Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

1 Identification

· **Product identifier**

· **Trade name:** GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

· **Application of the substance / the mixture** Dental filling material

· **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 identification

· **Classification of the substance or mixture**

Skin Corrosion - Category 1A	H314	Causes severe skin burns and eye damage.
Serious Eye Damage - Category 1	H318	Causes serious eye damage.
Skin Sensitizer - Category 1	H317	May cause an allergic skin reaction.

· **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 reduced risk(s) through proper usage and handling.

· **Label elements**
· **GHS label elements**
Exempt from requirements - product regulated as a medical device or an in vitro diagnostic medical device.
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**
2-hydroxyethyl methacrylate (HEMA)
polybasic carboxylic acid**
urethane dimethacrylate (UDMA)
· **Hazard statements**
Causes severe skin burns and eye damage.

(Contd. on page 2)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 1)

May cause an allergic skin reaction.

· **Precautionary statements**
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**
5 % of the mixture consists of an ingredient or ingredients of unknown acute toxicity.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 1

3 Composition/Information on ingredients

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

· **Dangerous components:**		
CAS: 868-77-9	2-hydroxyethyl methacrylate (HEMA)	15 - 40% w/w
	polybasic carboxylic acid**	3 - 7% w/w
	dimethacrylate**	1 - 5% w/w
CAS: 72869-86-4	urethane dimethacrylate (UDMA)	1 - 5% w/w

· **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.
If symptoms persist consult doctor.

(Contd. on page 3)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 2)

· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
· **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.
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** Allergic reactions
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **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:** 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.
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:**
Use neutralizing agent.
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.

(Contd. on page 4)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 3)

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.
Prevent formation of aerosols.
Avoid contact with the eyes and skin.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
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.
· **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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **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

(Contd. on page 5)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 4)

· **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.
· **Eye protection:** Safety glasses

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Light yellow
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C:**	1.9
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	Undetermined.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not determined.
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Insoluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.

(Contd. on page 6)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 5)

Kinematic:	Not determined.
· **Solvent content:**	
Water:	24.9 %
· **Other information**	No further relevant information available.

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:** No further relevant information available.
· **Primary irritant effect:**
· **on the skin:** Strong caustic effect on skin and mucous membranes.
· **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
· **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**	
poly(acrylic acid)	3
butylated hydroxytoluene (BHT)	3

· **NTP (National Toxicology Program)**
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.
· **Repeated dose toxicity.** No further relevant information available.

(Contd. on page 7)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 6)

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
No further relevant information available.
No further relevant information available.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **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.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
· **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:**
Dispose of contents / container in accordance with local / regional / national / international regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, TDG, ADN, IMDG, IATA**	Void
· **UN proper shipping name**	
· **DOT, TDG, ADN, IMDG, IATA**	Void
· **Transport hazard class(es)**	
· **DOT, TDG, ADN, IMDG, IATA**	
· **Class**	Void

(Contd. on page 8)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 7)

· **Packing group** · **DOT, TDG, IMDG, IATA**	Void
· **Environmental hazards:** · **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

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 ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**
2-hydroxyethyl methacrylate (HEMA)
poly(acrylic acid)
polybasic carboxylic acid**
photoinitiator**
butylated hydroxytoluene (BHT)
water, distilled

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**
2-hydroxyethyl methacrylate (HEMA)

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05 GHS07

· **Signal word** Danger

(Contd. on page 9)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 8)

· **Hazard-determining components of labeling:**
2-hydroxyethyl methacrylate (HEMA)
polybasic carboxylic acid**
urethane dimethacrylate (UDMA)
· **Hazard statements**
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
· **Precautionary statements**
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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** 03/13/2018 / -
· **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
ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)
ECHA: European Chemicals Agency
OSHA: Occupational Safety and Health Administration (USA)
LEL: Lower Explosive Limit
UEL: Upper Explosive Limit
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
· **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)

(Contd. on page 10)

Safety Data Sheet
according to HPR, Schedule 1

Printing date 03/13/2018 Version CA-EN-Rev 1 Reviewed on 01/09/2018

Trade name: GC Fuji II LC (Improved, Liquid)
GC Fuji II LC CAPSULE (Improved, Liquid)

(Contd. of page 9)

· **Notes:**
CAS Registry Number is a Registered Trademark of the American Chemical Society.
CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.

· *** Data compared to the previous version altered.** This version replaces all previous versions.

· **Disclaimer:**
The information contained herein is believed to be true and accurate. However, all statements, recommendations or suggestions are made without any guarantee, representation or warranty, express or implied, on our part. Therefore, no warranty is made or to be implied that the information set out in this document is accurate or complete, and we accordingly exclude all liability in connection with the use of this information or the products referred to herein. All such risks are assumed by the purchaser/user. The information contained herein is also subject to change without notice. For the avoidance of doubt, however, nothing in this document excludes or limits our liability for death or personal injury caused by our negligence or for fraudulent misrepresentation.