



SAFETY DATA SHEET

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006,
Regulation (EC) 1272/2008 and Regulation (EC) 453/2010

Document Number: 728-00003

Current Revision: IN

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SECTION 1 - IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Trade Name (as labeled): Trulock® Light Activated Bonding Resin
 Product Form: Mixture
 Part / Item Number: J04002

Relevant identified Uses of the Substance or Mixture and Uses Advised Against:

Recommended Use: Orthodontic Bonding Resin
 Restrictions on Use: None

Details of the Supplier of the Safety Data Sheet:

Manufacturer / Supplier Name: RMO, INC.
 Manufacturer / Supplier Address: 650 WEST COLFAX AVENUE
 DENVER, CO 80204 U.S.A
 Manufacturer / Supplier Telephone Number: (303) 592-8200 / (800) 525-6375

Emergency Telephone Number:

Emergency Contact Telephone Number: Chemtrec
 (800) 424-9300 / (703) 527-3887

SECTION 2 - HAZARDS IDENTIFICATION

Classification of the Substance or Mixture:

Classification according to Directive 1999/45/EC: The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies. This material is not considered hazardous to health.

GHS Classification:		
Health	Environmental	Physical
Not Classified	Not Hazardous	No Physical Hazards

Classification according to Regulation (EC) No 1272/2008 [CLP]: Health – Not Classified

Label Elements:

Signal Word: Not applicable	
Hazard Phrases	Precautionary Phrases
None	P280 – Wear protective gloves / protective clothing / eye protection / face protection. P305+P351+P338 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists: Get medical advice / attention P302+P352 – If on skin: Wash with plenty of soap and water P273 – Avoid release to the environment



SAFETY DATA SHEET

	P501 – Dispose of contents and container in accordance with local and national regulations.
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Other Hazards:

None known.

Unknown Acute toxicity (GHS-US):

No data available

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Not Applicable

Mixture:

Hazardous Components	C.A.S. #	GHS-US Classification	WT %*
2-Propenoic acid, 2-methyl-,(1-methylethylidene)bis{4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester	1565-94-2	Skin Irrit. 3, H316 Eye Irrit. 2B, H320	45-70%
Poly(oxy-1,2-ethanediyl), alpha,alpha'-((1-methylethylidene)di-4,1-phenylene)bis(omega-((2-methyl-1-oxo-2-propen-1-yl)oxy)-	41637-38-1	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Skin Sens. 1, H317 STOT (SE) Respirator Tract 3, H335	5-10%
2-Propenoic acid, 2-methyl-, (tetrahydro-2-furanyl)methyl ester	2455-24-5	Flammable Liquid 4, H227 Skin Sens. 1, H317 Eye Irrit. 2B, H320 STOT(SE) Respiratory Tract 3, H335 Repr. Tox. 2, H361	15-35%
2-Hydroxyethyl methacrylate	868-77-9	Skin Sens. 1B, H317 Eye Irrit. 2B, H320	5-10%
2-Propenoic acid, 2-methyl-, 1,1'-(2-ethyl-2-(((2-methyl-1-oxo-2-propen-1-yl)oxy)methyl)-1,3-propanediyl) ester	3290-92-4	Acute aquatic tox. 2, H401 Chronic aquatic tox. 2, H411	1-5%
2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester	2867-47-2	Flammable Liquid 4, H227 Acute Tox., Oral 4, H302 Acute Tox., Dermal 4, H312 Skin Corrosion 1, H314 Serious Eye Damage 1, H318 Skin Sens. 1, H317 Repr. Tox. 2, H361 Acute aquatic tox. 3, H402	1-5%

* Specific identity and/or exact percentage have been withheld for trade secret
NOTE: Refer to Section 16 for the full text of the GHS and EU Classifications.

SECTION 4 - FIRST AID MEASURES

Description of First Aid Measures:

Eye	Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention, if irritation persists.
Skin	Wash with soap and water.
Inhalation	No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
Ingestion	Do not induce vomiting, seek medical attention.



