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Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

- · Product identifier
- · Trade name: GC RELINE II Primer for Resin
- · Application of the substance / the mixture Auxiliary for dental technology
- · 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

Flammable Liquids - Category 2

Eye Irritation - Category 2A

H225 Highly flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H319 Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure -Category 3

· 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

The product is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms



· Signal word Danger

- Hazard-determining components of labeling: methyl acetate ethyl acetate
- Hazard statements Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.

(Contd. on page 2)

Page 1/10

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

Precautionary statements

(Contd. of page 1)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 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.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)

Health = 2 Fire = 3 Reactivity = 0

· HMIS-ratings (scale 0 - 4)

| HEALTH 2 | Health = 2 |
|--------------|----------------|
| | Fire = 3 |
| REACTIVITY 0 | Reactivity = 0 |

3 Composition/Information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

| - | • | |
|---------------|--|----------------|
| CAS: 79-20-9 | methyl acetate | 45 - 70% w/w * |
| CAS: 141-78-6 | ethyl acetate | 10 - 30% w/w * |
| * ^ -+ | tuetien verene every stillerele een tuete een ut | |

* Actual concentration ranges are withheld as a trade secret.

• 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.

- 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: Rinse with warm water. If symptoms persist consult doctor.
- After eye contact:
 Protect unharmed eye.
 Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

(Contd. of page 2)

Safety Data Sheet according to HPR, Schedule 1

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

· 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.

5 Firefighting 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: 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.
 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.

(Contd. on page 4)

CA

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

(Contd. of page 3)

Protect against electrostatic charges.
Do not spray on a naked flame or any incandescent material.
Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.
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:

CAS: 79-20-9 methyl acetate

EL Short-term value: 250 ppm Long-term value: 200 ppm

EV Short-term value: 755 mg/m³, 250 ppm Long-term value: 605 mg/m³, 200 ppm

CAS: 141-78-6 ethyl acetate

- EL Long-term value: 150 ppm
- EV Long-term value: 1,440 mg/m³, 400 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

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

Material of gloves

(Contd. of page 4)

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:

Manufacturing sites:

Wear safety glasses with side shields (or goggles). Distribution, Workplace, and Household Settings: No special protective equipment required

9 Physical and chemical properties

| Information on basic physical and | chemical properties |
|--------------------------------------|--|
| · General Information | |
| · Appearance: | |
| Form: | Liquid |
| Color: · Odor: | Clear Fruit-like |
| · Odor threshold: | Not determined. |
| | |
| · pH-value: | Not determined. |
| Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 77 ℃ |
| · Flash point: | -4 °C |
| · Flammability (solid, gaseous): | Not applicable. |
| · Ignition temperature: | Undetermined. |
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not self-igniting. |
| · Danger of explosion: | Product is not explosive. However, formation of explosive air/ vapor mixtures are possible. |
| · Explosion limits: | |
| Lower: | 2.1 Vol % |
| Upper: | 16 Vol % |
| · Vapor pressure: | Not determined. |
| · Density at 20 °C: | 0.9 g/cm ³ |
| · Relative density | Not determined. |
| Vapor density | Not determined. |
| Evaporation rate | Not determined. |
| · Solubility in / Miscibility with | |
| Water: | Fully miscible. |
| | (Contd. on page 6 |
| | |

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

| | (| Contd. of page & |
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| · Partition coefficient (n-octane | ol/water): Not determined. | |
| · Viscosity: | | |
| Dynamic: | Not determined. | |
| Kinematic: | Not determined. | |
| · Solvent content: | | |
| Organic solvents: | 91.0 % | |
| Solids content: | 5.0 % | |
| 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: No irritant effect.
- on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information: The product shows the following dangers according to interior

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

- Irritant
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· 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.

(Contd. on page 7)

(Contd. of page 6)

Safety Data Sheet according to HPR, Schedule 1

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

- · Repeated dose toxicity. No further relevant information available.
- 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.

- · 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.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

| · UN-Number | | |
|---------------------------|--------------|--|
| · DOT, TDG, IMDG, IATA | UN1090 | |
| · UN proper shipping name | | |
| DOT | Acetone | |
| · TDG | 1090 Acetone | |
| · IMDG, IATA | ACETONE | |

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

| | (Contd. of page |
|--|---|
| · Transport hazard class(es) | |
| ·DOT | |
| | |
| | |
| 3 | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| TDG (Transport dangerous goods): | |
| | |
| | |
| 3 | |
| | 0 (Ed) Elemente la linuida |
| · Class · Label | 3 (F1) Flammable liquids 3 |
| | |
| IMDG, IATA | |
| | |
| | |
| 3 | |
| Class | 3 Flammable liquids |
| Label | 3 |
| · Packing group | |
| DOT, TDG, IMDG, IATA | II |
| Environmental hazards: | Not applicable. |
| Special precautions for user | Warning: Flammable liquids |
| Danger code (Kemler): | 33 |
| EMS Number: | F-E,S-D |
| Stowage Category | E |
| Transport in bulk according to Annex I | |
| MARPOL73/78 and the IBC Code | Not applicable. |
| Transport/Additional information: | |
| TDG | |
| Excepted quantities (EQ) | Code: E2 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |
| IMDG | |
| Limited quantities (LQ) | 1L |
| Excepted quantities (EQ) | Code: E2 Maximum pet quantity per inner packaging: 30 ml |
| | Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| | |
| UN "Model Regulation": | UN 1090 ACETONE, 3, II |

(Contd. on page 9)

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

(Contd. of page 8)

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):
- methyl acetate
- ethyl acetate

· Canadian substance listings:

- · Canadian Domestic Substances List (DSL)
- methyl acetate
- ethyl acetate
- · Canadian Ingredient Disclosure list (limit 0.1%)
- None of the ingredients is listed.
- Canadian Ingredient Disclosure list (limit 1%)
- methyl acetate
- ethyl acetate
- · GHS label elements
- The product is classified and labeled according to the Globally Harmonized System (GHS). · Hazard pictograms



· Signal word Danger

- · Hazard-determining components of labeling: methyl acetate ethyl acetate
- · Hazard statements
- Highly flammable liquid and vapour. Causes serious eye irritation.
- May cause drowsiness or dizziness.
- Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 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.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 10)

Printing date 05/16/2018

Version CA-EN-Rev 1

Reviewed on 05/16/2018

Trade name: GC RELINE II Primer for Resin

(Contd. of page 9) • 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 05/16/2018 / - |
| · 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 |
| 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) |
| · Notes: |
| CAS Registry Number is a Registered Trademark of the American Chemical Society. |
| cho hogisti y humber is a hogistered trademark of the American Oremean Oberly. |

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

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