

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

1 Identification

- **Product identifier**

- **Trade name:** G-COAT PLUS

- **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** Dental sealing 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(s) identification

- **Classification of the substance or mixture**

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

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **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**



GHS02 GHS07

- **Signal word** Danger

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

methyl methacrylate (MMA)

synergist**

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 1)

phosphoric acid ester monomer**

- **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Wear protective gloves / eye protection / face protection.

Contaminated work clothing must not be allowed out of the workplace.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

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

- **Additional information:**

33.9 % of the mixture consists of component(s) of unknown toxicity.

- **Classification system:**

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



Health = 1

Fire = 3

Reactivity = 0

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



Health = *1

Fire = 3

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

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

- **Dangerous components:**

80-62-6	methyl methacrylate (MMA)	25-50%
	photoinitiator**	1-5%
	phosphoric acid ester monomer**	1-5%

- **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.

(Contd. on page 3)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 2)

- 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:**
Immediately wash with water and soap and rinse thoroughly.
Seek medical treatment.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
If symptoms persist consult doctor.
- **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 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**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Carbon dioxide
- **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.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to penetrate the ground/soil.
In case of seepage into the ground inform responsible authorities.
- **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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 3)

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.
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.
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:**

80-62-6 methyl methacrylate (MMA)

PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Long-term value: 410 mg/m ³ , 100 ppm
TLV	Short-term value: 410 mg/m ³ , 100 ppm Long-term value: 205 mg/m ³ , 50 ppm (SEN) NIC-DSEN

- **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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 4)

- **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.
- **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: | Ester-like |
| Odor threshold: | Not determined. |

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

· Change in condition

- | | |
|------------------------------|-----------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 100 °C (212 °F) |

- | | |
|--------------|---------------|
| Flash point: | 10 °C (50 °F) |
|--------------|---------------|

- | | |
|--------------------------------|-----------------|
| 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: | 2.1 Vol % |
| Upper: | 12.5 Vol % |

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

- | | |
|---------------------------|--------------------------------------|
| Density at 20 °C (68 °F): | 1.1 g/cm ³ (9.18 lbs/gal) |
|---------------------------|--------------------------------------|

- | | |
|------------------|-----------------|
| Relative density | Not determined. |
|------------------|-----------------|

- | | |
|----------------|-----------------|
| Vapour density | Not determined. |
|----------------|-----------------|

- | | |
|------------------|-----------------|
| Evaporation rate | Not determined. |
|------------------|-----------------|

· Solubility in / Miscibility with

- | | |
|--------|-----------------|
| Water: | Fully miscible. |
|--------|-----------------|

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

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 5)

· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	20.0 %
· 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**
Reacts with reducing agents.
Reacts with alkali (lyes).
Reacts with acids.
Reacts with oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Reacts with alkali (lyes).
- **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:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Carcinogenic categories**

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

methyl methacrylate (MMA)	3
silicon dioxide	3
butylated hydroxytoluene (BHT)	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 6)

- **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.

- **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 3 (Self-assessment): extremely hazardous for water

- Do not allow product to reach ground water, water course or sewage system, even in small quantities.

- Danger to drinking water if even extremely small quantities leak into the ground.

- **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.

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

14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1247

- **UN proper shipping name**

- **DOT**

- **ADR**

- **IMDG, IATA**

Methyl methacrylate monomer, stabilized solution

1247 Methyl methacrylate monomer, stabilized solution

METHYL METHACRYLATE MONOMER, STABILIZED solution

(Contd. on page 8)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 7)

- **Transport hazard class(es)**

- **DOT**



- **Class** 3 Flammable liquids
- **Label** 3

- **ADR**



- **Class** 3 (F1) Flammable liquids
- **Label** 3

- **IMDG, IATA**



- **Class** 3 Flammable liquids
- **Label** 3

- **Packing group**

- **DOT, ADR, IMDG, IATA** II

- **Environmental hazards:**

- **Marine pollutant:** No

- **Special precautions for user**

Warning: Flammable liquids

- **Danger code (Kemler):**

339

- **EMS Number:**

F-E,S-D

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

- **Transport/Additional information:**

- **ADR**

- **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 net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 8)

UN "Model Regulation":	UN1247, Methyl methacrylate monomer, stabilized solution, 3, II
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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):
--

methyl methacrylate (MMA)

TSCA (Toxic Substances Control Act):

methyl methacrylate (MMA)

silicon dioxide

photoinitiator**

synergist**

silane**

- Carcinogenic categories

EPA (Environmental Protection Agency)
--

methyl methacrylate (MMA)

E, NL

TLV (Threshold Limit Value established by ACGIH)

methyl methacrylate (MMA)

A4

butylated hydroxytoluene (BHT)

A4

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

None of the ingredients is listed.

- GHS label elements

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

- Hazard pictograms



GHS02 GHS07

- Signal word Danger

- Hazard-determining components of labeling:

methyl methacrylate (MMA)

synergist**

phosphoric acid ester monomer**

- Hazard statements

Highly flammable liquid and vapor.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 9)

- **Precautionary statements**

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 - Wear protective gloves / eye protection / face protection.
 - Contaminated work clothing must not be allowed out of the workplace.
 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - 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** 04/20/2015 / -

- **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)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
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)
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
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, 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)

- **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:**

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(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS 29 CFR 1910.1200

Printing date 04/20/2015

Version US-EN-Rev 1

Reviewed on 04/17/2015

Trade name: G-COAT PLUS

(Contd. of page 10)

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