SAFETY DATA SHEET

Most Important Symptoms and Effects, Both Acute and Delayed:

Not expected to present a significant hazard under anticipated conditions of normal use. May cause eye irritation.

Indication of Any Immediate Medical Attention and Special Treatment Needed:

Not applicable.

Note to Physicians (Treatment, Testing, and Monitoring): Not Applicable

SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media:

See section regarding Fire Fighting Equipment





Special Hazards Arising from the Substance or Mixture:

Not determined

Advice for Fire-Fighters:

Fire Fighting Procedures:	Cool fire exposed containers with water spray
Precautions for Fire Fighters:	Firefighters should wear full emergency equipment and approved positive pressure self-containing breathing apparatus.

Recommended Protective Equipment for Fire Fighters:



Eyes / Face	Hands	Respiratory	Thermal
 Face Shield	 Hand Protection	 Air Purifying Respirator	 Chemical Protective Clothing

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Avoid contact with skin, eyes or clothing. Wear appropriate protective clothing as described in Section 8.

Recommended Protective Equipment for Containment and Clean-up:

Eyes / Face	Hands	Respiratory	Thermal
 Goggles	 Hand Protection		

Environmental Precautions:

Prevent entry into sewers and waterways. Report releases as required by local, state, and national authorities.

Avoid contact with skin, eye or clothing. Wear appropriate protective clothing as described in Section 8.

Methods and Material for Containment and Cleaning up:

Wipe up with cloth, soap and water

Reference to Other Sections:

Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.



SAFETY DATA SHEET

SECTION 7 - HANDLING AND STORAGE

Precautions for Safe Handling:

Avoid contact with the eyes, skin and clothing. Wear protective clothing and equipment as described in Section 8.
Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for Safe Storage, Including Any Incompatibilities:

See product labeling. Keep container closed to prevent contamination.

Specific End Use(s):

Orthodontic Bonding Adhesive

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTIONS



Control Parameters:

No additional information available.

Exposure Controls:

Appropriate Engineering Controls: None required under normal product handling conditions.

Individual Protection Measures (PPE):

Recommended Protective Equipment for Containment and Clean-up:			
Eyes / Face	Hands	Respiratory	Thermal
 Goggles	 Hand Protection		
Specific Eye/face Protection:	Wear eye protection.		
Specific Skin Protection:	Wear suitable protective clothing and gloves.		
Specific Respiratory Protection:	None should be needed under normal use.		
Specific Thermal Hazards:	None required.		

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties:

Physical state:	Homogeneous Viscous Liquid	Relative density:	1.10-1.12g/cc @ 25°C / 77°F
Color:	Pale Yellow	Explosive limits:	Not determined
Odor:	Fruity ester-like	Vapor pressure (mmHg):	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH:	Not determined	Solubility(ies):	Insoluble in water
Melting / Freezing point:	Not determined	Partition coefficient: n-octanol/water:	Not determined
Initial boiling point and boiling range:	Not determined	Auto-ignition temperature:	Not determined
Flash point:	Not determined	Decomposition temperature:	Not determined
Evaporation rate:	Not determined	Viscosity:	Not determined
Flammability (solid, gas):	Not determined	Oxidizing Properties:	Not determined

Other Information:

None available



SAFETY DATA SHEET

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:

Stable at ambient temperature and under normal conditions of use.

Chemical Stability:

Stable at standard temperature and pressure.

Possibility of Hazardous Reactions:

None.

Conditions to Avoid:

Keep away from heat, sparks, flames and other sources of ignition.

Incompatibility materials:

High temperatures, visible light sources, strong oxidizing agents. Keep away from sunlight and open flames.

Hazardous Decomposition Products:

Oxides of carbon when burned.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on Toxicological Effects:

2-Propenoic acid, 2-methyl-,(1-methylethylidene)bis{4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (1565-94-2)	
LD50 oral	Not Available
Poly(oxy-1,2-ethanediyl), alpha,alpha'-((1-methylethylidene)di-4,1-phenylene)bis(omega-((2-methyl-1-oxo-2-propen-1-yl)oxy)- (41637-38-1)	
LD50 oral rat	>2000 m/kg
2-Propenoic acid, 2-methyl-, (tetrahydro-2-furanyl)methyl ester (2455-24-5)	
LD50 oral (estimate)	4003 mg/kg
2-Hydroxyethyl methacrylate (868-77-9)	
LD50 oral rat	>5000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-(2-ethyl-2-(((2-methyl-1-oxo-2-propen-1-yl)oxy)methyl)-1,3-propanediyl) ester (3290-92-4)	
LD50 oral rat	>2000 mg/kg
2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester (2867-47-2)	
LD50 oral rat	1751 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity:

No data available.

Persistence and Degradability:

No data available.

Bio-accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Results of PBT and vPvB Assessment:

No data available.



SAFETY DATA SHEET

Other Adverse Effects:

No data available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

Regulations	Dispose in accordance with all national and local regulations.
Properties (Physical / Chemical) Affecting Disposal:	None currently known.
Waste Treatment Recommendations:	Dispose in accordance with national and local regulations.

SECTION 14 - TRANSPORT INFORMATION

UN number:

Not applicable

UN proper shipping name:

Not applicable

Transport hazard class(es):

Not applicable

Packing group:

Not applicable

Environmental hazards:

Not applicable

Special precautions for user:

Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not applicable

SECTION 15 - REGULATORY INFORMATION

Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture:

U.S. Federal Regulations

2-Propenoic acid, 2-methyl-,(1-methylethylidene)bis{4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (1565-94-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Poly(oxy-1,2-ethanediyl), alpha,alpha'-((1-methylethylidene)di-4,1-phenylene)bis(omega-((2-methyl-1-oxo-2-propen-1-yl)oxy)- (41637-38-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Propenoic acid, 2-methyl-, (tetrahydro-2-furanyl)methyl ester (2455-24-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Hydroxyethyl methacrylate (868-77-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Propenoic acid, 2-methyl-, 1,1'-(2-ethyl-2-(((2-methyl-1-oxo-2-propen-1-yl)oxy)methyl)-1,3-propanediyl) ester (3290-92-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester (2867-47-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory



SAFETY DATA SHEET

International Regulations

Canadian Workplace Hazardous Materials Information System (WHMIS):	Medical devices are not subject to WHMIS
Canadian Environmental Protection Act:	This product is a medical device and not subject to chemical notification requirements.
European Inventory of Existing Chemicals (EINECS):	This product is a medical device and not subject to chemical notification requirements.
EU REACH:	All components requiring registration have been pre-registered.
Australian Inventory of Chemical Substances:	This product is a medical device and not subject to chemical notification requirements.
China Inventory of Existing Chemicals and Chemical Substances:	This product is a medical device and not subject to chemical notification requirements.
Japanese Existing and New Chemical Substances:	This product is a medical device and not subject to chemical notification requirements.
Korean Existing Chemicals List:	This product is a medical device and not subject to chemical notification requirements.
Philippine Inventory of Chemicals and Chemical Substances:	This product is a medical device and not subject to chemical notification requirements.

NOTE: This SDS has been prepared to the criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

Chemical Safety Assessment

None required.

SECTION 16 - OTHER INFORMATION

HMIS Hazard Rating:

Health: 1	Flammability: 0	Reactivity: 0
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Full text of Classification abbreviations used in Section 2 and 3:

H227	Combustible liquid
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes sever skin burns and eye damage
H315	Causes skin irritation
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H320	Causes eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H401	Toxic to aquatic life with long-lastic effects.



SAFETY DATA SHEET

Disclaimer: FOR ORTHODONTIC USE ONLY. The information and recommendations are taken from sources (raw material MSDS(s), SDS(s) and manufacturers knowledge) believed to be accurate; however, the manufacturer makes not warranty with respect to the accuracy of the information or suitability of the recommendation in the specific context of the intended use and determine whether they are appropriate.