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DAISHIN INDUSTRIAL CO.,LTD.

7-1-7 IZUO TAISHO-KU OSAKA 551-0031 JAPAN

TELEPHONE : (81) 6-6552-7551

FACSIMILE : (81) 6-6554-5397

MATERIAL SAFETY DATA SHEET

FOR

VAPOUR FLUX BL-7

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OSAKA 551-0031 JAPAN

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MANUFACTURERS OF BRAZING EQUIPMENT

DAISHIN INDUSTRIAL CO.,LTD.

MATERIAL SAFETY DATA SHEET

SECTION 1. MATERIAL IDENTIFICATION

Material Name : VAPOUR FLUX BL-7

Chemical Formula : $(\text{CH}_3\text{O})_3\text{B} + \text{CH}_3\text{OH}$
Trimethyl Borate + Methanol

Description : Vapour Flux BL-7 is used for only metal brazing flux.
It is made from special processed high pure methanol
with dissolved boron of 5-6%.

Manufacturer : Daishin Industrial Co., Ltd.
7-1-7 Izuo Taisho-ku Osaka 551-0031 Japan
Telephone : (81) 6-6552-4051

U.N. Classification : 3-2
U.N. No. : 1993
Packing Group : II

SECTION 2. INGREDIENTS AND HAZARDS

Methanol (CAS NO:67-56-1 / UN ID NO:1230) : 50-56%
Trimethyl Borate (CAS NO:121-43-7 / UN ID NO:2416) : 44-50%

SECTION 3. PHYSICAL DATA

Specific Gravity : 0.85
Boiling Point : 54 degrees C.
Ignition Point : 425 degrees C.
P.H. : 5.42
Water Solubility : It is non-water soluble. In the case of that
it is mixed with water, it dissolves and
becomes white crystal of borate.

Appearance and Oder : Colorless and transparent liquid with little
stimulative oder.

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SECTION . FIRE AND EXPLOSION DATA

Flash Point :	-4 degrees C.
Combustion limitation in air :	Under 6% of air, Vapour Flux BL-7 is not ignited. The mixing ratio of 36% of air is the most dangerous for explosion.
Extinguishing Media :	Fire extinguisher with powder
Note for extinguishing :	Do not water. (If watered, flames scatter.)

SECTION . REACTIVITY DATA

- When 1cc. of Vapour Flux evaporates, it becomes 320 cc.
- When Vapour Flux in gas state is mixed with acetylene gas or propane gas, the mixing ratio in volume is about 7-8%.
- When acetylene, Vapour Flux and oxygen burn, carbon dioxide, water, borate and C₂ (only with an excess of acetylene) are produced.

Notes for Storage

- Store Vapour Flux in the place where water is not mixed.
- Do not store outside.
- Do not place it near fire.

SECTION . HEALTH HAZARD INFORMATION

- As long as one does not drink it, it is no harm.
- Since Vapour Flux is evaporative liquid, don't inhale Vapour.

First Aid

- Eye Contact : Flush with running water immediately. If discomfort is not relieved, get medical help.
- Skin Contact : Wash with running water, or wash with weak alkaline liquid to neutralize and rinse with water, since Vapour Flux BL-7 is weak acid liquid.
- Inhaling : Repeat to take a deep breath and keep quiet.
- Drinking : Drink water and repeat to throw up.

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SECTION . SPILL, LEAK AND DISPOSAL PROCEDURES

- a) Collection of spill or leak : If the quantity of spill or leak is small, let it evaporate naturally. If the quantity of spill or leak is large, absorb with paper or clothes, spread sand on the spot and let it evaporate naturally.
- b) Disposal : Natural evaporating, firing, or drain after diluting with water.

SECTION . SPECIAL PROTECTION INFORMATION

- a) Ventilation : Provide exhaust duct where brazing operation is done.
- b) Protection Goggles : Since bright green flame produced by high combustion of borate makes operators' eyes tired and causes headache, wear black colored or dark brown colored goggles.
- c) Gloves : Wear cloth gloves.
- d) Mask : Put on a paper filter mask.

SECTION . SPECIAL PRECAUTIONS AND COMMENTS

- a) Check whether a rubber packing of inlet of Vapour Flux BL-7 is transformed. If it is transformed, change it for a new one.
- b) Check whether the quantity of Vapour Flux BL-7 is adequate by looking at the glass window of Vapour Tank.
- c) Check whether a inlet valve and outlet valve is open before using and they are closed after using.
- d) Follow the notes about storage on SECTION .

SECTION . OTHERS

- a) The handling Vapour Flux BL-7 is applies correspondingly to Methanol which is classified in Clause 4 of the dangerous articles.
- b) For explosives and combustibles regulations, Clause 4 of the dangerous articles is applied for Vapour Flux BL-7.