

Safety Data Sheet in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

1 Identification of the substance or mixture and of the supplier

- **Other means of identification**
- **Trade name:** Essentia HiFlo
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Auxillary for dental technology
- **Details of the supplier of the safety data sheet**
Henry Schein Dental

243-249 Bush Road, Rosedale
Auckland 0632, NEW ZEALAND

Free Phone: 0800 808 855
- **Further information obtainable from:** Regulatory affairs
- **Emergency telephone number:** 0800 764 766 (National Poisons Centre)

2 Hazards identification

- **Classification of the substance or mixture**
Skin sensitisation Category 1 H317 May cause an allergic skin reaction.
Hazardous to the aquatic environment chronic Category 3H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **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**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
Urethane Dimethacrylate (UDMA)
2,2'-ethylenedioxydiethyl dimethacrylate
- **Hazard statements**
May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapours/spray.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves.

(Contd. on page 2)

Safety Data Sheet in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: Essentia_HiFlo

(Contd. of page 1)

*If skin irritation or rash occurs: Get medical advice/attention.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

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

3 Composition/Information on ingredients

- **Chemical characterisation: 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 components:**

CAS: 41637-38-1	Esterification products of 4,4'-isopropylidenediphenol, ethoxylated and 2-methylprop-2-enoic acid. Hazardous to the aquatic environment chronic Category 4, H413	10-<25%
CAS: 72869-86-4 EINECS: 276-957-5	Urethane Dimethacrylate (UDMA) Hazardous to the aquatic environment chronic Category 2, H411; Skin sensitisation Sub-category 1B, H317	5-<10%
CAS: 109-16-0 EINECS: 203-652-6	2,2'-ethylenedioxydiethyl dimethacrylate Skin sensitisation Sub-category 1B, H317	2.5-<5%
CAS: 1309-37-1 EINECS: 215-168-2	Iron(III)oxide	0.5-<1%
CAS: 9003-08-1	1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde Serious eye damage Category 1, H318; Skin sensitisation Category 1, H317; Specific target organ toxicity - single exposure Category 3, H335	0.5-<1%
CAS: 13463-67-7 EINECS: 236-675-5	titanium dioxide Carcinogenicity – Category 2, H351	0.5-<1%
CAS: 1879-09-0 EINECS: 217-533-1	6-tert-butyl-2,4-xilenol Acute dermal toxicity Category 2, H310; Specific target organ toxicity - repeated exposure Category 2, H373; Acute oral toxicity Category 4, H302; Skin irritation Category 2, H315; Eye irritation Category 2, H319	0.1-<0.2%
CAS: 2440-22-4 EINECS: 219-470-5	2-(2H-benzotriazol-2-yl)-p-cresol Acute inhalation toxicity Category 3, H331; Skin sensitisation Category 1, H317	0.1-<0.2%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 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.

(Contd. on page 3)

Safety Data Sheet in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: Essentia_HiFlo

(Contd. of page 2)

*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 a 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

· 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.**No further relevant information available.***· 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.**Avoid formation of dust.**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.**Do not allow to enter sewers/ surface or ground water.***· Methods and material for containment and cleaning up:***Allow to evaporate.**Pick up mechanically.**Prevent formation of dust.**Dispose of the material collected 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***Ensure good ventilation/exhaustion at the workplace.**Prevent formation of dust.*

(Contd. on page 4)

-NZ-

Safety Data Sheet in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: Essentia_HiFlo

(Contd. of page 3)

*Any unavoidable deposit of dust must be regularly removed.**Avoid contact with the eyes and skin.***· Information about fire - and explosion protection:***Protect against electrostatic charges.**Dust can combine with air to form an explosive mixture.***· 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:** *None.***· Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

· Appropriate engineering controls *No further data; see section 7.***· Ingredients with limit values that require monitoring at the workplace:****1309-37-1 Iron(III)oxide**

WES (New Zealand)	Long-term value: 5 mg/m ³ as Fe, w
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13463-67-7 titanium dioxide

WES (New Zealand)	Long-term value: 10 mg/m ³ interim WES
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· DNELs**13463-67-7 titanium dioxide**

