

MATERIAL SAFETY DATA SHEET

SECTION 1 - SOURCE/IDENTITY/USE INFORMATION

MANUFACTURER	SUPPLIER
GC AMERICA INC.	
3737 West 127th St.	
Alsip, Illinois, 60658	
Telephone: 708-597-0900	
Hours: Mon.- Fri. 8:00 am. - 5:00 pm. C.S.T.	
Transportation Emergency Telephone No. 800-424-9300	

COMMON NAME: FUJI PLUS POWDER
 FUJI PLUS CAPSULE POWDER
 FUJI PLUS EWT

Chemical Name: N.A.

PRODUCT USE: Reinforced glass ionomer cement - Powder component.

The following information is provided with regard to the toxicity and hazards of the pure components present in this portion of the unmixed powder/liquid system.

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 SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT AND C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Alumino-silicate glass (Not listed)	TLV=10mg/m ³ PEL=15mg/m ³ (ACGIH)	N.E.	95-100%

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 SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

BOILING POINT: N.E.	SPECIFIC GRAVITY (H ₂ O = 1): 2.56
VAPOR PRESSURE: N.E.	MELTING POINT: >1,350°C
VAPOR DENSITY: N.E.	EVAPORATION RATE: N.E.
SOLUBILITY IN WATER: Insoluble	ODOR THRESHOLD: N.E.
COEFFICIENT OF OIL/WATER DISTRIBUTION: N.E.	

APPEARANCE AND ODOR: Very fine white powder, odorless

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 SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT: Not flammable FLAMMABLE LIMITS: N.A.

EXTINGUISHING MEDIA: Material is not combustible. Use extinguishing media appropriate to the surrounding area.

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SECTION 4 - FIRE AND EXPLOSION DATA - continued

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus in confined areas or when exposed to combustion products. Use water to cool down fire exposed containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: N.E.

HAZARDOUS COMBUSTION PRODUCTS: N.E.

SECTION 5 - REACTIVITY DATA

STABILITY: STABLE: X UNSTABLE:
POLYMERIZATION: WILL NOT OCCUR: X WILL OCCUR:

CONDITIONS TO AVOID: Heat, sparks, open flames, moisture

INCOMPATIBILITY (MATERIALS TO AVOID): Organic acids, humidity, alcohols and strong bases

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Ferric Chloride - at 200° releases Chlorine gas

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION

	YES	NO	N.E.	N.A.	NTP	IARC	OSHA	OTHER
MUTAGENIC AFFECTS:		X						
TERATOGENIC AFFECTS:		X						
REPRODUCTIVE TOXIN:		X						
CARCINOGENICITY:		X						
SENSITIZER:		X						

ROUTES OF ENTRY: INHALATION X SKIN X INGESTION X

HEALTH HAZARD: (ACUTE AND CHRONIC):

Eye and skin contact will cause irritation. Ingestion will cause adverse health effects. Inhalation will cause irritation of the respiratory tract. Aqueous solutions are highly corrosive to skin and eyes.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: N.E.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.E.

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION - continued

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Remove to fresh air. Assist breathing if necessary.
Consult a physician immediately.

INGESTION: Do not induce vomiting nor give fluids.
Consult a physician immediately.

SKIN: Rinse with flowing water for at least 15 minutes.
Consult a physician immediately.

EYES: Flush immediately with water for 15 minutes.
Consult a physician immediately.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL:

Sweep up and discard. Flush area with water.

WASTE DISPOSAL METHOD:

Dispose of in accordance with applicable federal, state and local regulations.

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS:

Store in cool, dry place. Avoid eye and skin contact.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION:

Approved respirator and nuisance dust mask

VENTILATION: LOCAL EXHAUST: YES

MECHANICAL: N.A.

SPECIAL: N.A.

OTHER: N.A.

PROTECTIVE GLOVES: Rubber or plastic

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N.E.

WORK/HYGIENIC PRACTICE: Observe good hygienic practices.

