

Printing date 21.06.2023 Version number 4 (replaces version 3) Revision: 21.06.2023

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

- · 1.1 Product identifier
- · Trade name: UNIFAST Trad Liquid
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- · Application of the substance / the mixture Auxiliary for dental technology
- · 1.3 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

Tel. +32/(0)16/74.10.00 Fax +32/(0)16/40.26.84 msds@gc.dental

- · Information department: Regulatory affairs
- · 1.4 Emergency telephone number: International: +01-813-248-0585 (ChemTel Inc.)

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

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

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.

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

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labeled according to the CLP regulation.

· Exemptions

The product, regulated as an invasive medical device by the Regulation (EC) 2017/745, is exempted from labelling requirements for substances and mixtures (according to the provision of the Art 1.5).

· Hazard pictograms





GHS02

- · Signal word Danger
- · Hazard-determining components of labeling:

Methyl methacrylate

2-(2H-benzotriazol-2-yl)-p-cresol

Ethyleneglycol dimethacrylate

· Hazard statements

H225 Highly flammable liquid and vapour.

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H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/

shower.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable. · **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Chemical characterization: Mixtures
- · Description:

Only substances required to be mentioned according to Annex II of regulation 1907/2006 are listed. Information on the other substances that may be present can be obtained upon request.

· Dangerous	s components:	
80-62-6	Methyl methacrylate	90-<100%
	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	
99-97-8	N,N-dimethyl-p-toluidine	1-<2.5%
	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT RE 2, H373; Aquatic Chronic 3, H412	
2440-22-4	2-(2H-benzotriazol-2-yl)-p-cresol	1-<2.5%
	Acute Tox. 3, H331; Aquatic Chronic 1, H410; Skin Sens. 1, H317	
97-90-5	Ethyleneglycol dimethacrylate	0.2-<0.5%
	Skin Sens. 1, H317; STOT SE 3, H335 Specific concentration limit: STOT SE 3; H335: $C \ge 10 \%$	
123-31-9	hydroquinone	≥0.025-<0.1%
	Muta. 2, H341; Carc. 2, H351; Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=10); Acute Tox. 4, H302; Skin Sens. 1, H317	
· Additional	information: For the wording of the listed hazard phrases refer to section 16.	

SECTION 4: First aid measures

- · 4.1 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.

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· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Do not use mouth to mouth or mouth to nose resuscitation.

Take affected persons into fresh air and keep quiet.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment.

If skin irritation continues, consult a doctor.

· 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.

- · 4.2 Most important symptoms and effects, both acute and delayed Allergic reactions
- · 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- · For safety reasons unsuitable extinguishing agents: Water
- 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

No further relevant information available.

- 5.3 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.

SECTION 6: Accidental release measures

· 6.1 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.

· 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

· 6.3 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.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

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.

- · 7.2 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:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Store in a cool place.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- · Components with limit values that require monitoring at the workplace:

80-62-6 Methyl methacrylate

IOELV Short-term value: 100 ppm Long-term value: 50 ppm

· DNELs

80-62-6 Methyl methacrylate

Dermal DNEL dermal 13.67 mg/kg bw/day (man) (worker, l. te., syst.)

Inhalative DNEL inhalation 208 mg/m3 (air) (worker, l. te., syst.)

· PNECs

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

PNEC Aqua | 152.59 µg/L (freshwater)

- · Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Additional information about design of technical systems: No further data; see section 7.
- · 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.

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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.

· Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state Fluid · Color: Yellow · Odor: Characteristic · Odor threshold: Not determined.

-48 °C · Melting point/Melting range: 100 °C · Boiling point/Boiling range:

· Flammability (solid, gaseous): Highly flammable.

· Explosion limits:

Not determined. · Lower: Not determined. · Upper:

10 °C · Flash point:

· Auto igniting: Undetermined. · Decomposition temperature: Not determined. Not determined. · pH-value:

· Viscosity:

· Kinematic: Not determined. · Dynamic at 20 °C: 0.6 mPas

· Solubility in / Miscibility with $0.15 \, g/l$ · Water at 20 °C:

Insoluble. · Partition coefficient (n-octanol/water): Not determined. · Vapor pressure: Not determined.

· Density and/or relative density

 $0.9 \, \text{g/cm}^3$ · Density at 20 °C: Not determined. · Relative density

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Vapor density	Not determined.
9.2 Other information	
Appearance:	
Form:	Liquid
Important information on protection of head environment, and on safety.	alth and
Ignition temperature:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Solvent content:	1 1
VOC (EC)	0.0~g/l
Change in condition	ŭ
Evaporation rate	Not determined.
Information with regard to physical hazard cla	usses
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Highly flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammab	ble gases
in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity: Based on available data, the classification criteria are not met.

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· LD/LC50	values that	t are relevant for classification:
80-62-6 M	ethyl meth	acrylate
Oral	LD50	6,000 mg/kg (rabbit)
Dermal	LD50	>5,000 mg/kg (rab)
Inhalative	LC50/4 h	29.8 mg/l (rat (f+m))
99-97-8 N,	N-dimethy	yl-p-toluidine
Oral	LD50	1,650 mg/kg (rat (f+m))
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	1.4 mg/l (rat (f+m))
2440-22-4	2-(2H-ben	izotriazol-2-yl)-p-cresol
Oral	LD50	10,000 mg/kg (rat (f+m))
Inhalative	LC50/4 h	0.59 mg/l (rat (f+m))
97-90-5 Et	thyleneglyo	col dimethacrylate
Oral	LD50	8,700 mg/kg (rat (f+m))
Dermal	LD50	>2,000 mg/kg (rat (f+m))
on the skir	· Causas s	kin irritation

- · on the skin: Causes skin irritation.
- · on the eye: Based on available data, the classification criteria are not met.
- · Sensitization: May cause an allergic skin reaction.
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · Specific target organ toxicity single exposure May cause respiratory irritation.
- · Specific target organ toxicity repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · Additional toxicological information:
- · OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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

No further relevant information available.

· 11.2 Information on other hazards

Endocrine disrupting properties

128-37-0 Butylated hydroxytoluene

List II

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

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

LC50/96h 46 mg/L (fish)

- · 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.

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- · vPvB: Not applicable.
- 12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects
- · 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.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue		
	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCEPT KITCHEN AND RESTAURANT WASTES NOT ARISING FROM IMMEDIATE HEALTH CARE)	
	KITCHEN AND RESTAURANT WASTES NOT ARISING FROM IMMEDIATE HEALTH CARE)	
18 01 00	wastes from natal care, diagnosis, treatment or prevention of disease in humans	
18 01 06*	chemicals consisting of or containing hazardous substances	

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

SECTION 14: Transport information

- · 14.1 UN-Number
- · ADR, IMDG, IATA UN1247
- · 14.2 UN proper shipping name
- **DOT** Methyl methacrylate monomer, stabilized
- · ADR 1247 METHYL METHACRYLATE MONOMER, STABILIZED
- · IMDG, IATA METHYL METHACRYLATE MONOMER, STABILIZED
- · 14.3 Transport hazard class(es)
- $\cdot ADR$



- · Class 3 (F1) Flammable liquids
- · Label
- · IMDG, IATA



- · Class 3 Flammable liquids
- · Label

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14.4 Packing group ADR, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II o MARPOL73/78 and the IBC Code	f Not applicable.
Transport/Additional information:	Temperature control is not required, in regards to Speci Provision 386. Product uses chemical stabilization.
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1247 METHYL METHACRYLATE MONOME. STABILIZED, 3, II

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

80-62-6 Methyl methacrylate

- · Proposition 65
- · Chemicals known to cause cancer:

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

· 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.

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Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
Carcinogenic categories	
EPA (Environmental Protection Agency)	
80-62-6 Methyl methacrylate	E, I
TLV (Threshold Limit Value)	
80-62-6 Methyl methacrylate	
123-31-9 hydroquinone	
128-37-0 Butylated hydroxytoluene	
MAK (German Maximum Workplace Concentration)	
123-31-9 hydroquinone	
128-37-0 Butylated hydroxytoluene	
NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3	
DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substance electronic equipment – Annex II	es in electrical
None of the ingredients is listed.	
REGULATION (EU) 2019/1148	
Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpos Article 5(3))	e of licensing un
None of the ingredients is listed.	
Annex II - REPORTABLE EXPLOSIVES PRECURSORS	
None of the ingredients is listed.	
Regulation (EC) No 273/2004 on drug precursors	
Regulation (EC) No 273/2004 on drug precursors None of the ingredients is listed.	

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

SECTION 16: Other information

· Relevant phrases

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

None of the ingredients is listed.

H315 Causes skin irritation.

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H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

- · Classification according to Regulation (EC) No 1272/2008 Calculation method
- · Department issuing SDS: Regulatory affairs
- · Contact: msds@gc.dental
- Date of previous version 27.04.2023
- · Version number of previous version: 3
- · Abbreviations and acronyms:

ADR: Accord relatif au transport international 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

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

Flam. Liq. 2: Flammable liquids - Category 2

Acute Tox. 3: Acute toxicity - Category 3

Acute Tox. 4: Acute toxicity - Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3

· Sources

- ECHA (http://echa.europa.eu/)
- EnviChem (www.echemportal.org)
- * Data compared to the previous version altered.

This version replaces all previous versions.

Disclaimer:

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limits our liability for death or personal injury caused by our negligence or for fraudulent misrepresentation.

EU