



# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/24/2015

Version CA-EN-Rev 1

Reviewed on 04/24/2015

## 1 Identification

- **Product identifier**

- **Trade name:** COE ADHESIVE

- **Relevant identified uses of the substance or mixture and uses advised against**

Dental material

The product is intended for professional use.

To avoid risks for humans and environment obtain instructions.

- **Application of the substance / the mixture** Auxiliary for manufacture of dental prothesis

- **Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

GC America Inc.

3737 W. 127th Street

Alsip, IL 60803

USA

sds@gcamerica.com

- **Information department:** Regulatory Affairs

- **Emergency telephone number:**

During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900

Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

## 2 Hazard(s) identification

- **Classification of the substance or mixture**

Flam. Liq. 2      H225 Highly flammable liquid and vapor.

Eye Dam. 1      H318 Causes serious eye damage.

Acute Tox. 4      H332 Harmful if inhaled.

Skin Irrit. 2      H315 Causes skin irritation.

STOT SE 3      H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Harmful

Harmful by inhalation.

Irritant

Irritating to skin. Risk of serious damage to eyes.

Highly flammable

Highly flammable.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Vapours may cause drowsiness and dizziness.

- **Information concerning particular hazards for human and environment:** Has a narcotizing effect.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Additional information:**

The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of

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reduced risk(s) through proper usage and handling.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Code letter and hazard designation of product:**



Harmful  
Highly flammable

- **Hazard-determining components of labeling:**

toluene

- **Risk phrases:**

Highly flammable.

Harmful by inhalation.

Irritating to skin.

Risk of serious damage to eyes.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Vapours may cause drowsiness and dizziness

- **Safety phrases:**

Keep container in a well-ventilated place.

Keep away from heat.

Keep away from sources of ignition - No smoking.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection.

Avoid release to the environment. Refer to special instructions/Safety data sheets

- **Hazard description:**

- **WHMIS-symbols:**

B2 - Flammable liquid

D2B - Toxic material causing other toxic effects



- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 3

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

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· **vPvB:** Not applicable.

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### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

|           |                |        |
|-----------|----------------|--------|
| 67-64-1   | acetone        | 30-60% |
| 78-93-3   | butanone       | 10-30% |
| 108-88-3  | toluene        | 10-30% |
| 69-72-7   | salicylic acid | 1-5%   |
| 1314-13-2 | zinc oxide     | ≤ 1%   |

- **Additional information:**

If a substance is marked with \*\*, then substance is a trade secret. This is allowed under OSHA's Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
If symptoms persist consult doctor.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.  
Do not use mouth to mouth or mouth to nose resuscitation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
Seek medical treatment.
- **After eye contact:**  
Protect unharmed eye.  
Rinse opened eye for several minutes under running water.  
If symptoms persist consult doctor.  
Call a doctor immediately.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

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### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**  
Mouth respiratory protective device.  
Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Remove persons from danger area.  
Keep away from ignition sources  
Avoid contact with the eyes and skin.  
Wear protective clothing.
- **Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Do not allow to penetrate the ground/soil.
- **Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Absorb liquid components with liquid-binding material.  
Dispose of the collected material according to regulations.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Observe instructions for use.  
Ensure good ventilation/exhaustion at the workplace.  
Do not inhale dust / smoke / mist.  
Prevent formation of aerosols.  
Avoid contact with the eyes and skin.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Do not spray on a naked flame or any incandescent material.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.

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- Store only in unopened original receptacles.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
  - Observe instructions for use / storage.
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.
  - Protect from heat and direct sunlight.
  - Store in a cool place.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

### · Components with limit values that require monitoring at the workplace:

#### 67-64-1 acetone

|    |   |
|----|---|
| EL | Short-term value: 500 ppm<br>Long-term value: 250 ppm |
| EV | Short-term value: 750 ppm<br>Long-term value: 500 ppm |

#### 78-93-3 butanone

|    |   |
|----|---|
| EL | Short-term value: 100 ppm<br>Long-term value: 50 ppm  |
| EV | Short-term value: 885 mg/m <sup>3</sup> , 300 ppm<br>Long-term value: 590 mg/m <sup>3</sup> , 200 ppm |

#### 108-88-3 toluene

|    |                              |
|----|------------------------------|
| EL | Long-term value: 20 ppm<br>R |
| EV | Long-term value: 20 ppm      |

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - The usual precautionary measures for handling chemicals should be followed.
  - Avoid contact with the eyes and skin.
  - Wash hands before breaks and at the end of work.
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:** Protective gloves
- **Material of gloves**
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection: Safety glasses

### 9 Physical and chemical properties

#### · Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

|                   |                 |
|-------------------|-----------------|
| · Form:           | Liquid          |
| · Color:          | Brown           |
| · Odor:           | Like ketone     |
| · Odor threshold: | Not determined. |

|             |                 |
|-------------|-----------------|
| · pH-value: | Not determined. |
|-------------|-----------------|

##### · Change in condition

|                                |               |
|--------------------------------|---------------|
| · Melting point/Melting range: | Undetermined. |
| · Boiling point/Boiling range: | 56 °C         |

|                |        |
|----------------|--------|
| · Flash point: | -20 °C |
|----------------|--------|

|                                  |                 |
|----------------------------------|-----------------|
| · Flammability (solid, gaseous): | Not applicable. |
|----------------------------------|-----------------|

|                         |               |
|-------------------------|---------------|
| · Ignition temperature: | Undetermined. |
|-------------------------|---------------|

|                              |                 |
|------------------------------|-----------------|
| · Decomposition temperature: | Not determined. |
|------------------------------|-----------------|

|                  |                              |
|------------------|------------------------------|
| · Auto igniting: | Product is not selfigniting. |
|------------------|------------------------------|

|                        |  |
|------------------------|--|
| · Danger of explosion: | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
|------------------------|--|

##### · Explosion limits:

|          |            |
|----------|------------|
| · Lower: | 1.8 Vol %  |
| · Upper: | 13.0 Vol % |

|                   |                 |
|-------------------|-----------------|
| · Vapor pressure: | Not determined. |
|-------------------|-----------------|

|                     |                        |
|---------------------|------------------------|
| · Density at 20 °C: | 0.88 g/cm <sup>3</sup> |
| · Relative density  | Not determined.        |
| · Vapour density    | Not determined.        |
| · Evaporation rate  | Not determined.        |

##### · Solubility in / Miscibility with

|          |            |
|----------|------------|
| · Water: | Insoluble. |
|----------|------------|

|  |                 |
|--|-----------------|
| · Partition coefficient (n-octanol/water): | Not determined. |
|--|-----------------|

##### · Viscosity:

|              |                 |
|--------------|-----------------|
| · Dynamic:   | Not determined. |
| · Kinematic: | Not determined. |

##### · Solvent content:

|                     |        |
|---------------------|--------|
| · Organic solvents: | 71.0 % |
|---------------------|--------|

|                   |        |
|-------------------|--------|
| · Solids content: | 26.0 % |
|-------------------|--------|

|                     |  |
|---------------------|--|
| · Other information | No further relevant information available. |
|---------------------|--|

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### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable at ambient temperature.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

1314-13-2 zinc oxide

Oral LD50 7900 mg/kg (rat (f+m))

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive  
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

toluene

3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Carcinogenic categories' legend:**

IARC Group 1: The agent is carcinogenic to humans.

IARC Group 2A: The agent is probably carcinogenic to humans.

IARC Group 2B: The agent is possibly carcinogenic to humans.

IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.

IARC Group 4: The agent is probably not carcinogenic to humans.

NTP K: Known to be human carcinogen.

NTP R: Reasonably anticipated to be human carcinogen.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxic effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:** Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |   |                     |
|---|---------------------|
| · <b>UN-Number</b>  |                     |
| · <b>DOT, TDG, IMDG, IATA</b>   | UN1294              |
| · <b>UN proper shipping name</b>  |                     |
| · <b>DOT</b>  | Toluene             |
| · <b>TDG</b>  | 1294 Toluene        |
| · <b>IMDG, IATA</b>   | TOLUENE             |
| · <b>Transport hazard class(es)</b>   |                     |
| · <b>DOT</b>  |                     |
|  |                     |
| · <b>Class</b>  | 3 Flammable liquids |
| · <b>Label</b>  | 3                   |
| · <b>TDG, IMDG, IATA</b>  |                     |
|  |                     |
| · <b>Class</b>  | 3 Flammable liquids |
| · <b>Label</b>  | 3                   |

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|  |   |
|--|---|
| · <b>Packing group</b><br>· <b>DOT, TDG, IMDG, IATA</b>                          | II  |
| · <b>Environmental hazards:</b><br>· <b>Marine pollutant:</b>                    | No  |
| · <b>Special precautions for user</b><br>· <b>EMS Number:</b>                    | Warning: Flammable liquids<br>F-E,S-D   |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.   |
| · <b>Transport/Additional information:</b>                                       |   |
| · <b>TDG</b>   |   |
| · <b>Excepted quantities (EQ)</b>  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml       |
| · <b>IMDG</b>  |   |
| · <b>Limited quantities (LQ)</b><br>· <b>Excepted quantities (EQ)</b>            | 1L<br>Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · <b>UN "Model Regulation":</b>  | UN1294, Toluene, 3, II  |

### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act)

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

butanone

toluene

zinc oxide

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

|            |          |
|------------|----------|
| acetone    | I        |
| butanone   | I        |
| toluene    | II       |
| zinc oxide | D, I, II |

· **TLV (Threshold Limit Value established by ACGIH)**

|         |    |
|---------|----|
| acetone | A4 |
| toluene | A4 |

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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

acetone

butanone

acrylonitrile-butadiene polymer

resin acids and rosin acids, esters with glycerol

phenolic resin

salicylic acid

zinc oxide

· **Canadian Ingredient Disclosure list (limit 0.1%)**

salicylic acid

· **Canadian Ingredient Disclosure list (limit 1%)**

acetone

butanone

zinc oxide

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Harmful  
Highly flammable

· **Hazard-determining components of labeling:**

toluene

· **Risk phrases:**

Highly flammable.

Harmful by inhalation.

Irritating to skin.

Risk of serious damage to eyes.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Vapours may cause drowsiness and dizziness

· **Safety phrases:**

Keep container in a well-ventilated place.

Keep away from heat.

Keep away from sources of ignition - No smoking.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection.

Avoid release to the environment. Refer to special instructions/Safety data sheets

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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### 16 Other information

- **Department issuing SDS:** Regulatory Affairs
- **Contact:**  
Regulatory Affairs  
Telephone No. +1 (708) 597-0900  
sds@gcamerica.com
- **Date of preparation / last revision** 04/24/2015 / -
- **Abbreviations and acronyms:**  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
HCS: Hazard Communication Standard (USA)  
MSDS: Material Safety Data Sheet  
SDS: Safety Data Sheet  
ECHA: European Chemicals Agency  
OSHA: Occupational Safety and Health Administration (USA)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids, Hazard Category 2  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3
- **Sources**
  - Manufacturers' MSDSs/SDSs
  - OSHA (<https://www.osha.gov/dts/chemicalsampling/toc/chmcas.html>)
  - TOXNET (<http://toxnet.nlm.nih.gov/>)
  - ECHA (<http://echa.europa.eu/>)
  - EnviChem ([www.echemportal.org](http://www.echemportal.org))
- **Notes:**  
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