	APPENDIX 11- MATERIAL SAFETY DATA SHEET	MSDS-10
		MASTERBOND/ Bond according to Regulation (EC) No. 1907/2006	<i>Date of Issue:</i> 18.12.2018 Page 1 of 8

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Products name: **MASTERBOND/Bond**

Producer: ARKONA Laboratorium Farmakologii Stomatologicznej
Nasutów 99 C, 21-025 Niemce, Polska

Application: Dental adhesive system

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

MASTERBOND/Bond - is a dental adhesive system used to connect the hard tissues of the tooth to composite fillings, to seal marginal fissures, to offset polymerisation shrinkage, and to prepare surface restorations prior to cementation with dual-cure composite luting cements. **MASTERBOND/Bond** is packed in 4 ml black bottles. The bottles are equipped with dropper and cap.

1.3 Details of the supplier of the safety data sheet

Producer: ARKONA Laboratorium Farmakologii Stomatologicznej
Nasutów 99 C, 21-025 Niemce, Polska

Telephone : +48 81 470 57 00

E-mail address : biuro@arkonadent.com

1.4 Emergency telephone number

Emergency Phone # : 999, 112

2. HAZARDS IDENTIFICATION



2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

H302 Harmful if swallowed
H312 Harmful in contact with skin
H314 Causes severe skin burns and eye damage
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long-lasting effects
H411 Toxic to aquatic life with long-lasting effects

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xi, Irritant
R11 Highly flammable
R36/37/38 Irritating to eyes, respiratory system and skin

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R38 Irritating to skin
R41 Risk of serious damage to eyes
R43 May cause sensitisation by skin contact

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram



Signal word: Warning

Hazard statement(s)

Precautionary statement(s)

P280 Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]
P272 Contaminated work clothing should not be allowed out of the workplace.
P261 Avoid breathing dust/fumes/gas/mist/vapours/spray. [As modified by IV ATP]
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of water/... [As modified by IV ATP]
P273 Avoid release to the environment.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards - none



3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Mixture of Bis-GMA, EBADMA, photoinitiator and stabilizers.

Hazardous ingredients according to Regulation (EC) No 1272/2008
and Classification according to EU Directives 67/548/EEC or 1999/45/EC

No	Component	CAS #	EC No 1272/2008	EU Directives 67/548/EEC or 1999/45/EC
1	2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)) ester	1565-94-2	Eye Dam. 1, Skin Sens. 1, Skin Irrit. 2; H315, H317, H318	Xi; R41, R43
2	(1-Methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl)oxy-2,1-ethanediyl) bismethacrylate	41637-38-1	Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; STOT SE 3; H315, H317, H319, H335	Xi; R36/37/38, R43
3	2-Propenoic acid, 2-methyl-, 1,1'-(1,2-ethanediylbis(oxy-2,1-ethanediyl)) ester	109-16-0	Skin Irrit. 2; Eye Irrit. 2 H315, H319, H335	Xi; R36/37/38, R43
4	2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester	868-77-9	Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; H315, H319, H317	Xi; R36/38, R43
5	1,2-Benzenedicarboxylic acid, 1-(2-((2-methyl-1-oxo-2-propen-1-yl)oxy)ethyl) ester	27697-00-3	Skin Irrit. 2; Eye Irrit. 2; H315, H319	Xi; R38, R41, R43

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6	2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester	2867-47-2	Acute Tox. 4; Skin Corr. 1B; Skin Sens. 1; H302, H312, H314, H317	Xi; R21/22, R 36/38, R43
7	2,6-Di-tert-butyl-p-cresol	128-37-0	Aquatic Acute 1; Aquatic Chronic 1; H400, H410 M-Factor - Aquatic Acute: 1	Xn; R22, R36/37/38
8	Camphorquinone	10373-78-1	Skin Irrit. 2, Eye Irrit. 2; H315, H319	Xi; R36/37/38
9	Ethyl alcohol	64-17-5	Flam. Liq. 2, H225	F; R11

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 2 and 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

no data available



5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

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6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin, eyes and clothing. Wash hands before and immediately after using this product.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 3 - 28 °C

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection



Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form:	yellowish liquid
b) Odour:		slightly alcoholic, slightly acrylate
c) Odour Threshold:		no data available
d) pH		no data available
e) Melting point/freezing point		no data available
f) Initial boiling point and boiling range		no data available
g) Flash point:		no data available
h) Evaporation rate:		no data available
i) Flammability (solid, gas)		no data available
j) Upper/lower flammability or explosive limits:		no data available
k) Vapour pressure:		no data available
l) Vapour density:		no data available
m) Relative density		1.15 - 1.25 g/cm ³ (20°C)
n) Water solubility		insoluble
o) Partition coefficient: noctanol/water:		no data available
p) Autoignition temperature:		no data available
q) Decomposition temperature:		no data available
r) Viscosity:		no data available
s) Explosive properties:		no data available
t) Oxidizing properties:		no data available

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available



10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

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no data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 5000 mg/kg

Skin corrosion/irritation

Uncured material: prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil



no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

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13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

15.2 Chemical Safety Assessment

no data available



16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

Xi, Irritant

R11 Highly flammable.


R21 Harmful in contact with skin.

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R22	Harmful if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin
R38	Irritating to skin
R41	Risk of serious damage to eyes
R43	May cause sensitisation by skin contact

Further information

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Prepared by Robert Chilczuk	I approve of its use on:  18.12.2018
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