

REVISION DATE 15/01/2013

MATERIAL SAFETY DATA SHEET

TOKUYAMA SHIELD FORCE PLUS

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	TOKUYAMA SHIELD FORCE PLUS		
PRODUCT USE	Light-Cured Desensitizer. For dental professionals only.		
SUPPLIER	Tokuyama Dental America Inc. Tel: (877) 378 3548 (Toll-Free)	MANUFACTURER	Tokuyama Dental Corporation 38-9, Taitou 1-chome, Taitou-ku, Tokyo, Japan TEL: +81-3-3835-7201
CONTACT PERSON	http://www.tokuyama-dental.com/contact.htm		
EMERGENCY TELEPHONE	Washington National Capital Poison Center 3201 New Mexico Avenue, Suite 310 Washington, DC 20016 Telephone: +1 202 362 3867 Emergency telephone: 1 800 222 1222 Fax: +1 202 362 8377 E-mail: pc@poison.org Web site: http://www.poison.org San Francisco California Poison Control System at San Francisco General Hospital University of California San Francisco, Box 1369 1001 Potrero Avenue, Bldg 5 Rm 2A21 San Francisco, California 94143-1369 Telephone: +1 415 643 3200 Emergency telephone: 1 800 222 1222 Fax: +1 415 502 6010 E-mail: coadmin@calpoison.org Web site: http://www.calpoison.org http://www.who.int/ipcs/poisons/centre/en/		

2 HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

INHALATION

Irritating to respiratory system. Vapors may cause drowsiness and dizziness.

INGESTION

Slightly irritating. : DIGESTIVE SYSTEM.

SKIN CONTACT

Irritating to skin. Product has a defatting effect on skin. May cause sensitization by skin contact.

EYE CONTACT

Irritating and may cause redness and pain.

HEALTH WARNINGS

INHALATION. May cause irritation to the respiratory system. Solvent vapors are hazardous and may cause nausea, sickness and headaches. SKIN CONTACT. Irritating to skin. Product has a defatting effect on skin. EYE CONTACT. Irritating to eyes. INGESTION. May cause discomfort.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content %
2-HYDROXYETHYL METHACRYLATE	212-782-2	868-77-9	10-30%
bisphenol A di(2-hydroxy propoxy) dimethacrylate	216-367-7	1565-94-2	10-30%
camphorquinone	233-814-1	10373-78-1	< 1%
dibutyl hydroxy toluene	204-881-4	128-37-0	< 1%

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diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	278-355-8	75980-60-8	< 1%
MEQUINOL	205-769-8	150-76-5	< 1%
methacryloxyalkyl acid phosphate (phosphoric acid monomer)	258-053-2	52628-03-2	10-30%
PROPAN-2-OL	200-661-7	67-63-0	30-60%
triethylene glycol dimethacrylate	203-652-6	109-16-0	5-10%
Water	231-791-2	7732-18-5	5-10%

4 FIRST-AID MEASURES**GENERAL INFORMATION**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INHALATION

Move the exposed person to fresh air at once.

INGESTION

Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention if any discomfort continues.

SKIN CONTACT

Wash the skin immediately with soap and water.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

5 FIRE-FIGHTING MEASURES**EXTINGUISHING MEDIA**

Fire can be extinguished using: Foam. Carbon dioxide or dry powder.

SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapors.

SPECIFIC HAZARDS

When heated and in case of fire, irritating vapours/gases may be formed.

PROTECTIVE MEASURES IN FIRE

Wear full protective clothing.

FLASH POINT (°C) 20.0 °C

6 ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS**

Wear protective clothing as described in Section 8 of this material safety data sheet.

ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains, water courses or onto the ground.

SPILL CLEAN UP METHODS

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers. Do not contaminate water sources or sewer.

7 HANDLING AND STORAGE**HANDLING**

All handling to take place in well-ventilated area.

