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Safety data sheet according to Regulation (EC) No 1907/2006, Article 31 Revision: 18.07.2024 Printing date 18.07.2024 Version number 2 (replaces version 1) SECTION 1: Identification of the substance/mixture and of the company/undertaking · 1.1 Product identifier · Trade name: G-CEM ONE Paste B Nanoform 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 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 Skin Corr. 1 H314 Causes severe skin burns and eve damage. Eve Dam. 1 H318 Causes serious eye damage. Skin Sens. 1 H317 May cause an allergic skin reaction. Aquatic Chronic 2 H411 Toxic 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



· Signal word Danger

- · Hazard-determining components of labeling:
- Urethane Dimethacrylate (UDMA) · Hazard statements
- H314 Causes severe skin burns and eye damage.

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H317 May cause	an allergic skin reaction.
H411 Toxic to aq	nuatic life with long lasting effects.
· Precautionary st	atements
P260	Do not breathe dusts or mists.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P3.	53 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/
	shower.
P305+P351+P3.	38 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present
	and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P321	Specific treatment (see on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international
	regulations.
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· 2.3 Other hazards

· Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

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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.

72869-86-4	Urethane Dimethacrylate (UDMA)	25-<50%
	Aquatic Chronic 2, H411; Skin Sens. 1B, H317	
1830-78-0	2-Hydroxy-1,3 dimethacryloxypropane	5-<10%
	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
68909-20-6	Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	5-<10%
	STOT RE 2, H373, EUH066	
85590-00-7	methacryloyloxydecyl dihydrogen phosphate	2.5-<5%
	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
80-15-9	α,α -dimethylbenzyl hydroperoxide	0.5-<1%
	Org. Perox. E, H242; Acute Tox. 3, H331; STOT RE 2, H373; Skin Corr. 1B, H314;	
	Aquatic Chronic 2, H411; Acute Tox. 4, H302; Acute Tox. 4, H312	
	Specific concentration limits: Skin Corr. 1B; H314: $C \ge 10 \%$	
	<i>Skin Irrit.</i> 2; <i>H</i> 315: $3\% \le C < 10\%$	
	<i>Eye Dam. 1; H318: C</i> ≥ <i>3 %</i>	
	<i>Eye Irrit. 2; H319: 1 % ≤ C < 3 %</i>	
	STOT SE 3; H335: C < 10 %	
1879-09-0	6-tert-butyl-2,4-xylenol	≥0.2-<0.25%
	Acute Tox. 2, H310; STOT RE 2, H373; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	1
Additional i	<i>nformation:</i> For the wording of the listed hazard phrases refer to section 16.	1

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SECTION 4: First aid measures

• 4.1 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. 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:

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.

• 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, 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
- 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: 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. 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. 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.

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• 6.3 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.

• **6.4 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.

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: No special measures required.

· 7.2 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: Keep receptacle tightly sealed.

· 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:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNELs

1879-09-0 6-tert-butyl-2,4-xylenol

Inhalative DNEL inhalation 0.14 mg/m3 (man)

• 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.

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

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· Material of gloves

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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:



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Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemica	l properties	
General Information		
Physical state	Fluid	
Color:	White	
Odor:	Ester-like	
Odor threshold:	Not determined.	
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
Flammability (solid, gaseous):	Not applicable.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Flash point:	93 °C	
Auto igniting:	Undetermined.	
Decomposition temperature:	Not determined.	
pH-value at 20 °C:	1.5	
Viscosity:		
Kinematic:	Not determined.	
Dynamic:	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/water):	Not determined.	
Vapor pressure:	Not determined.	
Density and/or relative density		
Density at 20 °C:	$1.5 \ g/cm^3$	
Relative density	Not determined.	
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Vapor density	Not determined.
Particle characteristics	SiO2: Diameter particle structure = $2.5 - 50$ nm (TEI
	d50, number-based)
	Diameter agglomerate $= 5 - 50$ mm (laser diffraction d
	module, d50, volume based)
	68909-20-6 Silanamine, 1,1,1-trimethyl-N
	(trimethylsilyl)-, hydrolysis products with silica:
	set including amorphous nanoforms
	surface-treated nanoforms
	Shape: Spheroidal
	Structure: amorphous forms
	Crystallinity: amorphous nanoform
9.2 Other information	
Appearance:	
Form:	Pasty
Important information on protection of hea	ulth and
environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Solvent content:	
VOC (EC)	$0.0 \ g/l$
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard cla	ISSES
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
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	ole 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.
- \cdot 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.

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• 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.

· LD/LC50 values that are relevant for classification:

72869-86-4 Urethane Dimethacrylate (UDMA)

>5,000 mg/kg (rat female) (OECD 401) Oral LD50

80-15-9 a	,α -dimethy	vlbenzyl hydroperoxide
Oral	LD50	382 mg/kg (rat (f+m))
Dermal	LD50	500 mg/kg (rat (f+m))

Inhalative LC50/4 h 220 mg/l (rat (f+m))

1879-09-0 6-tert-butyl-2,4-xylenol

Oral	LD50	910 mg/kg (rat (f+m)) (OECD 401)
Dermal	LD50	<200 mg/kg (rabbit) (OECD 402)

• on the skin: Causes severe skin burns and eye damage.

• on the eye: Causes serious eye damage.

• 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 Based on available data, the classification criteria are not met.

• 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

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

• Aquatic toxicity:

72869-86-4 Urethane Dimethacrylate (UDMA)

EC50/48h (static) >1.2 mg/l (daphnia magna) (OECD 202)

· 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.

