

SAFETY DATA SHEET

GB003 Bare Silver based (Cadmium free) brazing rods.



Version number: 1
 Revision number: 1
 Replaces SDS: 2009-11-23
 Issued: 2014-10-14

Not for sale in the USA

Section 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Trade name ProSilver 2, ProSilver 5, ProSilver 15, ProSilver 30T, ProSilver 34T, ProSilver 39T, ProSilver 402, ProSilver 45T, ProSilver 494, ProSilver 56T

Article-no

Product/Article	Diameter(mm)	Packaging (kg)	Part Number
ProSilver 2	2	5	S0220
ProSilver 2	2.5	5	LTAP0242
ProSilver 2	3	5	LTAP0243
ProSilver 2	2.5	0.5	LTAP0205
ProSilver 2	2.5	5 PCS	LTAP02B1
ProSilver 2	3	5 PCS	LTAP02B2
ProSilver 5	2.5	2.5	LTAP0522
ProSilver 5	3	2.5	LTAP0500
ProSilver 5	2	0.5	LTAP0505
ProSilver 5	2.5	0.5	LTAP0506
ProSilver 5	2	5 PCS	LTAP05B1
ProSilver 5	2.5	5 PCS	LTAP05B2
ProSilver 15	1.5	2.5	LTAP1524
ProSilver 15	2	2.5	LTAP1521
ProSilver 15	2.5	2.5	LTAP1522
ProSilver 15	3	2.5	LTAP1523
ProSilver 15	2	0.5	LTAP1506
ProSilver 15	2.5	0.5	LTAP1507
ProSilver 15	3	0.5	LTAP1508
ProSilver 15	2.5	5 PCS	LTAP15B3
ProSilver 15	2	5 PCS	LTAP15B2
ProSilver 30T	1.5	0.5	LTAT3001
ProSilver 30T	2.5	0.5	LTAT3003
ProSilver 34T	1.5	0.5	LTAT3401
ProSilver 34T	2.5	0.5	LTAT3403
ProSilver 34T	1.5	5 PCS	LTAT3592
ProSilver 39T	1.5	0.5	LTAT3901
ProSilver 402	1.5	0.5	LTAN4001
ProSilver 402	1.5	5 PCS	LTAN4093
ProSilver 45T	1.5	2.5	LTAT4520
ProSilver 45T	1.5	0.5	LTAT4501
ProSilver 45T	2.5	0.5	LTAT4503
ProSilver 45T	3	0.5	LTAT4504
ProSilver 45T	1.5	5 PCS	LTAT4563
ProSilver 45T	1.5	5 PCS	LTAT4564
ProSilver 45T	0.125	0.025	LTAT4559
ProSilver 494	1.5	0.5	LTAT5301
ProSilver 494	1.5	5 PCS	LTAT5392
ProSilver 56T	1.5	0.5	LTAT5601
ProSilver 56T	2.5	0.5	LTAT5603

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

Article type	Gas Brazing: Bare Silver based (Cadmium free) brazing rod Classification: DIN L-Ag55n, AS/NZS 1167.1 (or other)
Use	Oxy-Fuel brazing

1.3 Details of the supplier of the safety data sheet

Supplier	BOC Limited	BOC Limited
Street address	10 Julius Avenue North Ryde NSW 2113 Australia	970-988 Great South Road Penrose, Auckland New Zealand
Telephone	131 262	0800 111 333
Fax	132 427	0800 229 923
Email	<u>contact@boc.com</u>	<u>customer.servicenz@boc.com</u>

1.4 Emergency telephone number

Available outside office hours	Yes
Emergency phone number	1800 653 572 (Aus) or 0800 111 333 (NZ)

Other

Additional product information Web site: www.boc.com.au or www.boc.co.nz

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

As shipped the product is:

Not Classified as Hazardous according to Australian, New Zealand and European regulations (refer Section 15 for references)

Not a Dangerous Good for Transport by road, rail, air or sea according to Australian, New Zealand, European, IMO, and IATA.

GHS Classification Not Classified

2.2 Label elements

Not Applicable

2.3 Other hazards

Do not touch hot parts. Watch out for splatter, hot metal and slag. It may cause skin burn and cause fire.

