

**SECTION 1 - SOURCE/IDENTITY/USE INFORMATION**

**MANUFACTURER**

GC AMERICA INC.  
 3737 West 127th St.  
 Alsip, Illinois, 60803  
 Telephone: 708-597-0900  
 Hours Mon.-Fri: 8:00 a.m.-5:00 p.m. C.S.T.  
 Transportation Emergency No. 800-424-9300

**COMMON NAME:** COE FLEX (Lead Free) CATALYST**CHEMICAL NAME:** N. A.**PRODUCT USE:** Dental Impression Material

*The following information is provided with regard to the toxicity and hazards of the pure components present in this portion of the unmixed two-paste system.*

**SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

COMPONENT	C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Cupric Hydroxide	20427-59-2	TWA=1mg/m <sup>3</sup> (as dust) (ACGIH)	LD50>1g/kg LC50>2mg/L	10-30
Titanium Dioxide	13463-67-7	TWA=10mg/m <sup>3</sup> (ACGIH)	N.E.	10-35
Silicon Dioxide	112926-00-8	TWA=10mg/m <sup>3</sup> (ACGIH)	N.E.	1-5
Chlorinated Fatty Acid Ester	68440-29-9	N.E.	N.E.	30-50

**SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES**

<b>BOILING POINT:</b> N.E.	<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b> 1.8
<b>VAPOR PRESSURE:</b> N.E.	<b>MELTING POINT:</b> N.E.
<b>VAPOR DENSITY:</b> N.E.	<b>EVAPORATION RATE:</b> N.E.
<b>SOLUBILITY IN WATER:</b> N.E.	<b>ODOR THRESHOLD:</b> N.E.
<b>COEFFICIENT OF OIL/WATER DISTRIBUTION:</b> N.E.	<b>APPEARANCE AND ODOR:</b> Light blue paste

**SECTION 4 - FIRE AND EXPLOSION DATA**

**FLASH POINT:** Non flammable                      **FLAMMABLE LIMITS:** N.A.  
**EXTINGUISHING MEDIA:** For surrounding fire use dry chemical, foam, carbon dioxide  
**SPECIAL FIRE FIGHTING PROCEDURES:** As appropriate for surrounding fire.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** N.E.  
**HAZARDOUS COMBUSTION PRODUCTS:** Hydrogen chloride gas, carbon dioxide

**SECTION 5 - REACTIVITY DATA**

**STABILITY:**                      Stable                       Unstable   
**POLYMERIZATION:**           Will Not Occur                       Will Occur

**CONDITIONS TO AVOID:** High heat**INCOMPATIBILITY (Materials to Avoid):** Strong oxidizing and reducing agents**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Hydrogen chloride, oxides of carbon

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

	YES	NO	NE	NA	NTP	IARC	OSHA	OTHER
MUTAGENIC AFFECTS		X						
TERATOGENIC AFFECTS		X						
REPRODUCTIVE TOXIN		X						
CARCINOGENICITY		X						
SENSITIZER		X						

ROUTES OF ENTRY: Inhalation  Skin  Ingestion

HEALTH HAZARD (Acute and Chronic): Cupric Hydroxide may be corrosive to eye

SIGNS AND SYMPTOMS OF OVEREXPOSURE: N.A.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.A.

**EMERGENCY FIRST AID PROCEDURES:**

**INGESTION:** Induce vomiting, seek medical attention.

**SKIN:** Wash with soap and water.

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

**SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE**

IN CASE OF RELEASE OR SPILL: Scrape up and discard.

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

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store in a cool, dry place

**SECTION 8 - CONTROL MEASURES**

RESPIRATORY PROTECTION: Reduce exposure in accordance with good hygiene practice. If exposure limits are exceeded, use MSHA-NIOSH approved respirators for dusts, mists, fumes.

VENTILATION: Local Exhaust: N.A. Mechanical: N.A.

Special: N.A. Other: N.A.

PROTECTIVE GLOVES: Disposable vinyl gloves recommended.

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N.A.

WORK/HYGIENIC PRACTICE: N.A.

**SECTION 9- PREPARATION INFORMATION**

This data is supplied to comply with OSHA Hazard Communication Standard 29 CFR1910,1200 and W.H.M.I.S. CPR

PREPARED BY: T. Joritz  
Director Regulatory Affairs

Date: 03 August 2004

N.A. = NOT APPLICABLE

N.E. = NOT ESTABLISHED

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

FIRE 1

TOXICITY 1

NFPA  
REACTIVITY 1

SPECIAL COR/OXY

# COE FLEX (LEAD FREE) - BASE

## MATERIAL SAFETY DATA SHEET

### SECTION 1 - SOURCE/IDENTITY/USE INFORMATION

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 Transportation Emergency Telephone No. 800-424-9300

**COMMON NAME:** COE FLEX (Lead Free) BASE, REGULAR, INJECTION AND HEAVY TYPE**CHEMICAL NAME:** N.A.**PRODUCT USE:** Dental Impression Material

*The following information is provided with regard to the toxicity and hazards of the pure components present in this portion of the unmixed two-paste system.*

### SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Silicon Dioxide	112926-00-8	TWA=10mg/m <sup>3</sup> (respirable) (ACGIH)	N.E.	1-5
Titanium Dioxide	13463-67-7	TWA=10mg/m <sup>3</sup> (respirable) (ACGIH)	N.E.	10-25

### SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

<b>BOILING POINT:</b> N.E.	<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b> 1.3 – 1.6
<b>VAPOR PRESSURE:</b> N.E.	<b>MELTING POINT:</b> 102°C
<b>VAPOR DENSITY:</b> N.E.	<b>EVAPORATION RATE:</b> N.E.
<b>SOLUBILITY IN WATER:</b> N.E.	<b>ODOR THRESHOLD:</b>
<b>COEFFICIENT OF OIL/WATER DISTRIBUTION:</b>	<b>APPEARANCE AND ODOR:</b> White paste with a sulfurous odor

### SECTION 4 - FIRE AND EXPLOSION DATA

**FLASH POINT:** N.A. **FLAMMABLE LIMITS:** N.A.  
**EXTINGUISHING MEDIA:** For surrounding fires, dry chemical, carbon dioxide  
**SPECIAL FIRE FIGHTING PROCEDURES:** N.A.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** N.E.  
**HAZARDOUS COMBUSTION PRODUCTS:** If heated to high temperatures or on open flame this product may emit formaldehyde, other aldehydes, oxides of sulfur, carbon dioxide, carbon monoxide, hydrogen sulfide, low molecular weight, hydrocarbons.

### SECTION 5 - REACTIVITY DATA

**STABILITY:** Stable  Unstable   
**POLYMERIZATION:** Will Not Occur  Will Occur

**CONDITIONS TO AVOID:** High heat**INCOMPATIBILITY (Materials to Avoid):** Oxidizing agents, strong acids**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** N.E.

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

	YES	NO	NE	NA	NTP	IARC	OSHA	OTHER
MUTAGENIC AFFECTS		X						
TERATOGENIC AFFECTS		X						
REPRODUCTIVE TOXIN		X						
CARCINOGENICITY		X						
SENSITIZER		X						

ROUTES OF ENTRY: Inhalation  Skin  Ingestion

HEALTH HAZARD (Acute And Chronic): Skin irritation can occur following prolonged or repeated contact.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: N.E.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.E.

**EMERGENCY FIRST AID PROCEDURES:**

**INHALATION:** N.A.

**INGESTION:** Induce vomiting. Call a poison control center, emergency room. Seek medical attention.

**SKIN:** Wash with soap and water.

**EYES:** Thoroughly flush with water.

**SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE**

IN CASE OF RELEASE OR SPILL: Scrape up and discard.