SECTION 9 - PREPARATION INFORMATION

This data is supplied to comply with OSHA Hazard Communication Standard 2. CFR 1910,1200 and W.H.M.I.S. CPR

PREPARED BY: T. Joritz
Director Regulatory Affairs

Date: 1 November 97

N.A. = NOT APPLICABLE
N.E. = NOT ESTABLISHED

The information herein is given in good faith. No warranty expressed or implied is made.

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FIRE 1 TOXICITY 1 REACTIVITY 1 SPECIAL C

SECTION 4 - FIRE AND EXPLOSION DATA - continued

SPECIAL FIRE FIGHTING PROCEDURES: N.A.

UNUSUAL FIRE AND EXPLOSION HAZARDS: N.E.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide

SECTION 5 - REACTIVITY DATA

STABILITY:	STABLE: X	UNSTABLE:
POLYMERIZATION:	WILL NOT OCCUR: X	WILL OCCUR:

CONDITIONS TO AVOID: Avoid high temperatures and humidity

INCOMPATIBILITY (MATERIALS TO AVOID): Contains silica glass. Avoid contact with hydrofluoric acid. Contact with acids liberates hydrogen fluoride gas which is toxic and corrosive.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: At elevated temperatures various fluoride compounds will be liberated, including toxic hydrogen fluoride and sodium potassium fluoride.

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION

	YES	NO	N.E.	N.A.	NTP	IARC	OSHA	OTHER
MUTAGENIC AFFECTS:		X						
TERATOGENIC AFFECTS:		X						
REPRODUCTIVE TOXIN:		X						
CARCINOGENICITY:	X						X (GROUP 2A)	
SENSITIZER:		X						

ROUTES OF ENTRY: INHALATION X SKIN___INGESTION

HEALTH HAZARD: (ACUTE AND CHRONIC): Contains silica glass, which is considered a hazard by inhalation. IARC has classified it as a probable carcinogenic for humans. Dusts of silica glass is also a known cause of silicosis, a non-cancerous lung disease.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Irritation and soreness in throat and nose.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: May aggravate preexisting upper respiratory and lung disease.

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION - continued

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Remove to fresh air, drink water to clear throat and blow nose to evacuate dust. If irritation persists, seek medical attention.

INGESTION: Ingestion may require medical assistance.

SKIN: Wash with soap and water.

EYES: Flush with large quantities of water. If irritation develops seek medical attention.

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SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL: Avoid generating dust while sweeping. If an excessive amount of dust is generated use a filter equipped vacuum and MSHA/NIOSH approved mask.

WASTE DISPOSAL METHOD: In accordance with local, state and federal regulations.

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store at normal room temperatures and humidity.

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SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: Minimize exposure to dust in accordance with good hygiene practice. If needed, use MSHA-NIOSH approved respirator for dusts, mists and fumes.

VENTILATION: LOCAL EXHAUST: Yes MECHANICAL: Yes
SPECIAL: N.A. OTHER: N.A.

PROTECTIVE GLOVES: Disposable vinyl gloves recommended.

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Eyewash station

WORK/HYGIENIC PRACTICE: Follow safe hygiene practices.

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SECTION 9- PREPARATION INFORMATION:

This data is supplied to comply with OSHA Hazard Communication Standard 29 CFR 1910,1200 and W.H.M.I.S. CPR

PREPARED BY: T. Joritz

Date: 03 January 2000

Director Regulatory Affairs

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c			NFPA	
FIRE	0	TOXICITY	1	REACTIVITY 0
				SPECIAL -

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COMMON NAME: FUJI PLUS LIQUID
 FUJI PLUS CAPSULE LIQUID
 FUJI PLUS EWT

Chemical Name: N.A.

PRODUCT USE: Reinforced glass ionomer cement - Liquid component

The following information is provided with regard to the toxicity and hazards of the pure components present in this portion of the unmixed powder/liquid system.

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 SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT AND C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Polyacrylic acid (not listed)	TWA=10ppm (ACGIH)	LD50 = 2500mg/kg (oral rat) LC50 = N.E.	22-24%
2-Hydroxyethyl methacrylate 868-77-9	N.E.	LD50=5888mg/Kg (oral rat) LC50=N.E.	35-40%
Di-2-Methacryloxyethyl- 2,2,4, Trimethyl hexamethylene dicarbamate (not listed)	N.E.	N.E.	5-7%
Tartaric Acid 87-69-4	N.E.	N.E.	5-7%

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SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

BOILING POINT: N.E. SPECIFIC GRAVITY (H₂O = 1): 1.18
 VAPOR PRESSURE: N.E. MELTING POINT: N.E.
 VAPOR DENSITY: N.E. EVAPORATION RATE: N.E.
 SOLUBILITY IN WATER: N.E. ODOR THRESHOLD: N.E.
 COEFFICIENT OF OIL/WATER DISTRIBUTION: N.E.

APPEARANCE AND ODOR: Colorless, slightly viscous and odorless liquid

SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT: N.E. FLAMMABLE LIMITS: N.A.

EXTINGUISHING MEDIA: Alcohol foam, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES: Full protective clothing and self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: N.E.

HAZARDOUS COMBUSTION PRODUCTS: N.E.

SECTION 5 - REACTIVITY DATA

STABILITY: STABLE: X UNSTABLE:
 POLYMERIZATION: WILL NOT OCCUR: X WILL OCCUR:

CONDITIONS TO AVOID: High heat

INCOMPATIBILITY (MATERIALS TO AVOID): None known

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None known

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION

	YES	NO	N.E.	N.A.	NTP	IARC	OSHA	OTHER
MUTAGENIC AFFECTS:		X						
TERATOGENIC AFFECTS:		X						
REPRODUCTIVE TOXIN:		X						
CARCINOGENICITY:		X						
SENSITIZER:		X						

ROUTES OF ENTRY: INHALATION X SKIN X INGESTION_X

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION - continued

HEALTH HAZARD: (ACUTE AND CHRONIC): Mildly toxic by all routes. Acidic solution, care should be taken to avoid contact with skin or eyes.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: N.E.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.E.

EMERGENCY FIRST AID PROCEDURES:

INGESTION: Do not induce vomiting - give large volumes of water. Seek medical attention.

SKIN: Wash with soap and water. If irritation persists seek medical attention.

EYES: Flush with water for 15 minutes. If irritation develops seek medical attention.

INHALATION: Remove to fresh air. If irritation persists seek medical attention.

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SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL: Cover with absorbent material. Collect spilled material. Clean up residue.

WASTE DISPOSAL METHOD: Dilute with water and flush into drain with large volumes of water.

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store in a cool dry place in tightly closed container. Store away from heat.

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SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: None required

VENTILATION: None required LOCAL EXHAUST: N.A. MECHANICAL: N.A. SPECIAL: N.E. OTHER: N.A.

PROTECTIVE GLOVES: Latex gloves are recommended

EYE PROTECTION: Goggles

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Transportation Emergency Telephone No. 800-424-9300

COMMON NAME: FUJI PLUS CONDITIONER

Chemical Name: N.A.

PRODUCT USE: To be used to clean and prepare the tooth surface prior to using Fuji Plus Powder/Liquid.

The following information is provided with regard to the toxicity and hazards of the pure components present in this product.

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT AND C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Citric Acid 77-92-9	N.E.	LD50=11,700 mg/Kg oral rat LC50=N.E.	5-10%
Ferric Chloride 7705-08-0	1 mg/m3 as Fe	LD50=C.900 mg/Kg oral rat LC50=N.E.	1-3%

SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

BOILING POINT: N.E.	SPECIFIC GRAVITY (H ₂ O = 1): N.E.
VAPOR PRESSURE: N.E.	MELTING POINT: N.E.
VAPOR DENSITY: N.E.	EVAPORATION RATE: N.E.
SOLUBILITY IN WATER: N.E.	ODOR THRESHOLD: N.E.
COEFFICIENT OF OIL/WATER DISTRIBUTION: N.E.	

APPEARANCE AND ODOR: Yellow, no odor

SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT: N.E. FLAMMABLE LIMITS: N.E.

EXTINGUISHING MEDIA: Water, CO₂, foam, dry chemical