Overexposure to the fumes and gases released from the brazing process may release products that are classified as hazardous and can be dangerous to health. Refer to Section 16 for more information . They can give rise to dryness of the nose, throat and eyes, respiratory irritation and, in some cases, longer term health effects such as irreversible central nervous system damage and lung deposits.

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Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

This product is a mixture and please refer to Section 3.2

3.2 Mixtures

AWS Classification	Ag	Cu	Zn	Ni	Sn	Li	Mn
Bag-4,5,6,7,	39.0-57.0	21.0-35.0	14.0-30.0	0-2.5	0-5.5	-	-
Bag-8,8a	71.0-73.0	Bal.	-	-	-	0-0.50	-
Bag-9,10	64.0-71.0	19.0-21.0	8.0-17.0	-	-	-	-
Bag-13,13a,18,19	53.0-93.0	Bal.	0-6.0	0-2.5	0-10.5	0-0.30	-
Others	24.0-86.0	0-41.0	0-35.0	0-5.0	0-7.0	-	0-16.0

Section 4. FIRST AND MEASURES

4.1 Description of first aid measures

Inhalation	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms occur.
Skin contact	Burns should be treated by a doctor. Wash affected areas with running water/soap. Seek medical attention in event of irritation
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Burns from radiation, see doctor.
Ingestion	Contact a doctor if more than an insignificant amount has been swallowed.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation	Brazing can generate fumes, mists, dust, vapours and gases, including ozone. The amounts and types of fumes produced vary greatly depending on the process involved and the materials being used such as metals, solvents, flux, paint and plastics. The health effects of exposure to fumes, dust, vapour and gases can vary. Effects can include irritation of the upper respiratory tract (nose and throat), tightness in the chest, asphyxiation, asthma, wheezing, metal fume fever, lung damage, bronchitis, cancer, pneumonia or emphysema.
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4.3 Indication of any immediate medical attention and special treatment needed

Acute effects include irritation of the eyes, nose and throat, shortness of breath

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Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media There is no restriction on the type of extinguisher which may be used.
Use extinguishing media suitable for surrounding area

5.2 Special hazards arising from the substance or mixture

Avoid contact with strong acids or other substances which are corrosive to metals

5.3 Advice for fire fighters

Special protective equipment for fire fighters Wear self contained breathing apparatus as in a fire brazing rods may decompose on heating and produce hazardous decomposition products

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits. Use respiratory equipment when brazing in a confined space. Wear protective clothing and eye protection appropriate to welding. Skin contact should be avoided to prevent possible allergic reactions.

6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3 Methods and material for containment and cleaning up

Spills to be cleaned up immediately using dry clean up methods and avoid dust generation
Use appropriate PPE to prevent contact with skin

6.4 Reference to other sections

For *Personal protection* see section 8. For *Disposal* see section 13. For *Environmental precautions* see section 12. For *Precautions for safe handling* see 7.1.

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Preventive handling precautions Ensure adequate ventilation for the welder and others. Use respiratory equipment when brazing in a confined space. Wear protective clothing and eye protection appropriate to

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General hygiene

welding. Remove all flammable materials and liquids before welding.
Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Store brazing consumables inside a room with low humidity. Do not store brazing consumables directly on the ground or beside walls. Store away from chemical substances like acids which could cause chemical reactions

7.3 Specific end use(s)

Brazing process.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Welding fume component	CAS No.	TWA ¹ (mg/m ³)	STEL ¹ 15min TWA	Hazard Classification 67/548/EC	Hazard Classification (GHS) 1272/2008
Copper, fume	7440-50-8	0.2			
Manganese and its inorganic compounds (as Mn)	7439-96-5 and others	1	3	R20/R22	H332 Acute Tox.4
Zinc oxide, fume	1314-13-2	5	10		
Nickel and its inorganic compounds Water soluble	7440-02-0	0.1		R40/R43 R49/R53	H351 Carc.2 H317skin sens 1/ H413 Aquatic Ch.4
Silver compounds (as Ag)	7440-22-4	0.01			
Tin compounds, inorganic (as Sn)	7440-31-5	2	4		
Carbon Dioxide	124-38-9	9000	54000		
Carbon Monoxide	630-08-0	31			
Nitrogen dioxide	10102-44-0	5.6	9.4		
Nitrogen monoxide	10102-43-9	31	0		
Ozone	10028-15-6	0.2 peak limitation			

1. Extracted from Safework Australia, Hazardous Substances Information System (HSIS) & Worksafe New Zealand Table of workplace exposure standards

8.2 Exposure controls

Environmental Exposure Control _ Refer to Section 12 of this SDS

Technical precaution measures

General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits.

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Eye / face protection	Workers should always have their eyes, face and/or head protected whenever they are brazing. For further information refer to: AS/NZS 1338: (series) Filters for eye protectors, AS/NZS 1338.1: Filters for eye protectors - Filters for protection against radiation generated in welding and allied operations and AS/NZS 1336: <i>Recommended practices for occupational eye protection</i> and AS/NZS 1337: <i>Eye protectors for industrial applications</i>
Hand/Arm protection	Gloves should be fire resistant and protect exposed skin on the hands and wrists. For further information refer to: AS/NZS 2161: (series) <i>Occupational protective gloves</i> .
Other skin protection	Avoid clothing that has the potential to capture hot sparks and metals, for example in pockets or other folds. Clothing should be made of natural fibres. For further information refer to: AS/NZS 4502: (series) <i>Methods for evaluating clothing for protection against heat and fire</i> . Foot protection should be non-slip and be heat and fire resistant. Avoid using foot protection that has the potential to capture hot sparks and metal debris, for example in laces or in open style shoes. For further information refer to: AS/NZS 2210: (series) <i>Occupational protective footwear</i> and AS/NZS 2210.1: <i>Safety, protective and occupational footwear - Guide to selection, care and use</i> .
Respiratory protection	Respirators should be fitted for each person individually and if one is to be used by another operator, it must be disinfected and refitted before use. The tightness of all connections and the condition of the face piece, headbands and valves should be checked before each use. Air supplied respirators may be required in some situations, e.g. confined spaces. For further information refer to: AS/NZS 1716: <i>Respiratory protective devices</i> and be selected in accordance with AS/NZS 1715: <i>Selection, use and maintenance of respiratory protective equipment</i> .
Eye / face protection	Workers should always have their eyes, face and/or head protected whenever they are welding. For further information refer to: AS/NZS 1338: (series) Filters for eye protectors, AS/NZS 1338.1: Filters for eye protectors - Filters for protection against radiation generated in welding and allied operations and AS/NZS 1336: <i>Recommended practices for occupational eye protection</i> and AS/NZS 1337: <i>Eye protectors for industrial applications</i>

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance, colour	Metal rods; does not mix with water
Appearance, physical state	Rod
Auto-ignition temperature	Not applicable
Auto-inflammability	Not auto-flammable

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Decomposition temperature	Not applicable
Evaporation rate	Not applicable
Explosive properties	Not explosive
Flammability (solid gas)	Not applicable
Flash point	Not applicable
Form	Fast
Initial boiling point and boiling range	Not applicable
Melting point / Freezing point	Not applicable
Odour	Odourless
Odour threshold	Not applicable
Oxidising properties	Not applicable
Partition coefficient: n-octanol / water	Not applicable
pH value	Not applicable
Relative density	Not applicable
Solubility	Not applicable
Solubility in water	Insoluble
Upper / lower flammability or explosive limits	Not applicable
Vapour density	Not applicable
Vapour pressure	Not applicable
Viscosity	Not applicable

9.2 Other information

Not applicable

Other

Density	9.3-10.5g/cm ³
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Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

Reactive with incompatible materials such as strong acids/corrosives

10.2 Chemical stability

Stable at normal conditions.

10.3 Possibility of hazardous reactions

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Hazardous polymerisation will not occur

10.4 Conditions to avoid

None under normal conditions

10.5 Incompatible materials

Strong acids and metal corrosives

10.6 Hazardous decomposition products

Brazing fumes and gases. Additional fume may arise from coatings and contaminants on the base material.

Silver Brazing – Including Nickel		
Classification	H phrase	Text
Skin Irrit.: Category 2	H315	Causes skin irritation
Eye Irrit.: Category 2	H319	Causes serious eye irritation
Skin sensitiser: Category 1	H317	May cause an allergic skin reaction
Carcinogenicity: Category 2	H351	Suspected of causing cancer
STOT RE: Category 2	H373	May cause damage to organs

Silver Brazing		
Classification	H phrase	Text
Skin sensitiser: Category 1	H317	May cause an allergic skin reaction
Carcinogenicity: Category 2	H351	Suspected of causing cancer
STOT RE: Category 2	H373	May cause damage to organs

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Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Conditions to avoid: none in the form supplied

When brazing, fumes and gases generated can be dangerous to health.

Acute toxicology	Brazing operations may evolve fumes that may be irritating to the respiratory tract and harmful if inhaled . Aspiration may cause pulmonary oedema and pneumonitis Short-term overexposure can cause dizziness, nausea and irritation of the nose, throat or eyes.
Irritation	Manganese fumes – Eye (rabbit) 500 mg/24hr Mild - Skin (rabbit) 500 mg/24 hr Mild
Corrosive effects	Not available
Sensitisation	May cause sensitisation by skin contact
Mutagenicity	Not available
Carcinogenicity	Brazing fumes are possibly carcinogenic to humans and have been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans
Repeated dose toxicity	Not available
Reproductive toxicity	Not available

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

The brazing process can effect the environment if fume is released directly into the atmosphere. Residues from welding consumables could degrade and accumulate into soils and ground water.

12.2 Persistence and degradability

Not available

12.3 Bio accumulative potential

Not available

12.4 Mobility in Soil

Not available

12.5 Results of PBT and vPvB assessment

Not available

12.6 Other adverse effects

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Not available

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal considerations Recycle packing materials. Dispose of any product, residue or packing material according to national and local regulations. Spent ;fume extraction filters shall be disposed of as hazardous waste.

Section 14. TRANSPORT INFORMATION

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Other

Dangerous goods Not classified as a dangerous good for transport by air, land, or sea

Section 15. REGULATORY INFORMATION

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

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EU regulations

Dangerous Goods Regulations/2014 (IATA)
International Maritime Dangerous Goods/2012 (IMO)
Regulation (EC) No 1271/2008 [CLP]
Dangerous Substances Directive (67/548/EEC)

National regulations

Model Work and Safety Regulations 2014 (Safework Australia)
Hazardous Substances [Classification] Regulations 2001 [New Zealand]
Australian Code for the transport of Dangerous Goods by Road and Rail Volume 7/2011 (NTC)
Land Transport Rule 45001/1 (New Zealand)
Local laws and regulations should be carefully observed.

15.2 Chemical safety assessment

Not applicable

Section 16. OTHER INFORMATION

References to key literature and data sources

Regulation (EC) No 1907/2006 of the European Parliament and of the Council, (REACH).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council.
Safework Australia: Hazardous Substances Information System (HSIS)
Worksafe New Zealand: Table of workplace exposure standards
Annex VI CLP Regulation (EC) 1272/2008
Safework Australia: Code of Practice : Welding Processes/2012

Other

Manufacturer's notes

Read this Safety Data Sheet carefully and become aware of hazards implied and the safety information.

Details of Hazards relating to fumes

As a result of intended normal use, decomposition products that are classified as Hazardous may be released.

GHS Classification

Acute Toxicity – Inhalation (Hazard Category 4)
Sensitisation – Skin (Hazard Category 1)
Carcinogenicity (Hazard Category 2)
Chronic Aquatic Toxicity (Hazard Category 4)

Hazard statement(s)

H317 - May cause an allergic skin reaction
H332 – Harmful if inhaled
H351 – Suspected of causing cancer
H413 - May cause long lasting harmful effects to aquatic life

Precautionary statements (s):

Prevention
P261 -Avoid breathing dust/fume/gas/mist/ vapours/spray
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves
P201 - Obtain special instructions before use.
P281 - Use personal protective equipment as required.

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P273 - Avoid release to the environment

Response

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 - Call a POISON CENTER or doctor/physician if you feel unwell..

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.

P308 + P313 - IF exposed or concerned: Get medical advice/attention.

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Disposal

P501 - Dispose of contents/container in accordance with local , state and national regulations.

End of document