



SAFETY DATA SHEET

Regulation (EC) No 1907/2006 and 2020/878 (REACH)

Date Revised: 3/30/22; Supersedes Date:6/13/19

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

1.1 Product Identifier:

- Product Type: Phosphate Casting Investment
- Trade Names:

AccuVest	Cera-Fina	Ceramigold	FastFire 15
Formula 1	Hi-Temp	PC 15	PowerCast
Polyvest	Ti21	V.H.T. Industrial	X-20

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

Product Use: Investments for casting dental appliances
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 Substance or Mixture:

CLP/GHS Classification (1272/2008):

Health Hazards	Physical Hazards	Environmental Hazards
Specific Target Organ Toxicity – Repeat Exposure Category 1 (H372)	Not Hazardous	Not Hazardous

2.2 Label Elements:

Danger!



Contains Crystalline silica, quartz and Crystalline silica, cristobalite

H372 Causes damage to lungs through prolonged or repeated exposure by inhalation.

Prevention

- P260 Do not breathe dust.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink, or smoke when using this product.

Response

P314 Get medical attention if you feel unwell.

Disposal

P501 Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None**Section 3 Composition/Information on Ingredients.****3.1 Substance:** Not applicable**3.2 Mixture:**

Substance	CAS No. / EC Number	%	CLP/GHS Classification (1272/2008)	ATE/ Specific Concentration limits/ M-Factor
Zirconium Silicate (Substance with a Union workplace exposure limit)	14940-68-2 / 239-019-6	0-95	Not Classified	None
Silica, Crystalline, Quartz	14808-60-7 / 238-878-4	0-75	STOT RE 1 H372	None
Phosphates (Substance with a Union workplace exposure limit)	Mixture / Not applicable	1-40	Not Classified	None
Silica, Crystalline, Cristobalite	14464-46-1 / 238-455-4	0-30	STOT RE 1 H372	None
Aluminum Oxide (Substance with a Union workplace exposure limit)	1344-28-1 / 215-691-6	0-5	Not Classified	None
Graphite (Substance with a Union workplace exposure limit)	7782-42-5 / 231-955-3	0-5	Not Classified	None
Glass fibers (Substance with a Union workplace exposure limit)	65997-17-3 / 266-046-0	0-2	Not Classified	None

See Section 16 for full text of GHS Classifications.

Section 4 First-Aid Measures.**4.1 Description of First Aid Measures:**

Inhalation: Remove exposed person to fresh air. If irritation or other symptoms persist, get medical attention.

Eyes: Flush with large quantities of water, while holding the eyelids apart. If irritation persists consult a physician.

Skin: No first aid is generally required. Wash skin with soap and water.

Ingestion: May cause gastrointestinal discomfort and intestinal blockage. If swallowed, drink 1 or 2 glasses of water to dilute. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed: May cause eye irritation. Inhalation of dust may cause mucous membrane and respiratory irritation. When mixed with water, this material hardens and becomes very hot – may cause burns. Repeated or prolonged exposure to Crystalline Silica dust may damage lungs.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed: Immediate medical attention is required for ingestion.

Section 5 Fire-Fighting Measures.

5.1 Extinguishing Media: Use media appropriate for surrounding fire. Water may cause product to solidify.

5.2 Specific Hazards Arising From the Chemical: The product does not burn but may decompose producing phosphorus oxides.

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 appropriate protective clothing as described in Section 8.

6.2 Environmental Hazards: Report releases as required by local and national authorities.

6.3 Methods and Materials for Containment and Cleaning up: Collect using dustless method (HEPA vacuum or wet method) and place in appropriate container for use. Do not use compressed air.

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. Do not breathe dust. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation and proper dust collection methods to keep exposure level below occupational exposure limits. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

7.2 Conditions for Safe Storage, including any Incompatibilities: Store in a cool, dry, well-ventilated area away from incompatible materials. Protect from physical damage.

7.3 Specific end use(s):

Industrial uses: None identified

Professional uses: Investments casting dental products for dental technicians.

Section 8 Exposure Controls/Personal Protection.

8.1 Control Parameters:

Zirconium Silicate (as zirconium compounds)	5 mg/m ³ TWA, 10 mg/m ³ STEL ACGIH TLV 1 mg/m ³ TWA, 1 mg/m ³ STEL Germany OEL (inhalable aerosol) 5 mg/m ³ TWA, 10 mg/m ³ STEL UK OEL 5 mg/m ³ TWA, 10 mg/m ³ STEL Belgium OEL 5 mg/m ³ TWA, 10 mg/m ³ STEL Ireland OEL 5 mg/m ³ TWA, 10 mg/m ³ STEL Spain OEL
Silica, Crystalline, Quartz	0.025 mg/m ³ TWA ACGIH TLV (respirable fraction) 0.1 mg/m ³ TWA France OEL(respirable aerosol) 0.075 mg/m ³ TWA Netherlands OEL (respirable dust) 0.1 mg/m ³ TWA Belgium OEL (respirable) 0.1 mg/m ³ TWA Ireland OEL (respirable fraction) 0.05 mg/m ³ TWA Spain OEL (respirable fraction) 0.1 mg/m ³ TWA Sweden OEL(respirable aerosol)
Phosphates	5 mg/m ³ TWA (respirable dust), 10 mg/m ³ TWA (total dust) Sweden OEL (inorganic dust)
Silica, Crystalline, Cristobalite	0.025 mg/m ³ TWA ACGIH TLV (respirable fraction) 0.05 mg/m ³ TWA France OEL(respirable aerosol) 0.075 mg/m ³ TWA Netherlands OEL (respirable dust) 0.05 mg/m ³ TWA Belgium OEL (respirable) 0.1 mg/m ³ TWA Ireland OEL (respirable fraction) 0.05 mg/m ³ TWA Spain OEL (respirable fraction) 0.05 mg/m ³ TWA Sweden OEL(respirable aerosol)
Aluminum Oxide	1 mg/m ³ TWA ACGIH TLV (Respirable) (as aluminum metal, and insoluble compounds) 1 mg/m ³ TWA Belgium OEL (as aluminum metal, and insoluble compounds) 1.5 mg/m ³ TWA (respirable aerosol), 4 mg/m ³ TWA (inhalable aerosol) Germany OEL

	4 mg/m ³ TWA (respirable aerosol), 10 mg/m ³ TWA (inhalable aerosol) UK OEL 10 mg/m ³ TWA France OEL (respirable aerosol) 4 mg/m ³ TWA (respirable aerosol), 10 mg/m ³ TWA (inhalable aerosol) Ireland OEL 10 mg/m ³ TWA (inhalable aerosol) Spain OEL 2 mg/m ³ TWA (respirable dust), 5 mg/m ³ TWA (total dust) Sweden OEL
Graphite	2 mg/m ³ TWA ACGIH TLV (respirable) 0.3 mg/m ³ TWA (respirable aerosol), 4 mg/m ³ TWA (inhalable aerosol), 2.4 mg/m ³ STEL (respirable) Germany OEL 4 mg/m ³ TWA (respirable aerosol), 10 mg/m ³ TWA (inhalable aerosol) UK OEL 2 mg/m ³ TWA France OEL (respirable aerosol) 2 mg/m ³ TWA Belgium OEL 2 mg/m ³ TWA (respirable aerosol) Ireland OEL 2 mg/m ³ TWA Spain OEL (inhalable aerosol) 5 mg/m ³ TWA (inhalable aerosol) Sweden OEL
Glass fibers	5 mg/m ³ (inhalable) TWA ACGIH TLV (as synthetic vitreous fibers, continuous filament glass fibers) 10 mg/m ³ TWA Belgium OEL (glass wool fibres) 1 f/cm ³ TWA Sweden OEL

Refer to local regulations for exposure limits not listed above.

8.2 Exposure Controls:

Recommended Monitoring Procedures: None.

Appropriate engineering controls: Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits.

Individual Protection Measures: Refer to Reg (EU) 2016/425

Respiratory protection: If the exposure limits are exceeded an approved particulate respirator appropriate for the form and concentration of the contaminants should be used. In the EU refer to EN Standards (EN 149 or 405). Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

Skin protection: For prolonged use or in dusty conditions, wear rubber gloves. In the EU refer to EN 374.

Eye protection: Chemical safety goggles if needed to avoid eye contact. In the EU refer to EN 166.

Other: Impervious clothing as needed to avoid contamination of personal clothing.

Section 9 Physical and Chemical Properties.

9.1 Information on basic Physical and Chemical Properties:

Physical State: Solid

Appearance: Powder, with variety of colors

Color: Variety of colors

Odor: Odorless

Melting Point/Freezing Point: Not applicable

Boiling Point/Range: Not applicable

pH: Not applicable

Flash Point: Not applicable

Evaporation Rate: Not applicable

Vapor Pressure: Not applicable

Explosive Limits:

LEL: Not applicable **UEL:** Not applicable

Vapor Density: Not applicable

Relative Vapor Density (at 20°C): Not applicable

Specific Gravity: Not applicable

Density/Relative Density: No data available

Solubility(ies): No data available

Octanol/Water Partition Coefficient: Not applicable

Auto-ignition Temperature: Not applicable

Decomposition Temperature: Not applicable

Kinematic Viscosity: Not applicable

Particle Characteristics: Not applicable

Flammability (gas, liquid, solid): Flammable liquid

9.2.1 Information with regard to physical hazard classes: Not applicable

9.2.2 Other Safety Characteristics: Not applicable

Section 10 Stability and Reactivity.

10.1 Reactivity: None known.
10.2 Chemical stability: Stable
10.3 Possibility of hazardous reactions: None known.
10.4 Conditions to avoid: None known.
10.5 Incompatible materials: Incompatible with hydrofluoric acid.
10.6 Hazardous decomposition products: Crystalline silica will dissolve in hydrofluoric acid and produce silicone tetrafluoride.

Section 11 Toxicological Information.

11.1 Information on Toxicological Effects:

Potential Health Effects:

Eyes: Dust may cause mechanical irritation and possible injury.

Skin: Dust may cause irritation.

Ingestion: No adverse effects expected for normal, incidental ingestion. Large amounts may cause gastrointestinal blockage and discomfort.

Inhalation: Inhalation of dust may cause irritation to the nose, throat and upper respiratory tract with coughing and shortness of breath.

Chronic Health Effects: Repeated or prolonged exposure to Crystalline Silica dust may damage lungs.

Acute Toxicity Data:

Zirconium Silicate: No toxicity data available

Silica, Crystalline, Quartz: Oral rat LD50 >22,500 mg/kg

Phosphates: No toxicity data available

Silica, Crystalline, Cristobalite: No toxicity data available

Aluminum Oxide: Oral rat LD50 15900 mg/kg, Inhalation rat LC50 7.6 mg/L/1 hr

Graphite: Oral rat LD50 >2000 mg/kg, Inhalation rat LC50 >2000 mg/m³ (no deaths occurred)

Glass Fibers: Oral rat LD50 >2000 mg/kg

Skin Corrosion/Irritation: Based on the available data, the classification criteria are not met.

Serious Eye Damage/Irritation: Based on the available data, the classification criteria are not met.

Respiratory or Skin Sensitization: Based on the available data, the classification criteria are not met.

Germ Cell Mutagenicity: Based on the available data, the classification criteria are not met.

Carcinogenicity: None of the components above 0.1% are listed as a carcinogen by EU CLP.

Reproductive Toxicity: Based on the available data, the classification criteria are not met.

Specific Target Organ Toxicity:

Single Exposure: Based on the available data, the classification criteria are not met.

Repeated Exposure: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.

Aspiration Hazards: Based on the available data, the classification criteria are not met.

11.2 Information on other hazards: Not applicable

11.2.1 Endocrine disrupting properties: Not applicable

11.2.2 Other information: Not applicable

Section 12 Ecological Data.

12.1 Toxicity:

Silica, Crystalline, Quartz: 72 hr LC50 Carp - >10,000 mg/L

Silica, Crystalline, Cristobalite: No data available

Zirconium Silicate: No data available

Aluminum Oxide: 96 hr LC50 Pimephales promelas 35 mg/L

Graphite: 96 hr EC50 Danio rerio >100 mg/L, 48 hr EC50 daphnia magna >100 mg/L, 72 hr EC50 Pseudokirchnerella subcapitata >100 mg/L

Phosphates: No data available

Glass Fibers: No data available

12.2 Persistence and degradability: Biodegradation is not applicable to inorganic substances.
12.3 Bioaccumulative potential: No data available
12.4 Mobility in soil: No data available
12.5 Results of PBT and vPvB assessment: Not required
12.6 Endocrine Disrupting Properties: Not applicable
12.7 Other adverse effects: Not required

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
EU ADR/RID		Not Regulated			
IMDG		Not Regulated			
IATA/ICAO		Not Regulated			

14.6 Special precautions for User: Not applicable
14.7 Maritime transport in bulk according to IMO instruments: Not applicable

Section 15 Regulatory Information.

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

Australia: All of the components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or exempt.

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

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

European Union: All the components in this product are listed on the EINECS inventory or exempt.

Japan: All of the components in this product are listed on the Japanese New and Existing Chemicals Substances (ENCS) Inventory.

Korea: All of the components in this product are listed on the Korean Existing Chemicals List (KECL) or exempt.

New Zealand: All of the components in this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or exempt.

Philippines: All of the components of this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or exempt.

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

15.2 Chemical safety assessment: None required.

Section 16 Other Information.

Date Revised: March 30, 2022

SDS Revision History: Updated SDS format to comply with Reg (EU) 2020/878 and updated Section 2, 4, and 8.

Supersedes Date: June 13, 2019

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

STOT RE 1 Specific Target Organ Toxicity Repeat Exposure Category 1
H372 Causes damage to organs through prolonged or repeated exposure.

Key literature references and sources for data: ECHA database, GESTIS, eChemPortal, TOXNET

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

Prepared By: <i>Denise A. Deeds</i>	Translated By:
Date: March 30, 2022	Date: