

SAFETY DATA SHEET

TOKUYAMA SHIELD FORCE PLUS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name TOKUYAMA SHIELD FORCE PLUS

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

Identified uses Protective sealant for treatment of hypersensitive dentin. For dental professionals only.

1.3. Details of the supplier of the safety data sheet

Supplier Tokuyama Dental Italy S.r.l.
Via Chizzalunga, 1,
36066 Sandrigo, Vicenza, Italy
TEL: +39-0444-659650
FAX: +39-0444-750345

Contact person <http://www.tokuyama-dental.com/tdc/contact.html>

Manufacturer Tokuyama Dental Corporation
38-9, Taitou 1-chome, Taitou-ku, Tokyo
110-0016, Japan
TEL: +81-3-3835-2261
FAX: +81-3-3835-2265

1.4. Emergency telephone number

Emergency telephone Regional Medicines and Poisons Information Centre NI,
Pharmacy Department
Royal Hospital Suite, Grosvenor Road, Belfast
Emergency telephone: 844 892 0111
Telephone: +44 28 90 63 2032
Fax: +44 28 90 24 8030
E-mail address: nirdic.nirdic@belfasttrust.hscni.net

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Skin Irrit. 2 - H315: Eye Irrit. 2 - H319: Skin Sens. 1 - H317: STOT SE 3 - H336

Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with local regulations.
Contains	(1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] BISMETHACRYLATE, 2-HYDROXYETHYL METHACRYLATE, 2,2'-ETHYLENEDIOXYDIETHYL DIMETHACRYLATE
Supplementary precautionary statements	P240 Ground/ bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P302+P352 IF ON SKIN: Wash with plenty of water. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTER/ doctor if you feel unwell. P321 Specific treatment (see medical advice on this label). P332+P313 If skin irritation occurs: Get medical advice/ attention. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P337+P313 If eye irritation persists: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

PROPAN-2-OL	30-60%
CAS number: 67-63-0	EC number: 200-661-7
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	

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(1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] BISMETHACRYLATE 10-30%
CAS number: 1565-94-2 EC number: 216-367-7
Classification Skin Sens. 1 - H317 Aquatic Chronic 3 - H412
2-PROPENOIC ACID, 2-METHYL-, 2-HYDROXYETHYL ESTER, PHOSPHATE 10-30%
CAS number: 52628-03-2 EC number: 258-053-2
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319
2-HYDROXYETHYL METHACRYLATE 10-30%
CAS number: 868-77-9 EC number: 212-782-2
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317
2,2'-ETHYLENEDIOXYDIETHYL DIMETHACRYLATE 5-10%
CAS number: 109-16-0 EC number: 203-652-6
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317
DL-BORNANE-2,3-DIONE 1-5%
CAS number: 10373-78-1 EC number: 233-814-1
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335
2,6-DI-tert-BUTYL-p-CRESOL <1%
CAS number: 128-37-0 EC number: 204-881-4 M factor (Chronic) = 1
Classification Aquatic Chronic 1 - H410

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DIPHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE	<1%
CAS number: 75980-60-8	EC number: 278-355-8

Classification Repr. 2 - H361f
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MEQUINOL	<1%
CAS number: 150-76-5	EC number: 205-769-8

Classification Acute Tox. 4 - H302 Eye Irrit. 2 - H319 Skin Sens. 1 - H317
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The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Inhalation	Move affected person to fresh air at once.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.
Skin contact	Wash skin thoroughly with soap and water. Take off contaminated clothing and wash it before reuse.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	Vapours may cause drowsiness and dizziness.
Skin contact	Skin irritation. Allergic rash.
Eye contact	May cause severe eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Foam. Carbon dioxide or dry powder.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Irritating gases or vapours. The product is highly flammable.
Hazardous combustion products	No known hazardous decomposition products.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours.
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Special protective equipment for firefighters Wear chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb in vermiculite, dry sand or earth and place into containers. Use only non-sparking tools. Ground/bond container and receiving equipment. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. All handling should only take place in well-ventilated areas. Avoid inhalation of vapours/spray and contact with skin and eyes. Take precautionary measures against static discharges. Use explosion-proof electrical, ventilating and lighting equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in a cool and well-ventilated place. Protect from sunlight. Store at temperatures between 0°C/10°F and 32°C/50°F.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

2,6-DI-tert-BUTYL-p-CRESOL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³

WEL = Workplace Exposure Limit

8.2. Exposure controls

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Use explosion-proof electrical, ventilating and lighting equipment.

Eye/face protection The following protection should be worn: Chemical splash goggles.

Hand protection Wear protective gloves.

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Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Wash contaminated clothing before reuse. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Light (or pale) green
Odour	Characteristic
Odour threshold	Not available.
pH	pH (diluted solution): 2.3
Melting point	Not available.
Initial boiling point and range	Not available.
Flash point	20.0°C
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.00
Solubility(ies)	Not available.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not available.

9.2. Other information

Other information	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

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Reactivity There are no known reactivity hazards associated with this product. See the other subsections of this section for further details.

10.2. Chemical stability

Stability The product is highly flammable.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not known.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat, sparks and open flame. Protect against direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Heating may generate the following products: Toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Not available.

Acute toxicity - dermal

Notes (dermal LD₅₀) Not available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not available.

Skin corrosion/irritation

Skin corrosion/irritation Not available.

Animal data

Not available.

Serious eye damage/irritation

Serious eye damage/irritation Not available.

Respiratory sensitisation

Respiratory sensitisation Not available.

Skin sensitisation

Skin sensitisation Not available.

Germ cell mutagenicity

Genotoxicity - in vitro Not available.

Genotoxicity - in vivo Not available.

Carcinogenicity

Carcinogenicity Not available.

Reproductive toxicity

Reproductive toxicity - fertility Not available.

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Reproductive toxicity - development Not available.

Specific target organ toxicity - single exposure

STOT - single exposure Not available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not available.

Aspiration hazard

Aspiration hazard Not available.

SECTION 12: Ecological Information

12.1. Toxicity

Acute toxicity - fish Not available.

Acute toxicity - aquatic invertebrates Not available.

Acute toxicity - aquatic plants Not available.

12.2. Persistence and degradability

Persistence and degradability No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not available.

12.4. Mobility in soil

Mobility No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1133

UN No. (IMDG) 1133

UN No. (ICAO) 1133

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ADHESIVES

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Proper shipping name (IMDG) ADHESIVES

Proper shipping name (ICAO) ADHESIVES

Proper shipping name (ADN) ADHESIVES

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID label 3

IMDG class 3

ICAO class/division 3

Transport labels



14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

14.5. Environmental hazards

14.6. Special precautions for user

EmS F-E, S-D

Emergency Action Code •3YE

Hazard Identification Number 33
(ADR/RID)

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation (EC) No 1907/2006 (REACH).
(EC) No 1272/2008 (CLP).
(EU) No 2015/830.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008 Flam. Liq. 2 - H225: On basis of test data. Skin Irrit. 2 - H315: Eye Irrit. 2 - H319: Skin Sens. 1 - H317: STOT SE 3 - H336 : Calculation method.

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Training advice	Ensure operatives are trained to minimise exposure. Only trained personnel should use this material.
Revision comments	
Revision date	15/09/2018
Revision	3
Hazard statements in full	H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H361f Suspected of damaging fertility. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

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