

SoporGreen Ag Cu Zn Sn coated brazing alloys

SAFETY DATA SHEET | TECHNICAL REVIEW DRAFT

Revision 02 draft | 11 October 2026 | English source retained

Supplier approval required before issue. This review corrects the supplied text and flags unresolved safety data. The coating formulation, coating mass fraction and final classification must be confirmed. This sheet covers silver alloys with Flex flux coating; the FOSOP 0 TDS is used solely as a visual reference.

Regulation (EC) No 1907/2006 (REACH),

Regulation (EU) 2020/878,

Regulation (EC) No 1272/2008 (CLP)

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

1.1 Product identifier

Commercial names: SoporGreen 20TSi, SoporGreen 25 T, SoporGreen 25 Sn, SoporGreen 30 T, SoporGreen 30 Sn, SoporGreen 34 Sn, SoporGreen 40 Sn, SoporGreen 45T, SoporGreen 45 Sn, SoporGreen 55 Sn, SoporGreen 56 Sn

Product type: Silver Brazing alloys (Ag-Cu-Zn-Sn based)

UFI: Applicability to be assessed for the final product and supply route under CLP Annex VIII; no UFI was supplied.

Supplier: Name: INDUCAST Lda. TM SOPORMETAL label,

Address: Zona Industrial de Albergaria-a-Velha, Arruamento D, Lote 32 B 3850-194 Albergaria-a-Velha PORTUGAL

Phone number: +351 234 243 048

Responsible Person / Editor: info@inducast.pt

1.2 Relevant identified uses of the substance or mixture

Relevant identified uses: Capillary brazing alloys for copper, brass, and steel

Applications:

Refrigeration industry

HVAC Systems

Gas distributor systems

Industrial heat Exchange systems

Industrial and professional use only

Use advised against: No specific uses advised against identified

1.3 Details of the supplier of the Safety data sheet

Supplier: Inducast Lda. – TM SOPORMETAL

Address: Zona Industrial de Albergaria-a-Velha

Arruamento D, Lote 32 B

3850-194 Albergaria-a-Velha

Responsible person / e-mail info@inducast.pt

1.4 Emergency telephone number

+ 351 234 243 048 (available during business hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP):

Final classification of the coated product has not been established. The source declares 20–30% potassium hydroxide and 20–30% potassium tetraborate in the coating. A blanket non-hazardous classification is not supported by these data.

Hazards are associated with fumes and airborne particulates generated during brazing or thermal processing operations

Evaluate the product as supplied, including its coating. Fume hazards during brazing are additional occupational hazards and do not replace the classification of the supplied product.

2.2 Label elements

Final CLP label elements, signal word, pictograms and hazard statements require supplier validation. GHS05 and GHS08 may be required if corrosivity and reproductive toxicity classifications are confirmed. Do not issue a label solely from this draft.

During brazing operations, fumes may cause:

Respiratory irritation

Eye irritation

Skin irritation

Precautionary statements;

P 261 – Avoid breathing fumes/vapours

P 271 – Use only outdoors or in a well-ventilated area.

P 280 – Wear protective gloves/protective clothing/eye protection /face protection.

P 304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P 305 +P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P 312 – CALL A POISON CENTER /doctor if you feel unwell

P 501 – Dispose of contents/container in accordance with local regulations

2.3 Other hazards

PBT/vPvB assessment: not documented for the complete coated product. Obtain current ingredient assessments and evaluate the applicable 0.1% threshold.

Endocrine-disrupting properties: no complete assessment supplied; absence cannot be confirmed.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Substance	CAS No	EC No.	Concentration (%)
Silver	7440-22-4	231-131-3	20 – 56
Copper	7440-50-8	231-159-6	21 - 44
Zinc	7440-66-6	231-175-3	17 - 36
Tin	7440-31-5	231-141-8	0 - 5
Silicon	7440-21-3	231-130-8	≤0.1

Coating:

Chemical name	Coating content	CAS No.	EC No.	Ingredient classification to verify
Potassium tetrafluoroborate	30 – 50 %	14075-53-7	237-928-2	Not classified
Potassium tetraborate tetrahydrate	20 – 30 %	12045-78-2	215-575-5	Source: Repr. 2 / H361d; verify
Potassium hydroxide	20 – 30 %	1310-58-3	215-181-3	Skin Corr. 1A / H314; check H302 and H290 in supplier SDS

Product composition

Trade Name	Composition (%)	Composition (%)	Composition (%)	Composition (%)	Composition (%)
Trade Name	Ag	Cu	Zn	Sn	Si
SoporGreen 20TSi	20	44	36		0,1
SoporGreen 25 T	25	40	35		
SoporGreen 25 Sn	25	40	33	2	
SoporGreen 30 T	30	38	32		
SoporGreen 30 Sn	30	36	32	2	
SoporGreen 34 Sn	34	36	27,5	2,5	
SoporGreen 40 Sn	40	30	28	2	
SoporGreen 45T	45	30	25		
SoporGreen 45 Sn	45	27	25,5	2,5	
SoporGreen 55 Sn	55	21	22	2	
SoporGreen 56 Sn	56	22	17	5	

Composition figures reproduced from the source, not independently certified. Metal percentages refer to the core; coating percentages refer to the coating. Coating mass fraction of the complete product is missing. For SoporGreen 20TSi the listed nominal values total 100.1%; confirm the copper balance and silicon tolerance. For potassium tetraborate tetrahydrate, confirm CAS/EC pairing and hydration state from the raw-material SDS.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation

Remove affected person to fresh air. Seek medical attention if symptoms persist.