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· 12.5	Results of	^c PBT and	l vPvB as	sessment	

- **PBT:** Not applicable.
- vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- · 12.7 Other adverse effects
- Additional ecological information:
- · General notes:

Water hazard class 2 (Self-assessment): hazardous for water

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

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.

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.

- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

not regulated 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANC
not regulated 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCI
3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE
LIQUID, N.O.S. (Urethane Dimethacrylate (UDMA)) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUI N.O.S. (Urethane Dimethacrylate (UDMA), α,α -dimethylbenz
hydroperoxide), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUII
N.O.S. (Urethane Dimethacrylate (UDMA))
9 (M6) Miscellaneous dangerous substances and articles

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Label	9
IMDG, IATA	
Class Label	9 Miscellaneous dangerous substances and articles 9
14.4 Packing group ADR, IMDG, IATA	111
14.5 Environmental hazards:	
Marine pollutant:	No
Special marking (ADR):	Symbol (fish and tree) Symbol (fish and tree)
Special marking (ADK). Special marking (IATA):	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles
Hazard identification number (Kemler code):	90
EMS Number:	F-A,S-F
Stowage Category	A
14.7 Transport in bulk according to Annex II of	
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L C L FL
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per inner packaging: 50 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	(-)
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANC
	LIQUID, N.O.S. (URETHANE DIMETHACRYLATE (UDMA) 9, III

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.

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	ction 313 (Specific toxic chemical listings):
	15-9 α,α -dimethylbenzyl hydroperoxide
	oposition 65
	emicals known to cause cancer:
	ne of the ingredients is listed.
	emicals known to cause reproductive toxicity for females:
No	ne of the ingredients is listed.
	emicals known to cause reproductive toxicity for males:
No	ne of the ingredients is listed.
Ch	emicals known to cause developmental toxicity:
No	ne of the ingredients is listed.
Ca	rcinogenic categories
	A (Environmental Protection Agency)
No	ne of the ingredients is listed.
TL	V (Threshold Limit Value)
No	ne of the ingredients is listed.
M A	AK (German Maximum Workplace Concentration)
No	ne of the ingredients is listed.
NI	OSH-Ca (National Institute for Occupational Safety and Health)
No	ne of the ingredients is listed.
Diı	rective 2012/18/EU
Na	med dangerous substances - ANNEX I None of the ingredients is listed.
	veso category E2 Hazardous to the Aquatic Environment
	alifying quantity (tonnes) for the application of lower-tier requirements 200 t
	alifying quantity (tonnes) for the application of upper-tier requirements 500 t
	GULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
	RECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical ctronic equipment – Annex II
	ne of the ingredients is listed.
	CGULATION (EU) 2019/1148
	nex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing un ticle 5(3))
No	ne of the ingredients is listed.
An	nex II - REPORTABLE EXPLOSIVES PRECURSORS
No	ne of the ingredients is listed.
Reį	gulation (EC) No 273/2004 on drug precursors
No	ne of the ingredients is listed.
	gulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and t untries in drug precursors
No	ne of the ingredients is listed.
15.	2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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SECT	TON 16: Other information	
	nt phrases	
H242	Heating may cause a fire.	
H302	Harmful if swallowed.	
H310	Fatal in contact with skin.	
H312	Harmful in contact with skin.	
H314	Causes severe skin burns and eye damage.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H331	Toxic if inhaled.	
H335	May cause respiratory irritation.	
H373	May cause damage to organs through prolonged or repeated exposure.	
H411	Toxic to aquatic life with long lasting effects.	
	6 Repeated exposure may cause skin dryness or cracking.	
	ication according to Regulation (EC) No 1272/2008 Calculation method	
v		
	ment issuing SDS: Regulatory affairs	
	t: msds@gc.dental	
	f previous version 18.07.2024	
	number of previous version: 1	
	iations and acronyms:	
	cord relatif au transport international des marchandises dangereuses par route (European Agreement Cond	cerning the Internation
	of Dangerous Goods by Road) nternational Maritime Code for Dangerous Goods	
	Department of Transportation	
	ternational Air Transport Association	
	obally Harmonised System of Classification and Labelling of Chemicals	
	European Inventory of Existing Commercial Chemical Substances	
	European List of Notified Chemical Substances emical Abstracts Service (division of the American Chemical Society)	
	latile Organic Compounds (USA, EU)	
	Derived No-Effect Level (REACH)	
LC50: Let	thal concentration, 50 percent	
	ethal dose, 50 percent	
	rsistent, Bioaccumulative and Toxic ry Persistent and very Bioaccumulative	
	National Institute for Occupational Safety	
	Cocupational Safety & Health	
	ox. E: Organic peroxides – Type E/F	
	x. 4: Acute toxicity – Category 4	
	x. 2: Acute toxicity – Category 2 x. 3: Acute toxicity – Category 3	
	r. 1: Skin corrosion/irritation – Category 1	
	r. 1B: Skin corrosion/irritation – Category 1B	
	. 2: Skin corrosion/irritation – Category 2	
	. 1: Serious eye damage/eye irritation – Category 1	
•	2: Serious eye damage/eye irritation – Category 2	
	s. 1: Skin sensitisation – Category 1 s. 1B: Skin sensitisation – Category 1B	
	3: Specific target organ toxicity (single exposure) – Category 3	
	2.2: Specific target organ toxicity (repeated exposure) – Category 2	
Aquatic C	Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2	
Sources	S	
• ECHA	1 (http://echa.europa.eu/)	
• EnviCl	Them (www.echemportal.org)	
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• * Data compared to the previous version altered.

This version replaces all previous versions.

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