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

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store in a cool and dry place

**SECTION 8 - CONTROL MEASURES**

RESPIRATORY PROTECTION: Reduce exposure in accordance with good hygiene practice. If exposure limits are exceeded, use MSHA-NIOSH approved respirators for dusts, mists, fumes.

VENTILATION: Local Exhaust: N.E. Mechanical: N.E. Special: N.E. Other: N.E.

PROTECTIVE GLOVES: Disposable vinyl gloves are recommended.

EYE PROTECTION: N.A.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N.A.

WORK/HYGIENIC PRACTICE: Avoid contact with clothing, may stain.

**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 August 2004  
Director Regulatory Affairs

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FIRE - 1

TOXICITY - 1

NFPA  
REACTIVITY - 1

SPECIAL -

MS329916

COE ADHESIVE

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## MATERIAL SAFETY DATA SHEET

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GC AMERICA INC.

3737 West 127th St.

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Transportation Emergency Telephone No. 800-424-9300

COMMON NAME: COE ADHESIVE

CHEMICAL NAME: N.A.

PRODUCT USE: Tray Adhesive for Polysulfide impression material.

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

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT AND C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Acetone 67-64-1	TWA=750ppm (ACGIH) STEL=100ppm (ACGIH)	LD50=9.75g/kg (oral rat) LC50=64000ppm/4hr (mouse)	40-50
Toluene 108-88-3	TWA=100ppm STEL=150ppm (OSHA)	LD50=2.5g/kg (oral rat) LC50=8000ppm/4h (mouse)	10-20
Methyl Ethyl Ketone 78-93-3	TWA=200ppm (ACGIH) STEL=300ppm (ACGIH)	LD50=7ml/kg (oral rat) LC50=13600ppm/2hr (mouse)	10-20
Acrylonitrile Butadiene Polymer 900-318-3	N.E.	N.E.	10-20
Phenol-Formaldehyde polymer 9003-35-4	N.E.	N.E.	1-10

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SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION - continued

COMPONENT AND C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Glycerol Esters of Rosin Acids 8050-31-5	N.E.	N.E.	1-10
Salicylic Acid 69-72-7	PEL=15mg/m <sup>3</sup> (OSHA) TWA=15mg/m <sup>3</sup> (OSHA) 5mg/m <sup>3</sup> (respirable)	LD50=891mg/Kg LC50=N.E.	1-10
Zinc oxide 1314-13-2	TWA=10mg/m <sup>3</sup>	LD50=7.9g/Kg (oral rat)	1-10

(ACGIH) (as dust) LC50=N.E.  
 TWA=5mg/m<sup>3</sup>  
 (ACGIH) (as fume)  
 STEL=10mg/m<sup>3</sup>  
 (ACGIH) (as fume)

Alkylated Diphenylamines N.E. N.E. <1  
 37338-62-8

SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

BOILING POINT: 56°C SPECIFIC GRAVITY (H2O=1): 0.88  
 VAPOR PRESSURE: 180 MELTING POINT: N.E.  
 VAPOR DENSITY: 2.0 EVAPORATION RATE: (Butyl Acetate=1.0): 1.9  
 SOLUBILITY IN WATER: Slight ODOR THRESHOLD: 200ppm as acetone  
 COEFFICIENT OF OIL/WATER DISTRIBUTION: N.E.  
 APPEARANCE AND COLOR: Brown liquid - Strong Ketone odor.

SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT: 17.8°C FLAMMABLE LIMITS: LEL=1.27 UEL=12.8  
 EXTINGUISHING MEDIA: Carbon dioxide, alcohol foam, dry chemical.  
 SPECIAL FIRE FIGHTING PROCEDURES: Use self contained breathing apparatus.  
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely flammable. If overheated, closed containers adjacent to fire could explode due to internal pressure buildup. Toluene vapors are heavier than air and may flash back.  
 HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition may produce formaldehyde and Nitrogen decomposition products including the possibility of HCN.

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SECTION 5 - REACTIVITY DATA

STABILITY: STABLE: X UNSTABLE: \_\_\_\_\_  
 POLYMERIZATION: WILL NOT OCCUR: X WILL OCCUR: \_\_\_\_\_  
 CONDITIONS TO AVOID: High heat.  
 INCOMPATIBILITY (MATERIALS TO AVOID): N.E.  
 HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None known.

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION

	<u>YES</u>	<u>NO</u>	<u>NE</u>	<u>NA</u>	<u>NTP</u>	<u>IARC</u>	<u>OSHA</u>	<u>OTHER</u>
MUTAGENIC AFFECTS:	<u>X</u>					<u>X</u>		
TERATOGENIC AFFECTS:		<u>X</u>						
REPRODUCTIVE TOXIN:	<u>X</u>					<u>X</u>		
CARCINOGENICITY:		<u>X</u>					X	Calif. Prop. 65
SENSITIZER:		<u>X</u>						
ROUTES OF ENTRY:			<u>X</u>		<u>X</u>			INGESTION <u>X</u>

HEALTH HAZARD: (ACUTE AND CHRONIC): Contact with liquid or overexposure to vapors is irritating to the eyes. Prolonged or repeated skin contact will defat the skin and cause irritation and possible dermatitis. Vapor inhalation may cause respiratory irritation and temporary nervous system impairment (light headedness).

Ingestion may cause digestive system irritation and nervous system impairment. Mutation references cited, animal reproductive effects cited.

CALIFORNIA PROP 65 WARNING: This product contains toluene, a chemical known to the State of California to cause birth defects or other reproductive harm.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Redness, smarting, tearing and swelling of the eyes. Skin may dry and crack. Symptoms of over inhalation include dizziness, headache, nausea and fatigue. Repeated or extreme overexposure to vapors may cause heart, liver, kidney, blood and nervous system damage. Ingestion may cause vomiting and diarrhea. Solvent aspiration into the lung due to vomiting may cause lung damage, which can be harmful or fatal.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Exposure to Acetone may enhance the liver toxicity of chlorinated solvents.

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COE ADHESIVE

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

EMERGENCY FIRST AID PROCEDURES:

INGESTION: Do not induce vomiting. Immediately call a physician or poison control center.

INHALATION: For over inhalation, move to fresh air. If breathing is difficult, seek medical attention.

SKIN: Wash skin with soap and water. If irritation develops, seek medical attention.

EYES: Flush eyes with water for 10 minutes. Seek medical attention.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL: Extinguish all ignition sources. Ventilate the area. Contain the spill. Cover with absorbent materials as needed. Collect the spill using non-sparking tools. Place in a U.S. Department of Transportation approved metal container and seal.

WASTE DISPOSAL METHOD: Incinerate absorbed and bulk product after mixing with flammable material in a licensed hazardous waste facility. Disposal should be in accordance with applicable regulations: US Hazardous Waste No D001 (ignitable).

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store in a cool place, away from heat source and direct sunlight.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: Reduce exposure in accordance with safe hygiene practice. If exposure limits are exceeded, use an MSHA-NIOSH approved respirator for organic vapors.

VENTILATION:	LOCAL EXHAUST: As needed	MECHANICAL: N.A.
	SPECIAL: N.A.	OTHER: N.A.

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COE ADHESIVE

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SECTION 8 - CONTROL MEASURES - continued

PROTECTIVE GLOVES: Use disposable gloves.

EYE PROTECTION: Face shield or goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Maintain eye wash station.

WORK/HYGIENIC PRACTICE: Follow safe hygiene practices. Avoid contact with clothing. May stain. Follow recommended procedures to avoid overexposure.

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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  
Director, Regulatory Affairs

Date: 03 January 2000

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				<u>NFPA</u>			
FIRE	4	TOXICITY	2	REACTIVITY	1	SPECIAL	-

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