

TOKUYAMA DENTAL CORPORATION

MATERIAL SAFETY DATA SHEET

(According to 91/155/EEC and OSHA regulation 29 CFR 1910. 1200(g))

1. Identification of substance

Product name	TOKUYAMA IONOTITE F Powder
Description of Product	Dental Cement, For dental professionals only.
Manufacturer	Tokuyama Dental Corporation 38-9, Taitou 1-chome, Taitou-ku, Tokyo, Japan TEL: +81-3-3835-7201
EC Representative (Emergency Contact in EU)	Tokuyama Europe GmbH Oststrasse 10, 40211 Düsseldorf, Germany TEL: +49 211 1754480 FAX: +49 211 357379

2. Composition / Data on components

Ingredients	%	Cas.No.	Symbols	R-phrases	OSHA PEL
Fluoroaluminosilicate glass filler	60-90	N/E	N/E	N/E	N/E
Silica filler, amorphous-fused	10-40	60676-86-0	N/E	N/E	80 mg/m ³
Benzoyl peroxide (BPO)	<3	94-36-0	E, Xi	2-36-43	5mg/m ³

3. Hazard identification

Hazard description	Irritant
R-phrases	R36: Irritating to eyes. R43: May cause sensitization by skin contact.

4. First aid measures

After skin contact	Wash immediately with soap and plenty of water.
After eye contact	Wash immediately with plenty of water. Get medical attention.
After swallowing	Induce vomiting immediately. Get medical attention.

5. Fire fighting measures

Suitable extinguishing media	Chemical foam, carbon dioxide or dry chemical.
Media not to be used	None.
Combustion products and resulting gases	Irritant gas may be released during heating or in case of fire.
Special precaution for firefighters	Use protective clothing and a self-contained breathing apparatus.

6. Accidental release measures

Personal protection	Wear suitable protective groves.
Environmental protection	Not required.
Methods for cleaning up	Clean up with a water-soaked inert absorbent and dispose of it at special waste collection point.

7. Handling and storage

Handling	Use in a well ventilated place.
Storage	Store in a cool, dark place (0-25°C, 32-77°F). Keep away from heat, direct sunlight, sparks and open flames.

8. Exposure controls / personal protection

In general	Not required.
Respiration protection	Not required.
Hand protection	Wear suitable protective gloves.
Eye protection	Wear suitable protective glasses.
Skin protection	Wear suitable protective clothing.

9. Physical and chemical properties

Appearance	Powder, white	Explosive properties	N/A
Odor	None	Oxidizing properties	N/A
pH	N/A	Vapor pressure	N/A
Boiling point	None	Relative density	N/A
Melting point	N/A	Solubility (water)	N/A
Flash point	N/A	Solubility (solvent)	N/A
Flammability	None	Partition coefficient	N/A
Autoflammability	N/A	Others	—

10. Stability and reactivity

Conditions to avoid	Heat, direct sunlight, sparks and open flames.
Materials to avoid	Strong acid, strong alkalis, strong oxidizers, accelerators and reducing agents.
Hazardous reactions	Incomplete thermal decomposition may cause toxic gases.

11. Toxicological information

Inhalation	Irritation of respiratory organs.
Ingestion	Slight irritation of digestive organs.
Skin contact	Slight irritation, repeated prolonged contact may cause skin inflammation.
Eye contact	Irritation, redness, pain.
Carcinogenicity	N/R
Others	—

12. Ecological information

Biodegradability	N/A
Bioaccumulative	N/A
Aquatic toxicity	N/A
Others	—

13. Disposal consideration

Disposal must be made according to federal, state and local regulations.
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14. Transport information

Proper shipping name	Not subject to this section. This product contains an organic peroxide (see section 2, BPO, less than 3%); however, this product does not meet the definition of "Organic Peroxide" which is described to § 173.128 of 49CFR or § 3.5.2 of IATA Dangerous Goods Regulations because this material meets the following exception, - § 173.128, (a)(4)(ii) of 49CFR, and - § 3.5.2.2, (b) of IATA Dangerous Goods Regulations.
UN number	
Classification	
Packing group	
Air transport	
Sea transport	
Inland transport	

15. Regulatory information

Marking according to EU regulations	67/548/EEC, 92/32/EEC
Contains	Benzoyl Peroxide
Symbols	Xi: Irritant
R-phrases	R36: Irritating to eyes. R43: May cause sensitization by skin contact
S-phrases	S2: Keep out of the reach of children. S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
Others	R and S-phrases are not marked according to contents not more than 125 ml and the case not related to the general public (Article 23 "Labeling" -3).

16. Other information

The information which is contained in this document is based on available data. However, as such has been obtained from various sources, including independent laboratories, it is given without warranty or representation that is complete, accurate and can be relied upon. Tokuyama Dental Corp. has not attempted to conceal in any way the deleterious aspects of the product listed herein, but makes no warranty as to such.

* N/E: Not Established, N/A: Not Available, N/R: Not Regulated by IARC

TOKUYAMA DENTAL CORPORATION**MATERIAL SAFETY DATA SHEET**

(According to 91/155/EEC and OSHA regulation 29 CFR 1910. 1200(g))

1. Identification of substance

Product name	TOKUYAMA IONOTITE F Liquid
Description of Product	Dental Cement, For dental professionals only.
Manufacturer	Tokuyama Dental Corporation 38-9, Taitou 1-chome, Taitou-ku, Tokyo, Japan TEL: +81-3-3835-7201
EC Representative (Emergency Contact in EU)	Tokuyama Europe GmbH Oststrasse 10, 40211 Düsseldorf, Germany TEL: +49 211 1754480 FAX: +49 211 357379

2. Composition / Data on components

Ingredients	%	Cas.No.	Symbols	R-phrases	OSHA PEL
2-Hydroxyethyl methacrylate	30-70	868-77-9	Xi	36/38-43	N/E
1,6-bis(methacrylethoxy-carbo-nylamino) trimethyl hexane	10-30	72869-86-4	N/E	N/E	N/E
Methacryloxyalkyl acid phosphate (Phosphoric acid monomer)	10-30	N/E	Xi	36/37/38	N/E
6-Methacryloyloxyhexyl 2-thiouracil-5-carboxylate	<1	N/E	Xi	36/37/38	N/E

3. Hazard identification

Hazard description	Irritant
R-phrases	R36/38: Irritating to eyes and skin. R43: May cause sensitization by skin contact.

4. First aid measures

After skin contact	Wash immediately with soap and plenty of water.
After eye contact	Wash immediately with plenty of water. Get medical attention.
After swallowing	Induce drinking plenty of water and get medical attention.

5. Fire fighting measures

Suitable extinguishing media	Chemical foam, carbon dioxide or dry chemical.
Media not to be used	None.
Combustion products and resulting gases	Irritant gas may be released during heating or in case of fire.
Special precaution for firefighters	Use protective clothing and a self-contained breathing apparatus.

6. Accidental release measures

Personal protection	Wear suitable protective groves.
Environmental protection	Do not empty into drains.
Methods for cleaning up	Clean up with an inert absorbent and dispose of it at special waste collection point.

7. Handling and storage

Handling	Use in a well ventilated place.
Storage	Store in a cool, dark place (0-25°C, 32-77°F). Keep away from heat, direct sunlight, sparks and open flames.

8. Exposure controls / personal protection

In general	Not required.
Respiration protection	Not required.
Hand protection	Wear suitable protective gloves.
Eye protection	Wear suitable protective glasses.
Skin protection	Wear suitable protective clothing.

9. Physical and chemical properties

Appearance	Transparent liquid	Explosive properties	N/A
Odor	Characteristic Odour	Oxidizing properties	N/A
pH	Acidic	Vapor pressure	N/A
Boiling point	N/A	Relative density	1.09g/cm ³
Melting point	N/A	Solubility (water)	N/A
Flash point	123° C	Solubility (solvent)	N/A
Flammability	None	Partition coefficient	N/A
Autoflammability	N/A	Others	—

10. Stability and reactivity

Conditions to avoid	Heat, direct sunlight, sparks and open flames.
Materials to avoid	Strong acid, strong alkalis, strong oxidizers, accelerators and reducing agents.
Hazardous reactions	No hazardous reactions known.

11. Toxicological information

Inhalation	No irritating effect (This material contains no volatile ingredient.)
Ingestion	Slight irritation of digestive organs.
Skin contact	Slight irritation, defatting action, repeated prolonged contact may cause skin inflammation.
Eye contact	Irritation, redness, pain.
Carcinogenicity	N/R
Others	—

12. Ecological information

Biodegradability	N/A
Bioaccumulative	N/A
Aquatic toxicity	N/A
Others	—

13. Disposal consideration

Disposal must be made according to federal, state and local regulations.
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14. Transport information

Proper shipping name	Not subject to this section. This product does not meet the definition of "Flammable liquid" which is described to § 173.120 of 49CFR or § 3.3 of IATA Dangerous Goods Regulations (see "Flash point" of section 9).
UN number	
Classification	
Packing group	
Air transport	
Sea transport	
Inland transport	

15. Regulatory information

Marking according to EU regulations	67/548/EEC, 92/32/EEC
Contains	2-Hydroxyethyl methacrylate, Methacryloxyalkyl acid phosphate (Phosphoric acid monomer) and 6-Methacryloyloxyhexyl 2-thiouracil-5-carboxylate.
Symbols	Xi: Irritant
R-phrases	R36/38: Irritating to eyes and skin. R43: May cause sensitization by skin contact.
S-phrases	S2 : Keep out of the reach of children. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28: After contact with skin, wash immediately with soap and plenty of water.
Others	R and S-phrases are not marked according to contents not more than 125 ml and the case not related to the general public (Article 23 "Labeling" -3).

16. Other information

The information which is contained in this document is based on available data. However, as such has been obtained from various sources, including independent laboratories, it is given without warranty or representation that is complete, accurate and can be relied upon. Tokuyama Dental Corp. has not attempted to conceal in any way the deleterious aspects of the product listed herein, but makes no warranty as to such.

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