species:	Crustacean
Test:	LC50
Result:	>100 mg/L

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

12.2. Persistence and degradability

Product/substance	NSWE SF-3AM
Conclusion:	The substance is inorganic. Biodegradation studies are not applicable.

12.3. Bioaccumulative potential

Product/substance	NSWE SF-3AM
Conclusion:	The substance is inorganic. Biodegradation studies are not applicable.

Product/substance	Manganese
BCF:	59052

Conclusion:	-

Product/substance	Silicon dioxide
LogKow:	0,53
Conclusion:	-

Product/substance	Aluminium
BCF:	18
LogKow:	<3
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	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group
** Environmental hazards

Additional information
Not dangerous goods according to ADR, 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 Hazards (COMAH) - Categories / dangerous substances:	Not applicable.
UK-REACH, Annex XVII:	Nickel is subject to restrictions, UK-REACH annex XVII (entry 27).

	Magnesium is subject to UK-REACH restrictions (entry 40). Aluminium is subject to UK-REACH restrictions (entry 40).
Additional information:	Not applicable.
Sources:	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

EUH032, Contact with acids liberates very toxic gas.
H228, Flammable solid.
H250, Catches fire spontaneously if exposed to air.
H260, In contact with water releases flammable gases which may ignite spontaneously.
H261, In contact with water releases flammable gases.
H301, Toxic if swallowed.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.
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
EINECS = European Inventory of Existing Commercial chemical Substances
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
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
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.
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