STORAGE

Store under refrigerated conditions at temperatures between 0 to 10°C (32 to 50°F). Keep away from heat, direct sunlight, sparks and open flames.

STORAGE CLASS

Flammable liquid storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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COMPONENT	STD	TWA (8-hrs)		STEL (15 min)		Notes
PROPAN-2-OL	ACGIH	200 ppm		400 ppm		A4
PROPAN-2-OL	PEL	400 ppm	980 mg/m3			
COMPONENT						IDLH
PROPAN-2-OL						2000 ppm

ACGIH=American Conference of Governmental Industrial Hygienists.

A4: Not Classifiable as a Human Carcinogen.

PROTECTIVE EQUIPMENT**ENGINEERING MEASURES**

Provide adequate general and local exhaust ventilation.

HAND PROTECTION

Wear protective gloves.

EYE PROTECTION

Wear approved safety goggles.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid
COLOR	Light (or pale) Yellowish
ODOR	Characteristic
RELATIVE DENSITY	1.00
pH-VALUE, DILUTED SOLUTION	2.0
FLASH POINT (°C)	20.0 °C

10 STABILITY AND REACTIVITY**STABILITY**

HIGHLY FLAMMABLE!

CONDITIONS TO AVOID

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

MATERIALS TO AVOID

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Toxic gases are generated when heated.

11 TOXICOLOGICAL INFORMATION**TOXICOLOGICAL INFORMATION**

No data on possible toxic effects have been found.

12 ECOLOGICAL INFORMATION**ECOTOXICITY**

No data on possible environmental effects have been found.

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13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION



DOT PROPER SHIPPING NAME	ADHESIVES, CONTAINING A FLAMMABLE LIQUID
TDG SHIPPING NAME	ADHESIVES, CONTAINING A FLAMMABLE LIQUID
IDENTIFICATION No.	1133
TUNNEL RESTRICTION CODE	(D/E)
CEPIC TEC(R) NO.	30GF1-I+II, 30GF1-sp
DOT HAZARD CLASS	3
DOT PACKING GROUP	II
U.S DOT HAZARD LABEL	Flammable Liquid
UN NO. SEA	1133
IMDG CLASS	3
IMDG PACK GR.	II
EMS	F-E, S-D
UN NO. AIR	1133
ICAO CLASS	3
AIR PACK GR.	II
TDG CLASS	3
TDG LABEL(S)	3
TDG PACKING GROUP	II

15 REGULATORY INFORMATION

INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
PROPAN-2-OL	No.	No.	EINECS					
2-HYDROXYETHYL METHACRYLATE	No.	No.	EINECS					
MEQUINOL	No.	No.	EINECS					
Water	No.	No.	EINECS					

COMPONENT	TSCA 12(b) Export Notification
PROPAN-2-OL	Yes.
2-HYDROXYETHYL METHACRYLATE	No.
MEQUINOL	No.
Water	No.

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TOKUYAMA SHIELD FORCE PLUS**US FEDERAL REGULATIONS**

COMPONENT	SARA 302-TPQ	CERCLA-RQ	SARA 313
PROPAN-2-OL	Not Listed	Not Listed	1.0 %
2-HYDROXYETHYL METHACRYLATE	Not Listed	Not Listed	No.
MEQUINOL	Not Listed	Not Listed	No.

CLEAN AIR ACT

COMPONENT	CAA Accidental Release Prevention
PROPAN-2-OL	Not Listed
2-HYDROXYETHYL METHACRYLATE	Not Listed
MEQUINOL	Not Listed

US STATE REGULATIONS

COMPONENT	CAS	CA	FL	MA	MN	NJ	PA	RI
PROPAN-2-OL	67-63-0	Not Listed	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.
2-HYDROXYETHYL METHACRYLATE	868-77-9	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
MEQUINOL	150-76-5	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

REGULATORY REFERENCES

29 CFR 1910. 1200(g) Federal Regulations (OSHA Standard).

16 OTHER INFORMATION

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DISCLAIMER

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