



SAFETY DATA SHEET

Regulation (EC) No 1907/2006 (REACH), OSHA HAZCOM 2012, WHMIS 2015

Revision: 6/14/19

Supersedes Date: 5/24/19

Section 1 Identification of the Substance/Preparation and of the Company/Undertaking.

1.1 Product Identifier

Product Type: 3D Printing Material

Trade Name: VeriModel OS

VeriSplint OS

VeriGuide OS

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use: Resin for production of dental models.

Uses Advised Against: For professional use only.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer:

Whip Mix Corporation

361 Farmington Avenue

Louisville, Kentucky, USA 40209

Emergency Telephone Number: (502) 634-1451

Fax Number: (502) 634-4512

EU Importer:

Whip Mix Europe GmbH

Wißstrasse 26 – 28

D – 44137 Dortmund

Germany

+49 (0) 231 / 567 70 8-0

1.4 Emergency Telephone Number

Transportation Emergencies: *CHEMTREC 1(800) 424-9300 (U.S. and Canada)*

International Calls: 1- 703-527-3887 (Collect calls accepted)

Other Product Information: *Infor@whipmix.com*

Section 2 Hazard Identification

2.1 Classification of the Mixture:

OSHA/WHMIS/GHS/CLP Classification (1272/2008):

Health Hazards	Physical Hazards	Environmental Hazards
Skin Sensitization Category 1B H317 Eye Irritation Category 2A H319 Toxic to Reproduction Category 2	Not Hazardous	Hazardous to the Aquatic Environment Chronic Category 3 H412

2.2 Label Elements

Danger!



Contains Acrylate, Phosphine Oxides and Methacrylic monomer

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation

H361f Suspected of damaging fertility

H412 Harmful to aquatic life with long lasting effects.

Precautionary Phrases:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing mists, vapors or spray.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves and eye protection.
P308 + P313 IF exposed or concerned: Get medical attention.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor.
P337 + P313 If eye irritation persists: Get medical attention.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None

Section 3 Composition/Information on Ingredients.

3.2 Mixtures

<u>Substance</u>	<u>CAS No. / EC Number</u>	<u>%</u>	<u>CLP/GHS Classification (1272/2008)</u>
Methacrylic oligomer	Proprietary	>30	Aquatic Chronic Category 4 H413
Acrylate	Proprietary	<40	Eye Irritation Category 2 H319 Skin Sensitization Category 1 H317 Aquatic Chronic Category 3 H412
Methacrylic monomer 1	Proprietary	<20	Skin Sensitization Category 1B H317
Methacrylic monomer 2	Proprietary	<15	Aquatic Chronic Category 2 H411
Phosphine Oxides	Proprietary	<3	Skin Sensitization Category 1B H317 Toxic to Reproduction Category 2f H361 Aquatic Chronic Category 2 H411
Titanium Dioxide	13463-67-7	<2	Carcinogen Category 2 H351

* The titanium dioxide in this product are inextricably bound in a manner that no exposure occurs during normal use and handling. Therefore this product is not classified as a carcinogen.

See Section 16 for full text of GHS.

Section 4 First-Aid Measures.

4.1 Description of First Aid Measures

Inhalation: Remove to fresh air. If irritation persists, get medical attention.

Eyes: Flush eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Seek immediate medical attention.

Skin: Remove contaminated clothing. Wash skin with soap and water. If irritation or rash develop, get medical attention. Launder clothing before reuse.

Ingestion: If large amounts are swallowed, get medical attention.

4.2 Most important symptoms and effects, both acute and delayed: Causes eye irritation. May cause mild skin irritation. May cause allergic skin reaction. Suspected of causing reproductive effects based on animal data.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical attention is not required.

Section 5 Fire-Fighting Measures.

5.1 Extinguishing Media: Use water spray, alcohol-resistant foam, carbon dioxide or dry chemical. Do not use a steady stream of water.

5.2 Special Hazards Arising from the Substance or Mixture: Not flammable or combustible but may burn under fire conditions.

5.3 Advice for Fire-Fighters: Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus. Cool fire exposed containers with water.

Section 6 Accidental Release Measures.

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Wear protective clothing and equipment as described in Section 8. Wash thoroughly after handling.

6.2 Environmental Precautions: Report releases as required by local and national authorities. Avoid release to the environment.

6.3 Methods and Material for Containment and Cleaning Up: Contain and collect with an inert absorbent. Place into a container for disposal. For small spill, wipe up with a paper towel.

6.4 Reference to Other Sections: Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

Section 7 Handling and Storage.

7.1 Precautions for Safe Handling: Avoid contact with eyes, skin and clothing. Avoid breathing mists or spray. Use with adequate ventilation. Wash exposed skin thoroughly with soap and water after handling.

7.2 Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, well-ventilated location. Protect from heat and direct sunlight.

7.3 Specific end use(s):

Industrial uses: None identified

Professional uses: Resin for the production of dental models.

Section 8 Exposure Controls/Personal Protection

8.1 Control Parameters:

Methacrylic oligomer	None Established
Acrylate	None Established
Methacrylic monomer 1	None Established
Methacrylic monomer 2	None Established
Phosphine Oxides	None Established
Titanium Dioxide	10 mg/m ³ TWA Belgium OEL 11 mg/m ³ TWA (inhalable aerosol) France OEL 4 mg/m ³ TWA (respirable), 10 mg/m ³ TWA (inhalable) TWA Ireland OEL 10 mg/m ³ TWA (inhalable aerosol) Spain OEL 5 mg/m ³ TWA (inhalable aerosol) Sweden OEL 15 mg/m ³ TWA (total dust) US OSHA PEL 10 mg/m ³ TWA ACGIH TLV

8.2 Exposure Controls:

Recommended Monitoring Procedures: Contact an occupational hygiene professional for monitoring.

Appropriate engineering controls: Use with adequate general or local exhaust ventilation to minimize exposures.

Personal Protective Measurers

Respiratory protection: None required under normal conditions of use. If exposures are excessive, or irritation is experienced an approved dust/mist respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice. In Europe follow EN 149.

Skin protection: Wear impervious gloves to avoid skin contact. In Europe follow EN 374.

Eye/Face protection: Wear safety goggles if contact is possible. In Europe follow EN 166.

Other: Protective clothing as required to avoid skin contact. In Europe follow EN 13034. An eye wash should be available in the work area.

Section 9 Physical and Chemical Properties.

9.1 Information on basic Physical and Chemical Properties

Appearance: White or colored liquid

Odor: Characteristic odor

Odor threshold: Not available

Melting point/freezing point: Not available

Flash point: Not available

Flammability (solid, gas): Not applicable

Flammable limits: LEL: Not applicable

Vapor pressure: Not applicable

Relative density: Not available

Partition coefficient: n-octanol/water: Not applicable

Decomposition temperature: Not applicable

Explosive Properties: Not applicable

pH: Not applicable

Boiling point: Not applicable

Evaporation rate: Not applicable

UEL: Not applicable

Vapor density (air = 1): Not applicable

Solubility In Water: Insoluble

Auto-ignition temperature: Not available

Viscosity: Not available

Oxidizing Properties: Not applicable

9.2 Other Information: None available

Section 10 Stability and Reactivity.

10.1 Reactivity: None known if used in accordance with package instructions.

10.2 Chemical stability: Stable.

10.3 Possibility of hazardous reactions: Product will polymerize in contact with heat or light.

10.4 Conditions to avoid: Avoid unintended contact with light and heat.

10.5 Incompatible materials: Avoid peroxides and free radical compounds, peroxides, strong oxidizing agents and strong alkalis.

10.6 Hazardous decomposition products: Thermal decomposition may generate oxides of carbon and nitrogen.

Section 11 Toxicological Information.

11.1 Information on Toxicological Effects:

Potential Health Effects:

Eyes: Causes irritation with redness, tearing and swelling.

Skin: May cause skin irritation with redness and itching. May cause allergic skin reaction.

Ingestion: Large amounts may cause gastrointestinal irritation and nausea.

Inhalation: Inhalation of mists may cause irritation of the eyes, nose and upper respiratory tract. Symptoms include coughing, sneezing and difficulty in breathing.

Chronic Health Effects: None known.

Acute Toxicity Data:

Methacrylic oligomer: Oral rat LD50 >2000 mg/kg, Dermal rat LD50 >2000 mg/kg (structurally similar chemical)

Acrylate: Oral rat LD50 >2000 mg/kg, Dermal rabbit LD50 >2000 mg/kg, Inhalation rat LC50 >5 mg/L/4 hr

Methacrylic monomer: Oral rat LD50 >5000 mg/kg, Dermal rat LD50 >3000 mg/kg

Phosphine Oxides: Oral rat LD50 >2000 mg/kg, Dermal rat LD50 >2000 mg/kg

Titanium Dioxide: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >6.82 mg/L/4 hr

Skin corrosion/irritation: Components are not skin irritants.

Eye damage/ irritation: Acrylate causes eye irritation.

Respiratory Irritation: May cause respiratory irritation.

Respiratory Sensitization: Not a respiratory sensitizer.

Skin Sensitization: Methacrylic monomer, acrylate, and phosphine oxides are skin sensitizers.

Germ Cell Mutagenicity: None of the components are mutagens.

Carcinogenicity: Titanium dioxide is listed by IARC as a group 2B carcinogen (possible human carcinogen). This component is encapsulated in a resin so no inhalable exposure occurs during use or disposal. None of the other components >0.1 are listed by OSHA, IARC, NTP or the EU CLP.

Reproductive Toxicity: Phosphine oxides is suspected of damaging fertility.

Specific Target Organ Toxicity:

Single Exposure: No data available.

Repeat Exposure: No data available.

Aspiration Toxicity: This product does not meet the criteria for aspiration toxicity.

Section 12. Ecological Data.

12.1 Ecotoxicity:

Methacrylic oligomer: 96 hr LL50 Oncorhynchus mykiss >100 mg/L, 48 hr EL50 daphnia magna 6 mg/L, 72 hr EL50

Pseudokirchneriella subcapitata >100 mg/L

Acrylate: 96 hr LC50 Brachydanio 100 mg/L, 48 hr EC50 daphnia magna No toxicity observed, 72 hr IC50 scenedesmus subspicatus 53.7 mg/L

Methacrylic monomer: 48 hr EC50 daphnia magna 391 mg/L

Phosphine Oxides: 48 hr LC50 Oryzias latipes 6.53 mg/L, 48 hr EC50 daphnia magna 3.53 mg/L, EC10

Pseudokirchneriella subcapitata 1.56 mg/L

Titanium Dioxide: 96 hr LC50 Pimephales promelas >1000 mg/L, 48 hr EC50 daphnia magna >1000 mg/L, 72 hr EC50

Pseudokirchneriella subcapitata 61 mg/L

12.2 Persistence and degradability: Acrylate is not readily biodegradable (9% in 28 days). Methacrylic monomer is readily biodegradable (100% in 28 days), Methacrylic oligomer is inherently biodegradable (24% in 28 days).

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: Components do not meet the criteria of PBT or vPvB.

12.6 Other adverse effects: None known.

Section 13. Disposal Considerations.

13.1 Waste Treatment Methods: Dispose in accordance with all national and local regulations.

Section 14. Transport Information.

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT		Not Regulated			
Canadian TDG		Not Regulated			
EU ADR/RID		Not Regulated			
IMDG		Not Regulated			
IATA/ICAO		Not Regulated			

14.6 Special precautions for User: Not applicable

14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Section 15 Regulatory Information.

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

US Regulations

SARA Section 313 (40 CFR 372): This product contains the following toxic chemical(s) subject to reporting requirements of SARA 313: None

SARA Section 311/312 (40 CFR 370) Hazard Categories: Refer to Section 2 for OSHA Hazard Classification.

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California: This product contains the following substances known to the state of California to cause cancer and/or reproductive toxicity:

Chemical Inventories

Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA inventory

Canadian Environmental Protection Act: All of the components of this product are listed on the Domestic Substances List (DSL).

China: All of the components in this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or exempt.

Other EU Regulations: This product is classified and labeled in accordance with EC CLP. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH)

German Water Hazard Class (VwVwS): 2

16. Other Information.

- HMIS Rating: Health 2* Flammability 1 Physical Hazard 0
Hazard: 4-Severe; 3-Serious; 2-Moderate; 1-Slight; 0-Minimum

Date Revised: June 14, 2019

SDS Revision History: Section 2 – update classification description


Supersedes Date: New May 24, 2019

CLP/GHS Classification and H Phrases for Reference (See Section 3)

- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H351 Suspected of causing cancer.
- H361f Suspected of damaging fertility.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- H413 May be harmful to aquatic life with long lasting effects

Literature references and sources for data: ECHA database, GESTIS, eChemPortal, TOXNET, Supplier SDS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP): Calculation method

Prepared By: 	Translated By:
Date: May 24, 2019	Date: