

Material Safety Data Sheet 1100/105

MSDB 1-1:

Silver Brazing Filler Metals (Metalli Range)



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This data is made i.h.t Commission Directives 91/155/EEC, 93/112/EEC & S.I. 1993 No. 1746

1.1 IDENTIFICATION OF SUBSTANCE

This Product Safety Data Sheet gives specific information about Cadmium free silver brazing alloys in the Metalli ranges.

Silver Brazing Filler Metals (Metalli Range)

1.2 SUPPLIER

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2. COMPOSITION

Cadmium Free Brazing Alloys – Metalli Range

Alloy	Composition					Melting Range C	gram/cm ³	ISO 17672
	Ag	Cu	Zn	Sn	Si			
METALLI 56	56	22	17	5		618 - 652	9,5	AG 156
METALLI 55	55	21	22	2		630 - 660	9,4	AG 155
METALLI 55 Plus	55	21	21,8	2	0,2	631 - 660	9,4	
METALLI 452	45	27,75	25	2,25		640 - 680	9,1	AG 145
METALLI 44	44	30	26			675 - 735	9,1	AG 244
METALLI 40	40	30	28	2		650 - 710	10	AG 140
METALLI 38	38	31	29	2		660 - 720	8,9	-
METALLI 34	34	36,75	27	2,25		630 - 730	8,9	AG 134
METALLI 33	33	33,5	33,5			700 - 740	8,9	-
METALLI 302	30	36	32	2		665 - 755	8,8	AG 130
METALLI 30	30	38	32			695 -770	8,9	AG 230
METALLI 25	25	41	34			700 - 800	8,8	AG 225
METALLI 18	18	45,75	36		0,25	784 - 815	8,34	-

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3. HAZARD IDENTIFICATION

The only potential health hazards involved with this product arise from its use. On heating, metal and metal oxide fumes may be evolved but are unlikely to exceed the above stated OES's under normal conditions. However, severe overheating could lead to the emission of fumes in harmful concentrations. Metal fume fever can be caused by exposure to excessive fumes of copper and zinc oxide. Symptoms are similar to those of influenza and often appear after a latent period of up to 10 hours. They normally disappear after 24 hours with rest.

UK Occupational Exposure Standards Are:

Element	Long Term 8-hour TWA* Value	Short Term 15 minute Value
**Silver	0,1 mg/m ³	-
Copper fume (as Copper)	0,2 mg/m ³	-
Zinc Oxide Fume	5,0 mg/ m ³	10,0 mg/ m ³
Tin compound inorganic (as Tin)	2,0 mg/m ³	4,0 mg/ m ³
Silicium	10,0 mg/m ³ as total inhalable fused Silica Dust	-
Manganese Fume (as Manganese)	1,0 mg/m ³	3,0 mg/m ³
*** Nickel	0,5 mg/m ³	-
Indium	0,1 mg/m ³	0,3 mg/m ³

* Time weighted Average

** under review

***Maximum Exposure Level

4. FIRST AID MEASURES

Metal oxide fume can be irritating to the upper respiratory tract, nose and throat. In powder form, metal dust will irritate the eyes and is harmful if ingested.

- Inhalation** Fumes may evolve at brazing temperatures, which will irritate nose, throat and respiratory organs. Remove patient to fresh air. In acute cases, apply artificial respiration.
- Ingestion** Not applicable. However, if the alloy in powder form is ingested, rinse mouth with water and give patient water or milk to drink. Do not induce vomiting. Summon medical aid.
- Eyes** Not applicable. However, if the alloy is in powder form and dust gets into the eyes, irrigate with water or isotonic saline for up to 20 minutes. Seek medical attention if there is any hint of eye damage.
- Skin** Wash hands with soap and water after handling brazing alloy. If any skin irritation develops, seek medical advice.

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5. FIRE FIGHTING MEASURES

Non-flammable. Use extinguishing medium suitable for surrounding fire but exercise care with water if molten metal is present. Use full personal protection with breathing apparatus in a fire as harmful fumes may evolve from the molten alloy.

6. ACCIDENTAL RELEASE MEASURES

Material may be collected for re-use or scrap as required. If alloy is in powder form, avoid getting dust in the eyes or breathing metal dust.

7. HANDLING AND STORAGE

Handling: Use in a well ventilated area or with local extraction systems. Do not inhale any fumes evolved during use. Wash hands thoroughly with soap and water after handling the brazing alloy, particularly before eating.

Storage: No special requirements – store in cool, dry conditions. Keep powder containers closed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Avoid exposure to fumes by using good ventilation or local extraction. If a risk of inhalation exists, personal respiratory protection should be worn. Safety glasses should be worn as well as gloves if required. Wash hands after using this material. The use of protective clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Silver/copper/Brass coloured metal depending on composition.
Odour	None.
pH	Not applicable.
Melting point	As shown in Section 3.
Flash point	Not applicable.
Flammability	Non flammable.

10. STABILITY AND REACTIVITY

No reaction with air or water. Avoid contact with acids.

11. TOXICOLOGICAL DATA

Material not classified as toxic. No other data available.

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12. ECOLOGICAL INFORMATION

As far as is known, no threat is posed to the environment by this material.

13. DISPOSAL CONSIDERATIONS

According to local and national regulations. Recommended method: as scrap for refining.

14. TRANSPORT INFORMATION

Not classified for land, sea or air transport. No UN No/s have been issued for these alloys.

15. REGULATORY INFORMATION

Material classification	Harmful	
Risk Phrases	R20	Harmful by inhalation
Safety Phrases	S20/21	When using do not eat, drink or smoke.
	S23	Do not breathe fumes
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S38	In case of insufficient ventilation wear suitable respiratory equipment.

Users are warned that on heating, the product may give off fumes hazardous to health and that they are to use adequate ventilation.

16. OTHER INFORMATION

Metalli Data sheet 1100:105 "Health and Safety in Brazing".

Guidance Note EH54 "Assessment of Exposure to fume welding and allied processes" HSE 1990

Guidance Note EH55 "The control of exposure to fume from welding, brazing and similar processes" HSE 1990.

Guidance Note EH60 "Nickel and inorganic compounds: health and safety precautions HSE 1991.