



SECTION 1: PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION

Product Name: MonoLok2 Light Cure Adhesive

Other Names: Orthodontic Adhesive

Product Use: Orthodontic cement.

Supplier:

RMO Inc.
650 West Colfax Avenue
Denver, CO 80204
USA
Telephone: 303-592-8217

Emergency Information Chemtrec:

(703) 527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Skin Sens. 1 H317

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Xi; R36/38

R43

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label Elements

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

Hazard pictograms (CLP):

Signal word (CLP): Warning

Hazardous ingredients: 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3-propanediyl)] ester

Hazard statements (CLP): H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

Precautionary statements (CLP) : P261 - Avoid breathing dust.

P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P280 - Wear eye protection, protective gloves.

P302+P352 - IF ON SKIN: Wash with plenty of water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 - Specific treatment (see Section 4 on this label).

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.

P501 - Dispose of contents/container according to local, regional, national, and international regulations.

2.3. Other Hazards

No additional information available



SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product Identifier	%	Classification according to Directive 67/548/EEC
Silica, vitreous substance with national workplace exposure limit(s) (AT, BE, BG, DE, DK, GR, IE, PL, SI)	(CAS No) 60676-86-0	60	Not classified
	(EC no) 262-373-8;424-440-1	-	
		70	
2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propenediyl)ester	(CAS No) 1565-94-2	10	Xi; R36/38 Xi; R43
	(EC no) 216-367-7	-	
		15	
Trimethylolpropane trimethacrylate (CAS No) 3290-92-4	(CAS No) 3290-92-4	1 - 5	N; R51/53
Iron oxide	(CAS No) 1309-37-1	.1 -	N; R51/53
	(EC no) 215-168-2	1	
Name	Product Identifier	%	Classification according to Regulation (EC) No
Silica, vitreous substance with national workplace exposure limit(s) (AT, BE, BG, DE, DK, GR, IE, PL, SI)	(CAS No) 60676-86-0	60	Not classified
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		70	
2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propenediyl)ester	(CAS No) 1565-94-2	15	Skin Irrit. 2, H315 Eye Irrit. 2, N; R51/53
	(EC no) 216-367-7	-	
		25	
Trimethylolpropane trimethacrylate (CAS No) 3290-92-4	(CAS No) 3290-92-4	1 - 5	N; R51/53
Iron oxide	(CAS No) 1309-37-1	.1 -	N; R51/53
	(EC no) 215-168-2	1	

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid measures general: If medical advice is needed, have product container or label at hand.
 First-aid measures after inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.
 First-aid measures after skin contact: Wash skin thoroughly with mild soap and water. Remove contaminated clothing. Obtain medical attention if irritation persists.
 First-aid measures after eye contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.
 First-aid measures after ingestion: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms/injuries: Causes skin irritation. Causes serious eye irritation. Exposure may produce an allergic reaction.
 Symptoms/injuries after inhalation: None expected under normal conditions of use.
 Symptoms/injuries after skin contact: May cause skin irritation. May cause sensitization of susceptible persons by skin contact.
 Symptoms/injuries after eye contact: May cause severe irritation.
 Symptoms/injuries after ingestion: Ingestion is likely to be harmful or have adverse effects.
 Chronic symptoms: May cause an allergic skin reaction.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
 Unsuitable extinguishing media: None known.

5.2. Special Hazards Arising From the Substance or Mixture



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Fire hazard: Under conditions of fire this material may produce: Carbon dioxide (CO2). Carbon monoxide. Silicon oxides.

Explosion hazard: Product is not explosive.

Reactivity: Stable at ambient temperature and under normal conditions of use.

5.3. Advice for firefighters

Precautionary measures fire: Not flammable.

Firefighting instructions: Do not breathe fumes from fires or vapors from decomposition. All firefighting personnel must wear safety suits.

Protection during firefighting: Use normal individual fire protective equipment. Use self-contained breathing apparatus when fighting fire in an enclosed area.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Avoid all contact with skin, eyes, or clothing.

6.1.1. For non-emergency personnel

Protective equipment: Wear suitable protective clothing, gloves and eye/face protection.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Wear suitable protective clothing, gloves and eye/face protection.

Emergency procedures: Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.3. Methods and material for containment and cleaning up

For containment: Absorb and contain spill with inert material, then place in suitable container.

Methods for cleaning up: For small quantities associated with normal therapeutic use, collect spillage and transfer to a closed waste container for disposal.

6.4. Reference to other sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures.

Always wash your hands immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke in areas where product is used.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a dry, cool place. Store in original container. Keep container tightly closed.

7.3. Specific end use(s)

Adhesive. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Iron oxide (1309-37-1)		
Austria	MAK (mg/m ³)	10 mg/m ³
Austria	MAK Short time value (mg/m ³)	10 mg/m ³
Belgium	Limit value (mg/m ³)	5 mg/m ³
Belgium	Limit value (ppm)	2 ppm
Bulgaria	OEL TWA (mg/m ³)	5.0 mg/m ³
France	VME (mg/m ³)	5 mg/m ³
Italy - Portugal - USA	ACGIH TWA (mg/m ³)	5 mg/m ³
Spain	VLA-ED (mg/m ³)	5 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	4 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	12 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	3.5 mg/m ³



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Finland	HTP-arvo (8h) (mg/m ³)	5 mg/m ³
Hungary	AK-érték	6 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	4 mg/m ³
Ireland	OEL (15 min ref) (mg/m ³)	10 mg/m ³
Lithuania	IPRV (mg/m ³)	3.5 mg/m ³
Poland	NDS (mg/m ³)	5 mg/m ³
Poland	NDSCh (mg/m ³)	10 mg/m ³
Romania	OEL TWA (mg/m ³)	5 mg/m ³
Romania	OEL STEL (mg/m ³)	10 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	1.5 mg/m ³
Sweden	nivågränsvärde (NVG) (mg/m ³)	3.5 mg/m ³
Portugal	OEL TWA (mg/m ³)	5 mg/m ³
Portugal	OEL chemical category (PT)	A4 - Not
Silica, vitreous (60676-86-0)		
Austria	MAK (mg/m ³)	0.3 mg/m ³
Belgium	Limit value (mg/m ³)	0.1 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	0.07 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	0.3 mg/m ³ (The risk of damage to the

8.2. Exposure controls

Appropriate engineering controls: Ensure adequate ventilation, especially in confined areas. Emergency eyewash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment: Safety glasses. Gloves.

Hand protection: Impermeable protective gloves.

Eye protection: Safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: Paste.

Color: No data available

Odor: No data available

Odor threshold: No data available

pH: No data available

Relative evaporation rate (butylacetate=1): No data available

Melting point: No data available

Freezing point: No data available

Boiling point: No data available

Flash point: No data available

Self-ignition temperature: No data available

Decomposition temperature: No data available

Flammability (solid, gas): No data available

Vapor pressure: No data available

Relative vapor density at 20 °C: No data available

Relative Density: No data available

Density: > 1 g/cc

Solubility: Water: Insoluble

Log Pow: No data available

Log Kow: No data available

Viscosity, kinematic: No data available



Viscosity, dynamic: No data available
Explosive properties: None known.
Oxidizing properties: None known.
Explosive limits: No data available

9.2. Other information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable at ambient temperature and under normal conditions of use.

10.2. Chemical stability

Stable at standard temperature and pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under conditions of fire this material may produce: Carbon dioxide (CO₂). Carbon monoxide. Silicon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity: Not classified

Iron oxide (1309-37-1)

LD50 oral rat > 10000 mg/kg

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Trimethylolpropane trimethacrylate (3290-92-4)

LC50 fishes 1 144 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

LC50 fish 2 160 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage disposal recommendations: Do not dispose of waste into sewer.

Waste disposal recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

No dangerous good in sense of transport regulations

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable



14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information: No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

14.7. Transport in bulk according to 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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008

Light Cure Orthodontic Adhesive - 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy,1-propanediyl) ester - Trimethylolpropane trimethacrylate

Contains no REACH candidate substance

Other information, restriction and prohibition regulations: This product is intended for pharmaceutical use only, and as such, is not subject to REACH registration requirements.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: OTHER INFORMATION

Revision date: 15/04/2016

Data sources: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Full text of R-, H- and EUH-phrases:

Aquatic Chronic: 2 Hazardous to the aquatic environment — Chronic Hazard, Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Category 2

Skin Irrit. 2: Skin corrosion/irritation, Category 2

Skin Sens. 1: Sensitization — Skin, category 1

H315: Causes skin irritation

H317: May cause an allergic skin reaction

H319: Causes serious eye irritation

H411: Toxic to aquatic life with long lasting effects

R36/38: Irritating to eyes and skin

R43: May cause sensitization by skin contact

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

N: Dangerous for the environment

Xi: Irritant

All information, recommendations, and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, express or implied, is being made as to the effects of such use, the results obtained, or the safety and toxicity of the product nor is there any assumed liability arising out of use, by others, of the product referred to herein. The information herein is not to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

April 15, 2016 updated from OEM SDS T. Salankey