

Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 08/12/2008 Revision date: 17/12/2024 Supersedes version of: 13/06/2016 Version: 4.0

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

1.1. Product identifier

Product form : Article
Product name : NST Kerback Ceramic Backing

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 : Cermaic welding backing

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	Organisation/Company	Address	Emergency number	Comment
Norway	Giftinformasjonen (Helsedirektoratet)	P.O. Box 7000, St. Olavs Plass 0130 Oslo	+47 22 59 13 00 113	(Open 24H)
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182 +44 191 2606180	Hours of operation: 24hrs
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Precautionary statements (CLP) : P261 - Avoid breathing fume, dust, vapours.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear Breathing equipment, face protection, protective gloves, protective clothing.

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

Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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]
Quartz (SiO ₂)	(CAS-No.) 14808-60-7 (EC-No.) 238-878-4 (REACH-no) N/A	40 – 50	Not classified
aluminium oxide	(CAS-No.) 1344-28-1 (EC-No.) 215-691-6 (REACH-no) 01-2119529248-35	38 – 44	Not classified
Magnesium oxide	(CAS-No.) 1309-48-4 (EC-No.) 215-171-9 (REACH-no) 01-2119962196-31	8 – 11	Not classified

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/doctor 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. Inhalation of vapours may cause respiratory irritation.
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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting 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. Oxides of: aluminium. Silicon. Magnesium. Manganese.

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper personal protective equipment, including respiratory protection (EN137).
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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. Overexposure to welding fumes may affect pulmonary function.
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Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

6.1.1. For non-emergency personnel

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

6.1.2. 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

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Mechanically recover the product.

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 : Avoid breathing dust and fumes generated during processing, and ensure adequate ventilation of the workplace. 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. Handle with care to avoid stings and cuts.

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. Store in a well-ventilated place. Keep cool. Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pile no more than 9 layers.

7.3. Specific end use(s)

No additional data.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

aluminium oxide (1344-28-1)	
United Kingdom - Occupational Exposure Limits	
Local name	Aluminium oxides
WEL TWA (OEL TWA)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Norway - Occupational Exposure Limits	
Local name	Aluminiumoksid
Grenseverdi (OEL TWA)	10 mg/m ³
Remark	1) Grenseverdien er fastsatt lik verdien for sjenerende støv.
Regulatory reference	FOR-2024-04-05-581

Quartz (SiO ₂) (14808-60-7)	
Norway - Occupational Exposure Limits	
Local name	Krystallinsk silika (SiO ₂), α-kvarts
Grenseverdi (OEL TWA)	0.3 mg/m ³ Totalstøv 0.05 mg/m ³ Respirabelt støv

Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Remark	Totalstøv og respirabelt støv: K: Kjemikalier som skal betraktes som kreftfremkallende; 7) Støv som inneholder α -kvarts, kristobalitt og/eller tridymitt vurderes ut fra summasjonsformel. Samtidig må verdiene for sjenerende støv overholdes. Respirabelt støv: G: EU har fastsatt en bindende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581

Magnesium oxide (1309-48-4)	
United Kingdom - Occupational Exposure Limits	
Local name	Magnesium oxide
WEL TWA (OEL TWA)	4 mg/m ³ (as Mg) fume and respirable dust 10 mg/m ³ (as Mg) inhalable dust fume
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Norway - Occupational Exposure Limits	
Local name	Magnesiumoksid
Grenseverdi (OEL TWA)	10 mg/m ³
Remark	1) Grenseverdien er fastsatt lik verdien for sjenerende støv.
Regulatory reference	FOR-2024-04-05-581

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:

Gloves. Safety glasses.



8.2.2.1. Eye and face protection

Eye protection:

Use approved safety goggles or face shield. Wear safety glasses with high protection against UV radiation. STANDARD EN 166.

8.2.2.2. Skin protection

Skin and body protection:

Wear thermal insulated gloves, shoes and other safety equipment designed for welding

Hand protection:

Gloves made of insulating material. Heat-resistant gloves. EN 388:2016

Other skin protection

Materials for protective clothing:

Heatproof clothing

8.2.2.3. Respiratory protection

Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Respiratory protection:

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. STANDARD EN 149.

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Beige.
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: 1430 °C
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
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 soluble in water.
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	: 1.9
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 under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Will not polymerise.

Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

10.4. Conditions to avoid

None to our knowledge.

10.5. Incompatible materials

None to our knowledge.

10.6. Hazardous decomposition products

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide. Oxides of: Aluminium. Silicon (Si). Magnesium. Manganese.

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 Vapours are irritating to the respiratory system May cause eye-irritation of susceptible persons

aluminium oxide (1344-28-1)

LD50 oral rat	> 5000 mg/kg
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Magnesium oxide (1309-48-4)

LD50 oral rat	3870 mg/kg
LD50 dermal rat	2000 – 5000 mg/kg

Skin corrosion/irritation	: Not classified
Additional information	: May cause a sensitization
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: The product contains a small amount of sensitising substance which may provoke an allergic reaction among sensitive individuals after repeated contact.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
Additional information	: Inhalation of fumes or vapours may cause respiratory irritation Overexposure to welding fumes may affect pulmonary function.
STOT-repeated exposure	: Not classified
Additional information	: Overexposure to welding fumes may affect pulmonary function. 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. Long 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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %
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Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

11.2.2 Other information

Other information : No additional data

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous to the environment. However, the product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)

aluminium oxide (1344-28-1)	
LC50 - Fish [1]	> 100 mg/l 96 h (Salmo trutta)
EC50 - Crustacea [1]	> 100 mg/l (48 hours - Daphnia magna)

12.2. Persistence and degradability

NST Kerback Ceramic Backing	
Persistence and degradability	The product is not biodegradable.

12.3. Bioaccumulative potential

NST Kerback Ceramic Backing	
Bioaccumulative potential	No data available on bioaccumulation.

12.4. Mobility in soil

NST Kerback Ceramic Backing	
Ecology - soil	The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

NST Kerback Ceramic Backing	
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. 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 waste regulation : Product is not hazardous waste.

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

European List of Waste (LoW, EC 2000/532) : 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 applicable	Not applicable	Not applicable	Not applicable	Not applicable

Safety Data Sheet

NST Kerback Ceramic Backing

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 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

Indication of changes:			
Regulatory information. Identification of the substance/mixture and of the company/undertaking.			
Section	Changed item	Change	Comments
8.1	Limit values	Modified	

Data sources : 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.

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.