



SAFETY DATA SHEET

SECTION 1. Identification of the substance or mixture and of the supplier

1.1 Product identifier

Trade Name:

FL BOND II "PRIMER"

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

Relevant identified uses: Dental material

Uses advised against: No further data

1.3 Details of the supplier of the safety data sheet

Company/Undertaking identification

Manufacturer's Name: **SHOFU INC.**

Address: 11 Kamitakamatsu-cho, Fukuine, Higashiyama-ku, Kyoto 605-0983, JAPAN

Phone: +81-75-561-1112

Fax: +81-75-275-4795

Section in Charge: Quality Assurance Section

1.4 Emergency Telephone Number

+81-75-561-1112

SECTION 2. Hazards identification

2.1 GHS Classification

PHYSICAL HAZARDS

FLAMMABLE LIQUIDS

Category 2

HEALTH HAZARDS

EYE DAMAGE/IRRITATION

Category 2A

SENSITIZATION-RESPIRATORY

Category 1

SENSITIZATION-SKIN

Category 1

TOXIC TO REPRODUCTION

Category 1A

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)

Category 3 (respiratory tract
irritation, narcotic effects)

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)

Category 1 (liver)

Category 2 (central nervous
system)

The thing without mention is out of a classification object. Or cannot classify it.

2.2 Label elements

SYMBOL



GHS02

GHS07

GHS08

HAZARD-DETERMINING COMPONENTS OF LABELLING

Ethanol

SIGNAL WORD Danger



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HAZARD STATEMENTS

- Highly flammable liquid and vapor
- May cause allergic skin reaction
- Causes serious eye irritation
- May cause allergy or asthma symptoms or breathing difficulties if inhaled
- May cause respiratory irritation
- May cause drowsiness or dizziness
- May damage fertility or the unborn child
- Causes damage to organs through prolonged or repeated exposure (liver)
- May cause damage to organs through prolonged or repeated exposure (central nervous system)

PRECAUTIONARY STATEMENTS

[Prevention]

- Do not handle until all safety precautions have been read and understood.
- Wear protective gloves and eye/face protection.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Do not eat, drink or smoke when using this product.
- Keep away from ignition sources such as heat/sparks/open flames-No smoking.
- Use only outdoors or in a well-ventilated area.
- Keep container tightly closed.
- Wash hands thoroughly after handling.

[Response]

- If on skin, wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Get medical advice/attention if you feel unwell.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.

[Storage]

- Store container tightly closed in cool/well-ventilated place. (Keep refrigerated when not in use.)

[Disposal]

- Dispose of contents and container in accordance with regulation.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3. Composition/information on ingredients

3.1 Chemical characterization: Mixtures

3.2 Description: Mixture of substances listed below with nonhazardous additions.

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- 3.3 Dangerous components:
- | | |
|------------------------------|---------|
| Ethanol [Cas.No. 64-17-5] | 30-35 % |
| Water | 40-50 % |
| Phosphonic acid type monomer | |
| Carboxylic acid type monomer | |
| Others | |
- 3.4 Additional information: For the wording of the listed risk phrases refer to section 2

SECTION 4. First-aid measures

- 4.1 Description of first aid measures
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present. and easy to do. If eye irritation persists, get medical advice/attention.
- Skin contact: Wash immediately with soap and plenty of water. If on skin, skin irritation, get medical advice/attention.
- Ingestion: Rinse mouth and seek medical advice if necessary.
- Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptom concerning breath goes out, call a POISON CENTER or doctor.
- 4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5. Fire-fighting measures

- 5.1 Extinguishing Media:
Foam, CO₂, Powder, Dry sand
- 5.2 Special hazards arising from the substance or mixture:
Easily flammable liquid in room temp.
In case of fire, irritation gasses and fumes may emit.
- 5.3 Advice for firefighters:
Wear fire protective cloth and self-contained breathing apparatus, if necessary.

SECTION 6. Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures:
Avoid contact with eyes and skin.
- 6.2 Environmental Precautions:
Send to approved treatment/disposal company or dispose according to local, state and federal regulations.
- 6.3 Methods and material for containment and cleaning Up:
Wipe up and discard in a stable container.
- 6.4 Reference to other section:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.



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SECTION 7. Handling and storage

- 7.1 Precautions for safe handling:
Handle in a well ventilated place.
Keep away from ignition source-No smoking.
- 7.2 Conditions for safe storage, including any incompatibilities:
Store in a cool and dark area. (Keep refrigerated when not in use.)
- 7.3 Specific end use(s):
No further relevant information available.

SECTION 8. Exposure controls/personal protection

- 8.1 Control parameters:
Exposure limits:
Ethanol [Cas No.64-17-5]:
[ACGIH 2007] 1000 ppm as TWA
NIOSH REL: TWA 1000 ppm (1900 mg/m³)
OSHA PEL: TWA 1000 ppm (1900 mg/m³)
[DFG 2004] MAK: 500 ppm, 960 mg/m³; Peak limitation category: II (2)
OES() Long-term value: 1920 mg/m³, 1000 ppm
- 8.2 Exposure controls:
Respiratory Protection: Dust mask
Skin Protection: Hand Protection
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
- Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
 - Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
Butyl rubber, BR
Nitrile rubber, NBR
- Eye Protection: Safety goggles

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SECTION 9. Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- | | |
|--|--|
| Appearance/Odor/Colour: | Colorless transparent liquid with alcohol odor |
| Odour threshold | Not determined. |
| pH | Not determined. |
| Melting point/freezing point | Not determined. |
| Boiling Point: | Not determined. |
| Flash point: | 23 °C (closed) |
| Evaporation rate | Not determined. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | Not determined. |
| Vapour pressure | Not determined. |
| Vapour density | Not determined. |
| Relative Density: | ≈ 1 (water=1) |
| Solubility: water solubility | Soluble |
| Partition coefficient: n-octanol/water | Not determined. |
| Auto-ignition temperature | Not determined. |
| Decomposition temperature | Not determined. |
| Viscosity | Not determined. |
| Explosive properties | Not applicable. |
| Oxidising properties | Not applicable. |
- 9.2 Other information
- No further relevant information available.

SECTION 10. Stability and reactivity

- 10.1 Reactivity:
- No further relevant information available.
- 10.2 Chemical stability:
- Stable under normal temperatures and pressures.
- 10.3 Possibility of hazardous reactions:
- No dangerous reactions known.
- 10.4 Condition to Avoid:
- Excessive heat (high temperature), open flames, ignition source, and exposure to sunlight.
- 10.5 Incompatible materials:
- Strong oxidizing materials.
- 10.6 Hazardous Decomposition Products:
- None under normal conditions of storage and use.

SECTION 11. Toxicological information

- 11.1 Information on toxicological effects:
- | | | | | |
|-----------------|---------------|--------------------|------|------------------------------|
| Acute toxicity: | Ethanol; Oral | rat | LD50 | 6.2-17.8 g/kg |
| | | Inhalation (vapor) | | |
| | | rat | LC50 | 20000 ppm/10H (31600 ppm/4H) |
| | | Inhalation (mist) | | |
| | | rat | LC50 | 63000 ppm/4H (118 mg/L) |
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.



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Eye damage/irritation:	Eye Irrit. 2A; H319 Causes serious eye irritation.
Sensitization to the respiratory tract:	Resp. Sens. 1; H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization:	Skin Sens. 1; H317 May cause allergic skin reaction.
Germ cell mutagenicity/Genotoxicity:	Based on available data, the classification criteria are not met.
Carcinogenicity:	Ethanol; ACGIH-A4; Not classifiable as a human carcinogen. [DFG 2004] MAK; Carcinogen category: 5
Reproductive toxicity:	Repr. 1A; H360 May damage fertility or the unborn child.
Effects on or via lactation:	Lack of data.
Specific target organ toxicity (single exposure):	STOT SE 3; H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure):	STOT RE 1; H372 Causes damage to organs through prolonged or repeated exposure. (liver) STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure. (central nervous system)
Aspiration hazard:	Based on available data, the classification criteria are not met.

SECTION 12. Ecological information

- 12.1 Toxicity:
No further relevant information available.
- 12.2 Persistence and degradability:
No further relevant information available.
- 12.3 Bioaccumulative potential:
No further relevant information available.
- 12.4 Mobility in soil:
No further relevant information available.
- 12.5 Results of PBT and vPvB assessment:
Not applicable.
- 12.6 Other adverse effects:
No further relevant information available.

SECTION 13. Disposal considerations

- 13.1 Waste treatment methods:
Dispose of contents/container to in accordance with local/regional/national/international regulations.

SECTION 14. Transport information

- 14.1 UN number: 1170
- 14.2 UN proper shipping name: ETHANOL, solution
- 14.3 Transport hazard class(es): 3 Flammable liquids.
- 14.4 Packing group: II



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- 14.5 Environmental hazards: No further relevant information available.
14.6 Special precautions for user: Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

SECTION 15. Regulatory informati

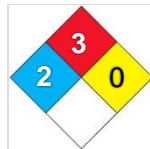
Follow all regulations in your country.

SECTION 16. Other information

This product is intended for use by dental professionals. (instrument/material)

NFPA ratings for USA (scale 0-4)

Ethanol;



Health = 2
Fire = 3
Reactivity = 0

Relevant HMIS-Ratings (Scale 0-4)

Ethanol;

Health Hazard	2
Fire Hazard	3
Reactivity	0

Health = 2
Fire = 3
Reactivity = 0

Relevant phrases:

- H225 Highly flammable liquid and vapour.
- H317 May cause allergic skin reaction.
- H319 Causes serious eye irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H360 May damage fertility or the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure. (liver)
- H373 May cause damage to organs through prolonged or repeated exposure. (central nervous system)

Abbreviations and acronyms:

- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative