

BRAZING & SOLDERING AUTOMATION

89 Fern Street, Islington NSW 2296 Australia
Phone +61 2 4961 0080 Fax +61 2 49610083
ACN: 067 503 995



Telephone: +61 2 4961 0080	REFERENCE CODE	MSDS 1193
Fax: +61 2 4961 0083	REVISION DATE	26.09.2006
	REVISION NO.	2

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

Product Type

A Brazepaste consisting of powdered filler metal and flux suspended in a binder and used for joining metals by heating the parts to be joined and this product to or above the melting temperature of the filler metal.

1.2 Product Identification

Silver Extra Easy, Easy Medium & Hard.

Special Codes

This data sheet is also applicable to pastes with the following codes:- NONE

1.3 Manufacturer / Supplier

Brazing and Soldering Automation Phone: +61 2 4961 0080
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Islington NSW 2296
AUSTRALIA

1.4 EMERGENCY TELEPHONE NUMBER: +61 2 4961 0080

2 COMPOSITION / INFORMATION ON INGREDIENTS

2.1 Filler Metal

Silver Solder = 65 Nominal weight % of product.

2.2 Flux / Binder

The flux/binder (STL) = 20-40 Nominal weight % of product.

The precise composition of this product is a trade secret. A more complete disclosure will be provided to a doctor or nurse in the event of a medical emergency. Contains the following hazardous ingredients (coded):-

INGREDIENT
C039
C520
C529

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3 HAZARDS IDENTIFICATION

3.1 Health Hazards

Eyes Direct contact may cause eye burns with possible permanent damage.
Skin Severely irritating to the skin.
Inhalation Brazing Fumes
Copper fume and zinc oxide fume, if excessive, are irritating and may cause *metal fume fever*. Fluoride fume can cause irritation of the respiratory tract and pulmonary oedema.
Ingestion Is harmful. May burn the mouth, throat and stomach.

Refer to Section 11 for further information.

4 FIRST AID MEASURES

Eye Contact Immediately flush eyes with plenty of water for at least 15 minutes. See a doctor.
Skin Immediately wash skin with soap and water. If irritation or burn develops, see a doctor.
Inhalation If affected, remove individual to fresh air and summon medical aid. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep individual warm and quiet.
Ingestion Aspiration hazard. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Summon medical aid.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Regular foam, CO₂ or dry chemical. Do not use water if metal is molten.

5.2 Hazardous Decomposition or by-products

Hydrogen fluoride, other fluorides, potassium oxide, copper fume, ZnO fume, CO, CO₂, and various hydrocarbons.

5.3 Unusual Fire and Explosion Hazards

May emit toxic and corrosive fumes under fire conditions.

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5.4 Special Fire Fighting Procedures

Wear a self-contained breathing apparatus with full face-piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

6 ACCIDENTAL RELEASE MEASURE

Release or Spillage

Scoop up excess material and wash affected areas with soap and water. Avoid contact with skin and eyes.

7 HANDLING AND STORAGE

7.1 Precautions to be taken

Keep lid tightly closed except when removing product and store at ambient temperatures of 5° - 25°C (to maximise shelf life of product).

7.2 Other Precautions

Avoid contact with skin and eyes. Use only with adequate ventilation.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Controls

Filler Metal

Element	UK HSE Workplace Exposure Limits	
	LTEL	STEL
Silver CAS 7440-22-4	0.1 mg/m ³	
Copper CAS 7440-50-8	0.2mg/m ³ (Fume, as Cu) 1 mg/m ³ (dusts & mists, as Cu)	2mg/m ³ (dust & mists, as Cu)

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Flux/Binder

All known health hazards and applicable PEL and TLV for all ingredients at 1% or more and known carcinogens at 0.1% or more of the formula are reported.

Ingredient	OSHA PEL	ACGIH TLV	Manufacturer's recommendation
			LTEL
C039	5 mg/m ³ (as oil mist)	5 mg/m ³ (as oil mist)	-
C520	2.5mg/m ³ (as F)	2.5mg/m ³ (as F)	-
C529	10mg/m ³	10mg/m ³	-

8.2 Personal Protection

Respiratory Protection (Specify Type)

NIOSH/MSHA approved (or equivalent) if ventilation is not adequate.

Ventilation

Good ventilation is required to remove brazing fumes from the operator's breathing zone and general area.

Protective Gloves

Chemical resistant.

Eye Protection

Safety glasses, consult ANSI Z87.1.

Other Protective Clothing or Equipment

Clothing to prevent skin contact.

Work Hygiene Practices

Wash thoroughly after handling this product.

See:

American National Standard Z49.1. Safety in Welding and Cutting, published by the American Welding Society, 550N Le Jeune Road, Miami, FLA 33135. OSHA Safety and Health Standard, 29 CFR 1910, available from the U.S. Government Printing Office, Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954.

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9 PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity (H₂O = 1)
>2.5

Flash Point (Method used)
>60.5°C

Melting Range
Filler Metal 705-723°C
Flux approx. 500°C

Vapour Pressure (mm/Hg)
No data available.

Vapour Density (Air=1)
No data available

Evaporation Rate (n-butyl acetate = 1)
No data available.

Solubility in Water
Negligible

Appearance and Odour
Fawn paste with characteristic odour.

10 STABILITY AND REACTIVITY

10.1 Stability

STABLE X UNSTABLE

10.2 Incompatibility (Materials to avoid)

Acids, alkalis, oxidising agents, acetylene, ammonia.
Reaction with strong reducing agents, such as metal hydrides or alkali metals, will generate hydrogen gas, which could create an explosive hazard.

10.3 Hazardous Polymerization

MAY OCCUR **WILL NOT OCCUR** X

11. TOXICOLOGICAL INFORMATION

11.1 Health Hazards

Eyes Direct contact may cause eye burns with possible permanent damage.

Skin Severely irritating to the skin. Prolonged contact may cause burns.
Systemic poisoning through absorption is possible.
Prolonged or repeated contact may cause irritation and dermatitis.

Inhalation Ambient conditions, solvent
Under ambient conditions, the solvent portion of this paste is not expected to cause any health problems. High vapour concentrations are irritating to the eyes and respiratory tract,

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may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects.

Brazing fumes

In the absence of adequate ventilation, fluoride fume can cause irritation of the respiratory tract and pulmonary oedema.

Chronic exposure to fluoride fume for many years may result in *fluorosis*. Copper fume and zinc oxide fume, if excessive, are irritating and may cause *metal fume fever*. Copper fume under normal conditions is unlikely to be a problem but, if excessive, is irritating and may cause *metal fume fever*. Brazing may produce higher vapour concentrations of volatile solvents with the possible effects noted above.

Ingestion

Is harmful. Ingestion may cause systemic poisoning.

Symptoms include abdominal pain, nausea, vomiting and pulmonary oedema. Can severely irritate and burn the mouth, throat and stomach.

11.2 Carcinogenicity

NTP

IARC

UK HSE

MONOGRAPHS

CHIP

None Known.

11.3 Signs and Symptoms of Exposure

Metal fume fever – Symptoms similar to influenza often appear after a latent period of 10 hours; they will normally disappear after 24 hours with rest.

Fluorosis – Embrittlement of bones and excessive calcification of ligaments and vertebrae resulting in spinal stiffness.

11.4 Medical Conditions Generally Aggravated By Exposure

Pre-existing eye, skin or respiratory disorders may be aggravated by exposure to this product.

11.5 Emergency and First Aid Measures

Eye Contact Immediately flush eyes with plenty of water for at least 15 minutes. See a doctor.

Skin Immediately wash skin with soap and water. If irritation or burn develops, see a doctor.

Inhalation If affected, remove individual to fresh air and summon medical aid. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep individual warm and quiet.

Ingestion Aspiration hazard. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Summon medical aid.

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12. ECOLOGICAL INFORMATION

Flux

Wash/cooling water will contain soluble and suspended fluorides. It may be necessary to treat the above before release.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Product

Dispose of in accordance with EC, national and local regulations, or sell to refiner for silver value.

Packing

Do not reuse empty containers. Dispose of in accordance with EC, national and local regulations.

14. REGULATORY INFORMATION

Classification and Labelling according to EC Directives:-

CLASSIFICATION / SYMBOL: Harmful / Xn

Nature of Special Risk

R20/22: Harmful by inhalation and if swallowed

R36/38: Irritation to eyes and skin

Safety Advice

S26: In case of eye contact, rinse immediately with water and seek medical advice.

S51: Use only in well-ventilated areas

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The information herein is given in good faith, but no warranty, express or implied, is made.

For additional information on health effects, contact:
The Safety Officer
Brazing and Soldering
Automotive
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Australia
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