

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/28/2012

Version 3

Reviewed on 06/28/2012

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** GC Unifast III Liquid
- **Application of the substance / the preparation** Auxiliary for dental technology
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
GC EUROPE N.V.
Interleuvenlaan 33
B-3001 Leuven
Tel. +32/(0)16/74.10.00
Fax +32/(0)16/40.26.84
- **Information department:** Regulatory affairs

2 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 80-62-6 EINECS: 201-297-1	Methyl methacrylate	92.0%
CAS: 99-97-8 EINECS: 202-805-4	N,N-dimethyl-p-toluidine	4.0%
CAS: 97-90-5 EINECS: 202-617-2	Ethyleneglycol dimethacrylate	2.0%
CAS: 3290-92-4 EINECS: 221-950-4	Trimethylolpropane trimethacrylate	1.8%

- **Additional information:**
This MSDS is valid from lotnumber 0906231.
For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Harmful

Harmful by inhalation, in contact with skin and if swallowed.



Irritant

Irritating to respiratory system and skin. May cause sensitization by skin contact.



Highly flammable

Highly flammable.

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Danger of cumulative effects.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

· **Classification system:**

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

· **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 labelling:**

Methyl methacrylate

Ethyleneglycol dimethacrylate

N,N-dimethyl-p-toluidine

· **Risk phrases:**

Highly flammable.

Harmful by inhalation, in contact with skin and if swallowed.

Danger of cumulative effects.

Irritating to respiratory system and skin.

May cause sensitization by skin contact.

· **Safety phrases:**

Keep container in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray.

Take precautionary measures against static discharges.

Wear suitable protective clothing and gloves.

This material and its container must be disposed of as hazardous waste.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

4 First aid measures

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.

5 Firefighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:**
Water
Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Prevent seepage into sewage system, workpits and cellars.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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· **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.

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

80-62-6 Methyl methacrylate

PEL ()	410 mg/m ³ , 100 ppm
REL ()	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

99-97-8 N,N-dimethyl-p-toluidine

WEEL ()	0.5 ppm
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3290-92-4 Trimethylolpropane trimethacrylate

WEEL ()	1 mg/m ³ Skin
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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **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:



Tightly sealed goggles

9 Physical and chemical properties

· General Information	
· Appearance:	
Form:	Fluid
Color:	According to product specification
· Odor: Characteristic	
· Odour threshold: Not determined.	
· pH-value: Not determined.	
· Change in condition	
Melting point/Melting range:	> 1350°C
Boiling point/Boiling range:	101°C (214 °F)
· Flash point: 10°C (50 °F)	
· Flammability (solid, gaseous): Not applicable.	
· Ignition temperature: 430°C (806 °F)	
· Decomposition temperature: Not determined.	
· Auto igniting: Product is not selfigniting.	
· Danger of explosion: Product does not present an explosion hazard.	
· Explosion limits:	
Lower:	2.1 Vol %
Upper:	12.5 Vol %
· Vapor pressure at 20°C (68 °F): 47 hPa (35 mm Hg)	
· Density: Not determined.	
· Relative density Not determined.	
· Vapour density Not determined.	
· Evaporation rate Not determined.	
· Solubility in / Miscibility with	
Water:	Soluble.
· Segregation coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
· Solids content: 7.0 %	

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· **Other information** *No further relevant information available.*

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:** *No dangerous decomposition products known.*

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *Irritant to skin and mucous membranes.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

12 Ecological information

- **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.*
- **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.

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

- **UN-Number**
- **DOT, ADR, IMDG, IATA** *UN1228*

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<ul style="list-style-type: none"> · <i>UN proper shipping name</i> · <i>DOT, IMDG, IATA</i> 	<p>MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine)</p>
<ul style="list-style-type: none"> · <i>ADR</i> 	<p>1228 MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine)</p>

· *Transport hazard class(es)*· *DOT, IMDG, IATA*

<ul style="list-style-type: none"> · <i>Class</i> · <i>Label</i> 	<p>3 Flammable liquids. 3+6.1</p>
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· *ADR*

<ul style="list-style-type: none"> · <i>Class</i> · <i>Label</i> 	<p>3 (FT1) Flammable liquids 3+6.1</p>
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· *Packing group*· *DOT, ADR, IMDG, IATA* II· *Environmental hazards:*· *Marine pollutant:* No· *Special precautions for user* Warning: Flammable liquids· *Danger code (Kemler):* 336· *EMS Number:* F-E,S-D

<ul style="list-style-type: none"> · <i>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</i> 	<p>Not applicable.</p>
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15 Regulatory information

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

None of the ingredient is listed.

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

80-62-6 Methyl methacrylate

· *TSCA (Toxic Substances Control Act):*

All ingredients are listed.

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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenity categories**

· **EPA (Environmental Protection Agency)**

80-62-6	Methyl methacrylate	NL
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· **IARC (International Agency for Research on Cancer)**

80-62-6	Methyl methacrylate	3
128-37-0	Dibutylated hydroxytoluene	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

80-62-6	Methyl methacrylate	A4
128-37-0	Dibutylated hydroxytoluene	A4

· **MAK (German Maximum Workplace Concentration)**

128-37-0	Dibutylated hydroxytoluene	4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **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 labelling:**

Methyl methacrylate
Ethyleneglycol dimethacrylate
N,N-dimethyl-p-toluidine

· **Risk phrases:**

Highly flammable.
Harmful by inhalation, in contact with skin and if swallowed.
Danger of cumulative effects.
Irritating to respiratory system and skin.
May cause sensitization by skin contact.

· **Safety phrases:**

Keep container in a well-ventilated place.

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Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray.

Take precautionary measures against static discharges.

Wear suitable protective clothing and gloves.

This material and its container must be disposed of as hazardous waste.

16 Other information

- **Department issuing MSDS:** Regulatory affairs
- **Contact:** regulatory@gceurope.com
- *** Data compared to the previous version altered.**

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