

Section 1 – Identification
Product Name: Fleck's Cement Liquid

Manufacturer: Mizzy Inc.
A division of Keystone Industries
52 W King St.
Myerstown, PA 17067

Chemical Name: Phosphoric Acid Solution

Product Use: Dental Cements

Information Contacts: (800)-333-3131

Emergency Phone Numbers: US & Canada 1 (800)-535-5053

Product #: Various

Section 2 – Hazards Identification
EMERGENCY OVERVIEW

This information is based on findings from related or similar materials.

- Eye: May cause irreversible eye injury. Contact with liquid is corrosive to the eyes and causes burns
- Skin: Contact with liquid is corrosive and may cause severe burns
- Ingestion: Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause permanent tissue destruction of the esophagus and digestive tract.
- Inhalation: Irritation may lead to chemical pneumonia and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.


Potential Health Effects, Signs and Symptoms of Exposure:
Primary Route of Entry Inhalation, skin, and ingestion.

Eye Contact with liquid is corrosive to the eyes and causes burns.

Skin Contact with liquid is corrosive and causes severe burns.

Ingestion May cause permanent tissue destruction of the esophagus and digestive tract.

Inhalation Causes severe irritation of upper respiratory tract with coughing, burning, breathing difficulty, and possible coma.

Sub-Chronic Effects Prolonged inhalation may cause respiratory tract inflammation and lung damage. Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis.

NOTE: Refer to Section 11, Toxicological Information for Details

Section 3 – Composition/Information on Ingredients

Chemical Identity	CAS Numbers	EINECS#	INCI Name	Exposure OSHA TWA/STEL	Limits ACGIH TWA/STEL	Carcinogen IARC/NTP/OSH A	%
Phosphoric Acid	7664-38-2	231-633-2	Phosphoric Acid	TWA = 1 mg / m ³	TWA = 1 mg / m ³ STEL = 3 mg / m ³	Not Listed	>70
Aluminum Oxide	21654-51-2	N/E	N/E	10 mg / m ³ (dust)	TLV = 10 mg / m ³	Not Listed	<20

N/E – None

Established

N/R – Not Reviewed

N/DA – No Data Available

N/A – Not Applicable

(items in parenthesis relate to 1999/45/EC)
Phosphoric Acid: Danger Symbol – GHS05 (C)
(S26), P309 + 314 (S45), P405 (S1)

Hazard Statement – H314 (R34)

Precautionary Statement – P102 (S2), P305+334

Aluminum Oxide: Danger Symbol – GHS07 (Xi)
P301+315 (S46)

Hazard Statement – H319 + 315 (R36/38)

Precautionary Statement – P102 (S2),

See Section 16 for Hazard and Precautionary Statement Key.

Section 4 – First Aid Measures
First Aid for Eye Immediately flush eyes with plenty of water for at least 15 min. occasionally lifting the upper and lower lids. Get medical aid immediately.

First Aid for Skin Get medical attention. Immediately flush skin with plenty of soap and water for at least 15 min. while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits

further exposure.

First Aid for Ingestion Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cups of milk or water. Get medical attention.

First Aid for Inhalation Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration.

Section 5 – Fire Fighting Measures

Flash Point (°F/°C)	Flammable Limit (vol%)	Auto-ignition Temperature (vol%)
N/A	N/A	N/A

Method:

Extinguishing Media: Use water spray to cool fire exposed containers. In case of fire use water spray, dry chemical, carbon dioxide or foam.

Fire Fighting Instructions: As in any fire, wear a self contained breathing apparatus in pressure-demand, MSHA/NIOSH, and full protective gear. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self contained breathing apparatus (SCBA) to prevent contact with decomposition products.

Unusual Hazards: Evacuate all personnel. Substance is noncombustible.

Section 6 – Accidental Release Measures

Spill or Release Procedures Minor spills – Clean up immediately, avoid contact with skin and eyes. Find any type of acid spill response kit to neutralize pH. Wipe and clean with soapy water

Major spills – Clear area of personnel. Restrict access to area. Avoid contact with skin and eyes. Remove ignition sources and ventilate the area well. Dike large spills and remove to large containers. Prevent washings from entering all waterways. Contact authorities on large spills. Locate any type of acid spill response kit to neutralize pH. Clean area thoroughly with soapy water.

Section 7 – Handling and Storage

Handling Limit all unnecessary personal contact. Avoid breathing vapors. Wear appropriate PPE. Use only in a chemical fume hood if using in large quantity.

Storage Store in a cool, well ventilated area away from heat, sparks and flame. Keep containers closed when not in use. Keep in original container provided by manufacturer.

Explosion Hazard None.

Section 8 – Exposure Controls / Personal Protection

Engineering Controls Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

General To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132), or European Standard EN166 be conducted before using this product.

Eye/ Face Protection Safety glasses / goggles or splash shields are required when handling. Ensure eye bath is on hand.

Skin Protection Use impermeable clothing to prevent any contact with this product, such as gloves, apron, boots, or whole body suit.

Respiratory Protection In case of insufficient ventilation, wear suitable respiratory equipment.

Section 9 – Physical and Chemical Properties

Appearance	Odor & Odor Threshold	pH	Specific Gravity	Viscosity	% Volatile
Clear liquid	Odorless	N/A	(H ₂ O = 1): 1.6	100 cps	N/A

Boiling Point/ Freezing Point	Decomposition Temperature	Octanol/Water Partitioning Coefficient Log Po/w	Vapor Pressure:	Vapor Density	Evaporation Rate	Ignition	Solubility In Water (20°C)

Material Safety Data Sheet

FLECK'S CEMENT LIQUID

Page 3 of 5

N/A	N/DA	N/DA	2 hpa @ 20 Celsius	N/A	>1	N/A	Soluble
Flash Point (°F/°C)		Flammable Limit (vol%)		Auto-ignition Temperature (vol%)			
N/A		N/A		N/A			

Section 10 – Stability and Reactivity

Stability: Stable	Incompatibility (Materials to Avoid): Bases, metals, amines, alcohols, halogenated agents, organic peroxides, phenols, aldehydes, amides, azo, and hydrazines, carbamates, phenols, cyanide, epoxides, caustics, sulfides, steel, sodium, and potassium hydroxides.
Hazardous Decomposition Products: Phosphine, Oxides of Phosphorus, hydrogen gas	Hazardous Polymerization: Will not occur
Conditions to Avoid: Excess Heat, incompatible materials, combustible materials, exposure to moist air or water.	

Section 11 – Toxicological Information

Acute Oral Toxicity LD50 = 1530 mg/kg	Acute Dermal Toxicity LD50 = 2740 mg/kg	Acute Inhalation Toxicity N/DA	Irritation – skin N/DA	Irritation – Eye N/ DA
Sensitization N/ DA	Mutagenicity N/DA		Sub-chronic Toxicity N/ DA	

Section 12 – Ecological Information

Ecotoxicological Information

Acute Toxicity to Fish N/DA	Acute Toxicity to Invertebrates N/ DA	Acute Toxicity to Algae N/ DA	Bioconcentration N/ DA	Toxicity to Sewage Bacteria N/ DA
---------------------------------------	---	---	----------------------------------	---

Chemical Fate Information

Biodegradability	N/DA. This material is not expected to bioaccumulate.
Chemical Oxygen Demand	N/ DA

Section 13 – Disposal Considerations

Dispose of in compliance with governmental regulation (state and federal).

Dispose of container and unused contents in accordance with federal, state and local requirements. For EU Member States, please refer to any relevant Community provisions relating to waste. In their absence, it is useful to remind the user that national or regional provisions may be in force.

Section 14 – Transport Information

DOT (49 CFR 172)	
Proper Shipping Name:	UN1805, Phosphoric Acid Solution, 8, PG III
Identification Number:	UN1805
Marine Pollutant:	No
Special Provisions:	A7, IB3, N34, T4, TP1
Emergency Response Guidebook (ERG) #:	154
IATA (DGR):	
Proper Shipping Name:	UN1805, Phosphoric Acid Solution, 8, PG III
Class or Division:	8
UN or ID Number:	UN1805
Packaging Instructions:	III
Emergency Response Guidance (ICAO)#:	
IMO (IMDG):	
Proper Shipping Name:	UN1805, Phosphoric Acid Solution, 8, PG III
Class or Division:	8

Material Safety Data Sheet

FLECK'S CEMENT LIQUID

Page 4 of 5

UN or ID Number:	UN1805
Special Provisions & Stowage/Segregation:	
Emergency Schedule (EmS):	N/A
Other Information:	N/A

Section 15 – Regulatory Information

US Federal Regulations

Clean Air Act: HAP/ODS	This product contains the following HAP's or ODS: • NONE
Clean Water Act: Priority Pollutant	This product contains the following chemicals listed under the U. S. Clean Water Act Priority Pollutant and Hazardous Substance List: • None
FDA: Food Packaging Status	This product has not been cleared by the FDA for use in food packaging and / or other applications as an indirect food-packaging additive.
Occupational Safety and Health Act	This product is considered to be hazardous under the OSHA Hazard Communication Standard. It's hazards are: • Phosphoric Acid – CAS #7664-38-2 (Corrosive)
RCRA	This product contains the following chemicals considered to be hazardous waste under RCRA (40 CFR 261). • None
SARA Title III: Section 302 (RQ)	This product contains no chemicals regulated under Section 302 as extremely hazardous substances.
SARA Title III: Section 302 (TPQ)	This product contains chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List): • Phosphoric Acid – CAS #7664-38-2 RQ 5,000 lbs.
SARA Title III: Section 311-312:	This product is considered to be hazardous under the OSHA Hazard Communication Standard and is regulated under Section 311-312 (40 CFR 370). It's hazards are: • Phosphoric Acid – CAS #7664-38-2 (corrosive)
SARA Title III: Section 313:	This product contains the following chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: • Phosphoric Acid – CAS #7664-38-2
TSCA Section 8(b): Inventory: TSCA Significant New Use Rule:	This product does contain chemicals listed on the TSCA inventory or otherwise complies with TSCA pre-manufacture notification requirements. • Phosphoric Acid – CAS #7664-38-2 None of the chemicals in this material have a SNUR under TSCA.

State Regulations

CA Right-to-Know Law: California No Significant Risk Rule:	Phosphoric Acid – CAS #7664-38-2 Aluminum Oxide – CAS # 21654-51-2 None
MA Right-to-Know Law:	Phosphoric Acid – CAS #7664-38-2 Aluminum Oxide – CAS # 21654-51-2
NJ Right-to-Know Law:	Phosphoric Acid – CAS #7664-38-2 Aluminum Oxide – CAS # 21654-51-2
PA Right-to-Know Law:	Phosphoric Acid – CAS #7664-38-2
FL Right-to-Know Law:	Phosphoric Acid – CAS #7664-38-2
MN Right-to-Know Law:	Phosphoric Acid – CAS #7664-38-2 Aluminum Oxide – CAS # 21654-51-2

International Regulations

CDSL: Canadian Inventory (on Canadian Transitional List)	Phosphoric Acid – CAS #7664-38-2 Aluminum Oxide – CAS # 21654-51-2
---	---

Material Safety Data Sheet

FLECK'S CEMENT LIQUID

Page 5 of 5

Labeling according to EC directives – 1272/2008 {CLP} and 1999/45/EC (items in parenthesis relate to 1999/45/EC)

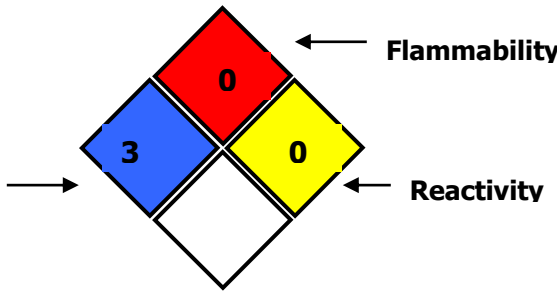
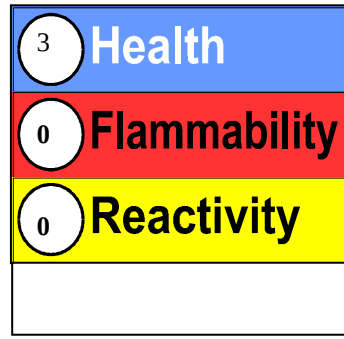
European Community:  	For Fleck's Cement Liquid (finished product): - DANGER SYMBOLS: GHS05 (C) – Corrosive - HAZARD STATEMENT: H314 (R34) - PRECAUTIONARY STATEMENT: P102 (S2), Keep out of reach of children. P261 (S24), Avoid breathing dust/fume/gas mist/vapor sprays. P280 (S36/37/39), Wear protective gloves/clothing/eye protection/face protection. P309+314 (S45), If exposed or you feel unwell, get medical advice/attention.
--	---

Section 16 – Other Information

EU Classes and Risk / Safety Phrases for Referenced Ingredients (See Section 2):

(items in parenthesis relate to 1999/45/EC) Danger Symbols: GHS05 (C) – Corrosive. GHS07 (Xi) – Warning (Irritants) Hazard Statement: H314 (R34), Causes severe skin burns and eye damage. H319 + 315 (R36/38), Irritating to eyes and skin. Precautionary Statement: P102 (S2), Keep out of reach of children. P260 (S23), Do not breathe dust/fume/gas/mist/vapors/spray. P261 (S24), Avoid breathing dust/fume/gas mist/vapor sprays. P280 (S36/37/39), Wear protective gloves/clothing/eye protection/face protection. P309+314 (S45), If exposed or you feel unwell, get medical advice/attention. P305+334 (S26), In case of contact with eyes, rinse immediately with water. P301+315 (S46), If swallowed, get immediate medical advice / attention. P405 (S1), Keep locked up.

Hazard Rating System (Pictograms)

NFPA:  Health → 3 ← Flammability 0 Reactivity 0	HMIS:  3 Health 0 Flammability 0 Reactivity
---	---

MSDS Prepared by:	WME
Revision History:	03/04/2011 Replaces prior MSDS - Completely revised.
	03/26/2014 Reviewed, No Changes

The information presented herein was obtained from sources considered to be reliable. However, this information is provided without any warranty, expressed or implied, regarding its correctness or suitability for consumers intended use and/or application. For this and other reasons, we assume no responsibility and expressly disclaim liability for loss, damage or expense arising out of any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared expressly for this product. Use the materials only as directed. If the product is used as a component of another product, the information contained within the MSDS may not be applicable.

Keystone Industries components are provided on an as is basis without warranties of any kind either expressed or implied. Keystone Industries does not warrant the use or the results of use of the materials sold on an as is basis since they are intended for remanufacturing or repackaging. It is the sole responsibility of the user to examine and determine appropriate application and regulatory requirements associated with said Keystone Industries components.