

SAFETY DATA SHEETS

This SDS packet was issued with item:

077316623

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

077316631



MATERIAL SAFETY DATA SHEET

(Revision: 06/01/2011)

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

- Product Type: Phosphate Investment Casting Liquid
- Trade Names:

Ceramigold Lilac Liquid	FastFire Liquid	Formula 1 Liquid
High Expansion Liquid	Old Style Special Liquid	Polyvest Liquid
PowerPlus Liquid	Special Liquid Concentrate	SpaceMaker Liquid
Special Liquid Concentrate Max	Special Liquid Concentrate Plus	Ti21 Liquid
- Company: **Whip Mix Corporation**
 361 Farmington Ave.
 Louisville, Kentucky, USA 40209
 Emergency Telephone Number: (502)-637-1451
 Fax Number: (502) 634-4512

Transportation CHEMTREC 1(800) 424-9300 (U.S. and Canada)
Emergencies: International Calls: 1- 703-527-3887 (Collect calls accepted)

2. Hazard Identification.

- Not a hazardous material.
- Personal protective equipment not required during normal laboratory use.

3. Composition/Information on Ingredients.

<i>Substance</i>	<i>Weight</i>	<i>CAS</i>	<i>EINECS</i>	<i>R</i>	<i>Symbols</i>	<i>S</i>
Colloidal Silica (amorphous)	15 - 50%	112926-00-8	231-545-4	None	None	None
* Ethylene Glycol	<9%	107-21-1	203-473-3		None	S2

4. First-Aid Measures.

- This product has no known acute toxic effects which would require emergency first-aid measures.
- For eye contact, rinse with water and call a physician.

5. Fire-Fighting Measures.

- Unusual fire and explosion hazard: Contact with reactive metals (e.g. aluminum) may result in the generation of flammable hydrogen gas.

6. Accidental Release Measures.

- Do not allow liquid to dry. Cleanup with absorbent paper towels.

7. Handling and Storage.

Handling: No special treatment required.
 Storage: Keep container closed.

8. Exposure Controls/Personal Protection. Exposure Limits Only If Aerosolized Dried (See below).

- Personal protective equipment: None required during normal laboratory use.
- Primary route(s) of exposure: Eye, skin, inhalation
- Eye contact: Can cause transient irritation.
- Prevent inhalation exposure to excessive dust (if mixture dries out). May result in lung damage.
- Exposure limit to dried dust: 1.6 mg/m³ as 8 hr TWA.
- Exposure limit: to aerosol of liquid: Ceiling Value of 100mg/m³ for ethylene glycol.

9. Physical and Chemical Properties.

- Translucent odorless liquid - may be colored
- Density 10.3-10.4 lbs/gal
- Solubility in water Dispersible
- Specific gravity 1.24-1.25 @ 77°F
- pH (neat) 8.4-8.8

Viscosity Boiling point Flash point	Max 6.0 cps @ 77°F 212°F @ 760 mm Hg None
<ul style="list-style-type: none"> No dangerous reactions are known to occur with correct handling and storage. 	
10. Stability and Reactivity. <ul style="list-style-type: none"> Basically stable. Avoid contact with aluminum. 	
11. Toxicological Information. <ul style="list-style-type: none"> Acute oral toxicity (albino rats): LD₅₀ = Greater than 34,000 mg/kg Acute dermal toxicity (albino rabbits): LD₅₀ = Greater than 10,000 mg/kg Primary skin irritation test (albino rabbits): Skin irritation index draize rating: 0.125/8.0 minimally irritating. Primary eye irritation test (albino rabbits): eye irritation index draize rating: 4.0/110.0 minimally irritating. Inhalation of excessive dust (if the mixture dries out) may result in lung damage. Carcinogenicity: Not listed as carcinogen by OSHA, NTP or TARC 	
12. Ecological Data. <ul style="list-style-type: none"> No ecotoxicological studies are available. See CERCLA section 14, if released into the environment. 	
13. Disposal Considerations. <ul style="list-style-type: none"> Waste is not hazardous as defined by RCRA (40CFR 2G1) No special treatment required. 	
14. Transport Information. <ul style="list-style-type: none"> No special transport requirements. Product is not regulated during transportation. 	
15. Regulatory Information. <ul style="list-style-type: none"> OSHA Hazard Communications Standard, 29 CFR 1810.1200: None of the ingredients are hazardous. RCRA: This material is not defined as hazardous water, per 40 CFR 261. TSCA: These products contain materials listed in the TSCA inventory and is not otherwise regulated by TSCA Sec. 4, 5, 6, 7 or 12. CERCLA: Materials not reportable under CERCLA. Local requirements may vary. SARA: 311/312 hazard categories - immediate and delayed health, 313 reportable ingredients - none Does not contain any chemicals which require warning. 	
16. Other Information. <ul style="list-style-type: none"> HMIS Rating: Health 1 Flammability 0 Reactivity 2 Other 0 <i>Hazard: 4-Severe; 3-Serious; 2-Moderate; 1-Slight; 0-Minimum</i> 	
Prepared By: Donna Ringo, CIH	Translated By:
Date: 6/13/2011	Date:

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SAFETY DATA SHEET
Regulation (EC) No 1907/2006 and 2015/8308 (REACH)

(Revision: 3/18/2019; Supersedes: 10/12/2016)

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

1.1 Product Identifier

Product Type: Silica preparation
Trade Names: Special Liquid Concentrate

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

Product Use: Investments for 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)

Medical Emergencies:

Other Product Information: Infor@whipmix.com

Section 2 Hazard Identification

2.1 Classification of the Substance or Mixture:

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

Health Hazards	Physical Hazards	Environmental Hazards
Specific Target Organ Toxicity Repeated Exposure Category 2 (H373)	Not Hazardous	Not Hazardous

2.2 Label Elements:

Warning!



H373 May cause damage to kidneys through prolonged or repeated exposure by ingestion.

Precautionary Phrases:

P260 Do not breathe mist, vapors or spray.
P314 Get medical attention if you feel unwell.
P501 Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None

Section 3 Composition/Information on Ingredients.

<u>Substance</u>	<u>CAS No. / EC Number</u>	<u>%</u>	<u>CLP/GHS Classification (1272/2008)</u>
Amorphous Silica	7631-86-9 / 231-545-4	40 – 70	Not hazardous
Ethylene Glycol	107-21-1 / 203-473-3	5 - 10	Acute Tox 4 H302 STOT RE 2 H373

See Section 16 for full text of GHS Classifications.

The exact percentage of composition has been withheld as a trade secret.

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 for several minutes, holding the eyelids apart. If irritation persists consult a physician.

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

Ingestion: If swallowed, rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

4.2 Most Important symptoms and effects, both acute and delayed: May cause mild eye irritation. Inhalation of mists may cause mucous membrane and upper respiratory tract irritation. Ingestion may cause gastrointestinal irritation, nausea, dizziness, drowsiness, slurred speech and stupor. Prolonged over exposure to ethylene glycol may cause damage to the kidneys.

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

Section 5 Fire-Fighting Measures.

5.1 Extinguishing Media: Use media appropriate for surrounding fire.

5.2 Special Hazards Arising from the Substance or Mixture: The product is not flammable or combustible.

5.3 Advice for Fire-Fighters: Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus.

Section 6 Accidental Release Measures.

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing as described in Section 8. Wash hands after use. Avoid breathing vapors or mists.

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

6.3 Methods and Material for Containment and Cleaning Up: Collect with an inert material and place in appropriate container for disposal or reuse.

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. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. 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 for dental appliances.

Section 8 Exposure Controls/Personal Protection

8.1 Control Parameters:

Amorphous Silica	80 mg/m ³ TWA PEL (total dust) % Silica 10 mg/m ³ TWA Belgium OEL 6 mg/m ³ TWA (Inhalable) UK WEL 2.4 mg/m ³ (Respirable) UK WEL
Ethylene Glycol	100 mg/m ³ Ceiling ACGIH TLV (as aerosol) 20 ppm TWA, 40 ppm STEL EU IOEL 10 ppm TWA, 20 ppm STEL Germany DFG (as aerosol and vapor) 20 ppm TWA, 40 ppm STEL UK WEL

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.

Personal Protective Measurers

Respiratory protection: None normally required. If the exposure levels are exceeded and irritation is experienced an approved dust/mist respirator appropriate for the form and concentration of the contaminants should be used. In the USA refer to OSHA regulations, 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: Wear impervious gloves such as nitrile to prevent skin contact. In the EU refer to EN 374.

Eye protection: Chemical safety goggles should be worn if contact is possible. In the EU refer to EN 166.

Other: Protective clothing as required to avoid prolonged skin contact.

Section 9 Physical and Chemical Properties.

9.1 Information on basic Physical and Chemical Properties

Appearance: White Liquid

Odor: Odorless

Odor threshold: 60.3 mg/m³ (ethylene glycol)

Melting point/freezing point: 32°F / 0°C

Flash point: Not applicable

Flammability (solid, gas): Not applicable

Flammable limits: LEL: Not applicable

Vapor pressure: 17 mmHg @ 20°C

Relative density: 1.20 g/mL at 20°C

Partition coefficient: n-octanol/water: Not available

Decomposition temperature: Not available

Explosive Properties: Not applicable

pH: 9.5-10.2

Boiling point: 212°F / 100°C

Evaporation rate: Not available

UEL: Not applicable

Vapor density (air = 1): Not available

Solubility In Water: Fully miscible

Auto-ignition temperature: Not applicable

Viscosity: Not applicable

Oxidizing Properties: Not applicable

9.2 Other Information: None available

Section 10 Stability and Reactivity.

10.1 Reactivity: Not expected to react under normal conditions of use.

10.2 Chemical stability: Stable under normal conditions of use.

10.3 Possibility of hazardous reactions: None known.

10.4 Conditions to avoid: None known.

10.5 Incompatible materials: None known.

10.6 Hazardous decomposition products: Thermal decomposition may generate silicon oxides.

Section 11 Toxicological Information.

11.1 Information on Toxicological Effects:

Potential Health Effects:

Eyes: May cause mild irritation with redness and tearing.

Skin: Prolonged skin contact may cause irritation and drying of the skin. 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: Prolonged over exposure to ethylene glycol may cause damage to the kidneys.

Carcinogenicity: None of the components of this product are listed as carcinogens by OSHA, IARC or NTP.

Skin Sensitization: None of the components have been shown to cause skin or respiratory sensitization in animals or humans.

Mutagenicity: None of the components have been shown to cause mutagenicity.

Reproductive Toxicity: None of the component are classified as being toxic to reproduction. In a study comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity and developmental toxicity in with minimal evidence of teratogenicity, The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen and there is currently no available information to suggest that ethylene glycol caused birth defects in humans.

Specific Target Organ Toxicity:

Single Exposure: None known.

Repeated Exposure: In a 16 week oral study, rats were administered 50, 150, 500 or 1000 mg/kg of ethylene glycol in their diet. After 16 weeks of exposure the renal toxicity was severe enough to impact the kidneys ability to process the ethylene glycol and eliminate it in urine. NOEL 150 mg/kg

Aspiration Hazards: Product viscosity does not meet the criteria for aspiration toxicity.

Acute Toxicity Data:

Amorphous Silica: Oral rat LD50 >5000 mg/kg, Inhalation rat LC0 >0.39 mg/L/4 hr., LD50, Dermal rabbit LD50 >2000 mg/kg

Ethylene Glycol: Oral rat LD50 7712 mg/kg; Inhalation rat LC50 >2.5 mg/L/6 hr Dermal rabbit LD50 >3500 mg/kg

Section 12. Ecological Data.

12.1 Ecotoxicity:

Amorphous Silica: 96 hr. LC50 Danio rerio >10,000 mg/L, 24 hr. EC50 daphnia magna >1000 mg/L, 72 hr. EC50

Desmodesmus subspicatus >10000 mg/L

Ethylene glycol: 96 hr LC50 Pimephales promelas 72,860 mg/L, 48 hr EC50 daphnia magna >100 mg/L, 96 Hr EC50

Pseudokirchneriella subcapitata 6500-13,000 mg/L

12.2 Persistence and degradability: Ethylene glycol is readily biodegradable.

12.3 Bioaccumulative potential: Ethylene glycol has a BCF of 10 which suggest the potential for bioconcentration is low.

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: 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
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: Ethylene Glycol 107-21-1 5-10%

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

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (10% maximum) of 5,000 lbs., is 50,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations

California:  **WARNING:** This product can expose you to ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

International Chemical Inventories

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.

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

16. Other Information.

HMIS Rating: Health 2* Flammability 0 Reactivity 0

Hazard: 4-Severe; 3-Serious; 2-Moderate; 1-Slight; 0-Minimum

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

Acute Tox 4 Acute Toxicity Category 4

STOT RE 2 Specific Target Organ Toxicity Repeat Exposure Category 2

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

Prepared By: <i>Denise A. Deeds</i>	Translated By:
Date: March 18, 2019	Date: