

SAFETY INFORMATION SHEET (SIS) FOR Alleima 13C26

Issue of November 2023

1. Identification of substance and company

1.1. Product identifier

Product name: Alleima 13C26

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

Alleima 13C26 is a martensitic stainless chromium steel. After heat treatment the grade is characterized by, very high hardness, good corrosion resistance, very good wear resistance

Alleima 13C26 is mainly used for razor blades but is also the standard grade for surgical knives. It is also used for different types of industrial knives for food processing such as bacon and derider blades.

1.3. Details of the supplier of the safety information sheet

Manufacturer and supplier:

Alleima AB

S-811 81 SANDVIKEN

Sweden

Tel: +46 26 426 00 00

Website: www.alleima.com

Contact: ehs.miljoskydd@alleima.com

1.4. Emergency information

In case of emergency, contact your local authority advisor.

2. Hazards identification

2.1. Classification of the mixture

Classification	Hazard statement
Carc. 1B	H350 May cause cancer
Repr. 1B	H360F May damage fertility.
Muta. 2	H341 Suspected of causin genetic effects.
Skin Sens. 1	H317: May cause an allergic reaction
Resp. Sens. 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

Table 1 Classification according to EC 1272/2008 regulation.

2.2. Label elements

Since these products are massive alloys, labelling is not required.

2.3. Other hazards

There are no hazards of concern for man or the environment.

Dust and fume may be generated during processing e.g. in welding, cutting and grinding. If airborne concentrations of dust and fume are excessive, inhalation over long periods may affect workers'

health, primarily of the lungs.

3. Composition/information on ingredients

Element	CAS number	EINECS number	Concentration wt-%	Classification	Hazard statement
Chromium	7440-47-3	231-157-5	13	-	-
Manganese	7439-96-5	231-105-1	0,7	-	-
Carbon	7440-44-0	231-153-3	< 8	Eye Irrit. 2	H319: Causes serious eye irritation H335: May cause respiratory irritation
Cobalt	7440-48-4	231-158-0	< 2	Carc. 1B Repr. 1B Muta. 2 Skin Sens. 1 Resp. Sens 1 Aquatic Chronic 4	H350 May cause cancer. H360F May damage fertility. H341 Suspected of causing genetic effects. H317: May cause an allergic reaction. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. H413: May cause long lasting harmful effects to aquatic life.

Table 2 Composition and classification according to EC 1272/2008 regulation.

4. First aid measures

4.1. Description of first aid measures

There are no specific first aid measures developed. Medical attention should be sought in case of an excessive inhalation of dust, a physical injury to the skin or to the eyes. Note that austenitic stainless steel particles are non-magnetic or only slightly magnetic and may therefore not respond to a magnet placed over the eye.

4.2. Most important symptoms and effects both acute and delayed

No relevant information has been identified.

4.3. Indication of any immediate medical attention and special treatment needed

No relevant information has been identified.

5. Firefighting measures

5.1. Extinguishing media

Alloys in massive form are not combustible.

However, care should be taken to avoid exposing fine process dust (e.g. from grinding and blasting operations) to high temperatures as it may present a potential fire hazard.

5.2. Special hazards arising from the mixture

None identified.

5.3. Advice for firefighters

None identified.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Not applicable.

6.2. Environmental precautions

Not applicable

6.3. Methods and material for containment and cleaning up

Not applicable

6.4 Reference to other sections

None.

7. Handling and storage

7.1. Precautions for safe handling

There are no special technical measures involved for handling. Normal precautions should be taken to avoid physical injury from coiled or bundled products, possibly with sharp edges.

Straps or bands, used to secure some products, should not be used for lifting. Coils and bundled products (e.g. sections, rods, bars etc.) may spring apart when the banding is removed and the banding itself could cause eye or other injury when tension is released.

Certain products may, as a result of processing, be brittle or have residual stress that might cause fracture or significant deformation.

All products are likely to have sharp edges that could cause lacerations and flying particles may be produced when shearing.

Suitable protective clothing and equipment, such as hand and eye protection, should be worn and systems of work adopted to take account of any hazards arising from the risk of fracturing or the release of tension when breaking open banding.

Suitable racks should be used to ensure stability when stocking narrow coils.

7.2. Conditions for safe storage, including any incompatibilities

The product is stable in storage. However, it should be kept in mind that the products may display sharp edges and a sufficiently robust place capable of carrying the significant weight of the products should be used for storage.

7.3. Specific end uses

None identified.

8. Exposure controls/personal protection

8.1. Control parameters

Elements	TD	ID	RD
Carbon		3	
Manganese and its inorganic compounds as Mn		0,2	0,05
Chromium and its compounds as Cr	0,5		
Cobalt and its inorganic compounds as Co		0,02	

Table 3 Occupational Exposure Limits, NGV, (mg/m³) in Sweden.

NGV=Nivågränsvärde(One working day exposure)

TD=Total dust

ID= Inhalable dust

RD=Respirable dust

8.2. Exposure controls

8.2.1. Appropriate engineering controls

In the processing of all metallic materials, exposure to fume and dust must be kept below any legally imposed limits.

Dust and fume may be generated in use, e.g. by cutting, grinding and welding processes, which may contain materials subject to exposure limits. To ensure these limits are not exceeded, adequate general or local ventilation or fume extraction should be provided.

8.2.2. Individual protection measures, such as personal protective equipment

In accordance with European and national health and safety regulations, it is necessary to assess the need for personal protection equipment and appropriate approved respiratory protection should be provided for those workers at risk of inhalation. Suitable hand and eye protection should be worn where there is a risk of laceration, flying particles, welding heat radiation or contact with oils during processing.

The process of welding should only be performed by trained workers with the personal protective equipment in accordance with the laws of each member state relating to safety.

8.2.3. Environmental exposure controls

Emissions from ventilation or equipment in the work place should be controlled in order to assure that environmental legislation is fulfilled.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

The physical properties are related to a number of factors, including alloying elements, heat treatment and manufacturing route, but the data presented below can generally be used for rough calculations.

Appearance: Grey solid

Melting Point: 3652 C

Vapor Pressure: Negligible at 20°C

Density: 7,7 g/cm³

Stability: Stable. Incompatible with strong oxidizing agents.

9.2. Other information

Thermal conductivity at 20°C, 8-30 W/(mK).

Not explosive.

10. Stability and reactivity

10.1. Reactivity

Stable and non-reactive under normal ambient atmospheric conditions.

10.2. Chemical stability

Stable and non-reactive under normal ambient atmospheric conditions.

10.3. Possibility of hazardous reactions

May react in contact with strong acids, releasing gaseous acid decomposition products, e.g. hydrogen, oxides of nitrogen.

10.4. Conditions to avoid

When heated to very high temperatures fumes may be produced (e.g. by cutting, welding or melting operations).

10.5. Incompatible materials

May react in contact with strong acids, releasing gaseous acid decomposition products, e.g. hydrogen, oxides of nitrogen.

10.6. Hazardous decomposition products

See section 10.3. and 10.5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Not acute toxic.

Irritation

The exposure route of concern is inhalation. These stainless steel products are in massive form, not capable of being inhaled.

Corrosivity

Not corrosive to skin.

Sensitization

Cobalt is classified as a skin sensitizer. It causes skin sensitization in susceptible individuals through prolonged intimate contact with the skin.

Repeated dose toxicity

During mechanical working, flame cutting or welding, dust, or fumes containing complex or mixed oxides (spinels) of its constituents, may be formed. Over long periods, inhalation of excessive airborne levels may have long term health effects, primarily affecting the lungs.

Carcinogenicity

Not classified as carcinogenic.

Mutagenicity

Not classified as mutagenic.

Toxicity for reproduction

Not toxic for reproduction.

12. Ecological information

12.1. Toxicity.

Not ecotoxic.

12.2. Persistence and degradability

Not relevant.

12.3. Bioaccumulative potential

None.

12.4. Mobility in soil

Not soluble in water. Immobile.

12.5. Results of PBT and vPvB assessment

Not relevant.

12.6. Other adverse effects

No known harmful effects. No special precautions are required.

13. Disposal considerations

13.1 Waste treatment methods

Surplus and scrap (waste) are valuable commodity and in demand for the production of prime stainless steel.

Recycling routes are well-established, and recycling is therefore the preferred disposal route.

Disposal to landfill is not harmful to the environment, but is a waste of resources and therefore less desirable than recycling.

14. Transport information

No special precautions required.

The product is not classified as hazardous for transport.

15. Regulatory information

15.1. Safety, health and environmental regulation/legislation specific for the mixture

No specific regulation.

15.2. Chemical safety assessment

No chemical safety assessment has been published.

16. Other information

Food contact materials

The Council of Europe published "Metals and alloys used in food contact materials and articles – A practical guide for manufacturers and regulators, 1st ed 2013" to ensure that metallic materials used in contact with food comply with the regulation EC 1935/2004. The document includes a section on stainless steels.

References to regulations

Alloys are considered as articles under regulation EC 1907/2006, concerning the registration, evaluation, authorisation and restriction of chemicals (REACH). In accordance with REACH and regulation EC 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) only substances and preparations require a safety data sheet (SDS). While articles under REACH do not require a classic SDS but articles shall be accompanied by sufficient information to permit safe use and disposal. In order to comply with this requirement a safety information sheet (SIS) has been developed.

Declaration

The information given in this safety information sheet is based on the present level of our knowledge and experience. The data sheet describes the products with respect to safety requirements. The data given is not intended as a confirmation of product properties and does not constitute a legal contractual relationship, nor should it be used as the basis for ordering these products.