



1. Identification of the preparation

1.1 Identification of the preparation

Flux.

1.2 Use of the preparation

This product facilitates the adhesion of the solderings to the orthodontic products. Usage temperature: 550-800°C.

1.3 Company identification

Leone s.p.a.

I – 50019 Sesto Fiorentino – Firenze - Via P. a Quaracchi, 50

e-mail: research@leone.it – <http://www.leone.it>

Tel. ++39 (0)55.30.44.1 – Fax ++39 (0)55 374808.

1.4 Emergency telephone

++39 (0)55.30.44.1. An answering machine is on during closing time.

2. Hazards identification

The major consequential hazards arising from the use of this product are related to the mode of employment.

During the normal heating at the usage temperature, the product releases small quantity of fume that considerably increases if overheated. Fumes derived from the product contain small quantities of hydrofluoric acid and boron trifluoride that may cause irritations to nose, eyes and throat.

The product itself is hazardous if swallowed and irritating to eyes. Skin contact may cause irritation.

Prolonged exposures and elevated concentrations of fumes generated from the product may cause fluorosis.

In the acute cases, being the exposure simultaneous to metallic fumes and combustion products of the soldering torch, hazards of pulmonary edema may arise.

The inhalation of fumes developed from the product can cause respiratory irritations and may irritate eyes.

The effected tests have shown the lower irritating power of the product on the intact skin, while in presence of skin with abrasions, cuts or other lacerations, the irritating effect is immediate.

The use of barrier creams can prevent skin irritations.

3. Composition/information on ingredients.

Information on ingredients:

mixture of difluorides, tetraborates and fluoride-potassium boron, with acids and boron oxide.

4. First aid measures

- Inhalation: move person from the contaminated area to fresh air. In the acute cases, it may be necessary to practise the artificial respiration and to ask for medical assistance.

- Ingestion: rinse oral cavity with water and have patient drink water or milk mixed with calcium carbonate.

Do not induce vomit. Ask for medical assistance.

- Skin contact: remove the contaminated equipment and carefully wash skin with water and soap. If zones of irritated skin are noted, ask for medical assistance. Wash the garments before wearing them again.

- Eye contact: flush with water or isotonic solution for 15-20 minutes. Medical intervention is always recommended to verify the absence of ocular damages.

5. Fire-fighting measures

The product is not flammable.

Use self-contained breathing apparatus if hazardous fumes derive from fire.

Use extinguishing media suitable to the kind of substance from which fire arises.

6. Accidental release measures

Pick up immediately and store into a container suitable for reuse and disposal.

In case of large losses of product, cover with sand or other inert absorbents and pick up in proper container for disposal, wash the area with water.

Avoid contact to eyes and skin.

7. Handling and storage

7.1 Handling

Provide a good local ventilation or suitable aspiration during working process. Do not inhale fumes developing during use. Avoid contact to skin and eyes. Avoid drinking, eating, smoking, and the use of cosmetics during manipulation of the product.

7.2 Storage

Store the product away from food, drinks or animal feedingstuffs, keep out of the reach of children. Follow the normal rules of good industrial hygiene.

Store in a fresh and dry place. Keep containers tightly closed when unused. Do not freeze.

8. Exposure controls/personal protection

8.1. Exposition limit values¹

Fluoridric acid (as F), professional exposure limit (TWA): 2.5 mg/m³.

Fluorides(as F), professional exposure limit (TWA): 2.5 mg/m³.

Boron trifluoride, professional exposure limit (TWA): 1 ppm.

8.2. Exposure control

Avoid exposure to fumes, working in well ventilated rooms. Use a correct system of respiratory protection, provide to effect soldering working processes always under located aspiration. Use gloves or barrier creams to protect hands from the contact with the product. In certain situations the use of protective glasses may be necessary. Carefully wash the hands before eating or at the end of each working turn.

9. Physical and chemical properties

9.1. General information

Appearance: doughy
Colour: white
Odour: odourless.

9.2. Health, safety and environmental information

Melting point: 550-800°C
Flash point: not applicable
Flash point: not applicable
Explosion hazards: not applicable
Oxidizing properties: not applicable
Vapour pressure: not known
Solubility in water: low.

10. Stability and reactivity

The product left in open containers loses vaporize water.
Anomalous reactions of the product are not known.
Avoid contact with acids and strongly oxidizing agents.

11. Toxicological information

Toxicity acute-oral: LD₅₀² (rat): > 200 mg/kg.
The product is classified as light sensitizing to skin.

12. Ecological information

Probably harmful to any kind of animals. At the moment other data regarding the polluting effects of the product are not available.

13. Disposal consideration

Dispose of in accordance with local and national regulations. In Italy dispose of according to Legislative Decree of April 3 2006 no. 152 "Regulations on environmental subject", application of European Directives on environmental protection, and subsequent modifications and integrations.

14. Transport information

No special precaution for transport is required.

15. Regulatory information

- Health, safety and environmental information shown on the label according to European Directives on hazardous materials and substances

Hazard symbols:



Harmful

Risk phrases: R 20/22 Harmful by inhalation and if swallowed
R 36/38 Irritating to eyes and skin

¹ The "occupational exposure limit", if not otherwise specified, is the average limit or serious concentration in the time of a chemical agent in the air inside the breathing area of a worker related to a specific period of time (Directive 98/24/EC on health and safety protection of the workers against the consequential risks from chemical agents during the job); the TWA (time weighted average) indicator is the serious average concentration in the time for a working day of 8 hours.

² LD₅₀ Lethal Dose, dose of substance which results to be lethal for 50% of organisms used in a toxicity test.



Safety phrases:	S 2	Keep out of the reach of children
	S13	Keep away from food, drink and animal feedingstuffs
	S20/21	When using do not eat, drink or smoke
	S22	Do not breathe dust
	S23	Do not breathe gas/fumes
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
	S45	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
	S46	If swallowed, seek medical advice immediately and show this container or label.

- Information related to further dispositions
None.

16. Other information

The safety data sheet has been written according to relevant European provisions, on the basis of information received by the supplier of preparation.

The product is intended for orthodontic and odontological use only. The use of the product has to be restricted to skilled and licensed professionals.

The information drawn herein is based on our knowledge at the date of the issue.

The information is exclusively provided related to the product herewith specified and is not intended as a warranty of quality.

Leone disclaims any responsibility arising out of the use of the information here furnished, or of the handling, the application or the manufacture of the product here described. The final user is called to verify the application and completeness of the information herein in relationship to the specific use and reliability of the rules and local applicable dispositions.

The present information doesn't imply any liberty to break patent rights.

Previous safety data sheet n. R16/3E dated 17/05/2001 is to be considered cancelled. In comparison to the preceding revision, meaningful changes have not been effected but only adjustments to the European provisions which regulate the compilation of safety data sheet.

This safety data sheet is subject to revision.

Visit our web site www.leone.it for an updated version of the present sheet.