Skin contact

Remove contaminated clothing. Rinse affected skin with plenty of water. Obtain medical advice for irritation or suspected chemical burns. For molten-metal burns, cool with water; do not forcibly remove adhered metal.

Eye contact

Immediately rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing and obtain urgent medical attention for coating exposure or persistent symptoms.

Ingestion

Rinse mouth. Do not induce vomiting. Obtain immediate medical advice if coating is swallowed. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects both acute and delayed

Respiratory irritation

Eye irritation

skin irritation

metal fume fever

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Inform the clinician about possible alkaline and fluoride exposure from flux, thermal burns and metal fume exposure. Provide the validated flux SDS.

Section 5. FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media;

Dry powder

Use media suitable for the surrounding fire. Do not apply water or foam directly to molten metal.

Carbon dioxide may be suitable for the surrounding fire; avoid dispersing coating dust.

5.2 Special hazards arising from the substance or mixture

Fire or heating may generate metal oxide fumes and hazardous fluorine-containing decomposition products from flux. Exact products depend on temperature and formulation.

5.3 Advice for firefighters

Wear self-contained breathing apparatus (SCBA)

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate personal protective equipment PPE. Avoid dust generation

6.2 Environmental precautions

Avoid release to soil, drains and waterways

6.3 Methods and material for containment and cleaning up

Collect mechanically. Avoid generating airborne dust

6.4 Reference to other sections

Refer to section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

Use with adequate ventilation. Avoid inhalation of fumes generated during brazing operations

Do not eat, drink or smoke while handling the product.

7.2 Conditions for safe storage, including any incompatibilities.

Store in a cool, dry and well-ventilated area.

Keep packaging clearly labelled.

Keep away from:

Strong acids

Oxidising agents

Halogens

7.3 Specific end use(s)

Industrial and professional brazing operations

Users should be trained in safe handling of brazing materials and thermal processing operations

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits shall comply with applicable national regulations.

Occupational exposure limits

Silver: source value 0.01 mg/m³ not retained as a validated limit; chemical form, jurisdiction and averaging period were unspecified.

Copper, zinc oxide and tin: establish current national limits with chemical form and averaging period before issue.

Include applicable potassium hydroxide, fluoride and borate exposure limits after ingredient verification.

DNEL/PNEC values and biological limits: not supplied; obtain where applicable.

8.2 Exposure controls

Engineering controls

Use adequate local exhaust ventilation during brazing

Respiratory protection

Where ventilation is insufficient, use suitable respiratory protection

Recommended:

FFP3

P3 particulate filter

Select any combined gas/particle filter from a documented exposure assessment; ABEK-P3 is not a universal solution for flux gases. Use supplied-air equipment when required.

Hand protection

Use heat-resistant welding gloves

Recommended material:

Leather

Eye and face protection: use appropriate safety goggles for flux handling and suitable brazing eye/face protection with a filter shade selected for the process. Protect against particles, splashes and thermal radiation.

Body protection

Wear suitable protective clothing for brazing and thermal processing operations

Environmental exposure controls

Avoid uncontrolled release of particulates and residues into the environment

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:

Physical State: Solid.

Colour: Metallic silver yellow

Odour: Odourless

Melting point: According to technical data sheet

Boiling point or initial boiling point and range: no reliable data available for the complete product.

Flammability: bulk metal core is generally non-flammable; coating test data not supplied.

Explosive properties: Not explosive

Density: approximately 8–9 g/cm³ for the metal core (source estimate); coated-product density not supplied.

Water solubility: metal core insoluble; coating contains water-soluble constituents. Whole-product solubility not quantified.

9.2 Other information

Additional required properties: lower/upper explosion limits, flash point, auto-ignition temperature, decomposition temperature, pH, kinematic viscosity, partition coefficient, vapour pressure and relative vapour density: no measured data supplied for the complete product; applicability must be assessed. Particle characteristics: solid rods; coating dust size distribution not supplied.

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended conditions of storage and handling

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reaction known under normal conditions of use

10.4 Conditions to avoid

Avoid excessive heat and incompatible materials

10.5 Incompatible materials

Strong acids

Oxidising agents

Halogens

10.6 Hazardous decomposition products

Thermal decomposition may generate

Metal oxide fumes

Flux decomposition products

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes

Exposure to fumes generated during brazing operations may cause:

Respiratory irritation

Eye irritation

Skin irritation

Metal fume fever

Acute toxicity

No data available for the mixture

Skin corrosion/irritation

Coating containing potassium hydroxide may cause chemical burns. Determine mixture corrosivity from verified formulation, relevant concentration limits and available test data.

Serious eye damage/irritation

Flux dust may cause serious eye damage if corrosive classification is confirmed. Fumes and particles may also irritate the eyes.

Respiratory sensitisation

No sufficient sensitisation data supplied for the complete coated product.

Carcinogenicity

No sufficient carcinogenicity data supplied for the complete coated product.

Germ cell mutagenicity

No sufficient germ-cell mutagenicity data supplied for the complete coated product.

Reproductive toxicity

The source assigns Repr. 2 / H361d to potassium tetraborate tetrahydrate. Confirm exact chemical identity and current supplier classification; calculate final product classification using verified concentrations.

STOT – single exposure

Exposure to fumes may irritate the respiratory tract

No additional information available

11.2 Information on other hazards: endocrine-disrupting and other toxicological effects have not been fully assessed for the coated product. STOT repeated exposure and aspiration hazard: insufficient mixture data supplied.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Copper and silver compounds may be hazardous to aquatic organisms at elevated concentrations
Avoid uncontrolled environmental release

12.2 Persistence and degradability

Metal components are persistent and occur naturally in the environment

12.3 Bioaccumulative potential

Copper may bioaccumulate in aquatic organisms

12.4 Mobility in Soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment: not documented for the complete coated product. Obtain current ingredient assessments and evaluate the applicable 0.1% threshold.

12.6 Endocrine disrupting properties

No complete endocrine-disruptor assessment supplied for the coated product.

12.7 Other adverse effects

No additional information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of waste through authorised waste management operators

Do not dispose of with municipal waste

Contaminated packaging may contain residues of product

Dispose of in accordance with local and national regulations

SECTION 14: Transport information

Transport classification remains unverified. Evaluate the coating and complete product under current ADR/RID, IMDG and ICAO/IATA provisions before shipment; the source non-dangerous-goods statement is not substantiated.

14.1 UN number or ID number

Not determined for the coated product; supplier confirmation required.

14.2 UN proper shipping name

Not determined for the coated product; supplier confirmation required.

14.3 Transport hazard class (es)

Not determined for the coated product; supplier confirmation required.

14.4 Packing group

Not determined for the coated product; supplier confirmation required.

14.5 Environmental hazards

Not determined for the coated product; supplier confirmation required.

14.6 Special precautions for user

Not determined for the coated product; supplier confirmation required.

14.7 Maritime transport in bulk according to IMO instruments

Not determined for the coated product; supplier confirmation required.

SECTION 15: Regulatory information

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

Regulatory framework used for the review (compliance cannot be confirmed until outstanding data are validated):

Regulation (EC) No 1907/2006 (Reach)

Regulation (EU) 2020/878

Regulations (EC) No 1272/2008 (CLP)

Commission Regulation (EU) 2023/707

Other CLP amendments: check the current consolidated CLP text and relevant application dates. The source citation to Regulation (EU) 2024/2564 was not substantiated and is removed.

15.2 Chemical safety assessment

No chemical safety assessment was supplied. Obtain relevant substance assessments and exposure scenarios where applicable.

SECTION 16: Other information

This information is based on current knowledge and applicable European legislation.

The information is intended to describe the product only for health, safety and environmental requirements.

It should not be construed as guaranteeing any specific property

Hazards of the coating in the supplied product and hazards generated by brazing must both be evaluated. This draft does not certify the product as non-hazardous.

Review changes and outstanding data

Corrected supplier contact to info@inducast.pt and address to Lote 32 B. Revised unsupported non-hazardous, label and transport statements; corrected first aid, flux/fire precautions, exposure-limit presentation, toxicology and missing property entries. Final approval requires coating formulation and mass fraction, current raw-material SDSs, CAS/EC checks, final CLP calculation/label, UFI applicability, transport assessment, national exposure limits and supplier emergency contact arrangements.

Hazard statements mentioned: H314 Causes severe skin burns and eye damage. H361d Suspected of damaging the unborn child. H302 Harmful if swallowed. H290 May be corrosive to metals. Ingredient statements are not automatically the classification of the finished product.

Sources: supplied SDS; FOSOP 0 TDS for design only; REACH Annex II as amended by Regulation (EU) 2020/878; CLP Regulation (EC) No 1272/2008. Draft reviewed on 11 October 2026. CLP = classification, labelling and packaging; PBT = persistent, bioaccumulative and toxic; vPvB = very persistent and very bioaccumulative; STOT = specific target organ toxicity; DNEL = derived no-effect level; PNEC = predicted no-effect concentration.