Inhalative	DNEL inhalation	10 mg/m ³ (man)
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1879-09-0 6-tert-butyl-2,4-xyleneol

Inhalative	DNEL inhalation	0.14 mg/m ³ (man)
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· Additional information: *The lists valid during the making were used as basis.***· Personal protective equipment:****· General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.**Do not inhale dust / smoke / mist.**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***· Respiratory protection:***In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.**Suitable respiratory protective device recommended.***· Protection of hands:***Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

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.*

(Contd. on page 5)

Safety Data Sheet in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: *Essentia_HiFlo*

(Contd. of page 4)

· **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

9 Physical and chemical properties

· **General Information**

· **Appearance:**

· **Form:**

Pasty

· **Colour:**

According to product specification

· **Odour:**

Odourless

· **Odour threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

· **Melting point/freezing point:**

Undetermined.

· **Initial boiling point and boiling range:**

180 °C

· **Flash point:**

Not applicable.

· **Flammability**

Not determined.

· **Auto-ignition temperature:**

Undetermined.

· **Decomposition temperature:**

Not determined.

· **Ignition temperature:**

Product is not selfigniting.

· **Explosive properties:**

Product does not present an explosion hazard.

· **Explosion limits:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Vapour pressure:**

Not applicable.

· **Density:**

Not determined.

· **Relative density**

Not determined.

· **Vapour density**

Not applicable.

· **Evaporation rate**

Not applicable.

· **Solubility in / Miscibility with**

· **water:**

Insoluble.

· **Partition coefficient: n-octanol/water:**

Not determined.

· **Viscosity:**

· **Dynamic:**

Not applicable.

· **Kinematic:**

Not applicable.

· **Other information**

· **Particle characteristics**

SiO₂: Diameter particle structure = 2.5 - 50 nm (TEM, d₅₀, number-based)

Diameter agglomerate = 5 - 50 mm (laser diffraction dry module, d₅₀, volume based)

· **Physical state**

Solid

NZ

(Contd. on page 6)

Safety Data Sheet

in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: *Essentia_HiFlo*

(Contd. of page 5)

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **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** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

72869-86-4 Urethane Dimethacrylate (UDMA)

Oral	LD50	>5,000 mg/kg (rat female) (OECD 401)
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1309-37-1 Iron(III)oxide

Oral	LD50	>5,000 mg/kg (rat (f+m))
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13463-67-7 titanium dioxide

Oral	LD50	>5,000 mg/kg (mouse) (OECD 420)
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Inhalative	LC50/4 h	>6.82 mg/l (rat male)
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1879-09-0 6-tert-butyl-2,4-xyleneol

Oral	LD50	910 mg/kg (rat (f+m)) (OECD 401)
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Dermal	LD50	<200 mg/kg (rabbit) (OECD 402)
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2440-22-4 2-(2H-benzotriazol-2-yl)-p-cresol

Oral	LD50	10,000 mg/kg (rat (f+m))
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Inhalative	LC50/4 h	0.59 mg/l (rat (f+m))
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** 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.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Interactive effects**
- **Repeated dose toxicity** No further relevant information available.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
No further relevant information available.

-NZ-

(Contd. on page 7)

Safety Data Sheet in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: *Essentia_HiFlo*

(Contd. of page 6)

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

72869-86-4 Urethane Dimethacrylate (UDMA)

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

- **Persistence and degradability** No further relevant information available.

- **Behaviour in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

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**

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

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**

- **NZS, ADN, IMDG, IATA**

not regulated

- **UN proper shipping name**

- **NZS, ADN, IMDG, IATA**

not regulated

- **Transport hazard class(es)**

- **NZS, ADN, IMDG, IATA**

- **Class**

not regulated

- **Packing group**

- **NZS, IMDG, IATA**

not regulated

- **Environmental hazards:**

- **Marine pollutant:**

No

- **Special precautions for user**

Not applicable.

- **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

(Contd. on page 8)

NZ

Safety Data Sheet

in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: *Essentia_HiFlo*

(Contd. of page 7)

· UN "Model Regulation": *not regulated*

15 Regulatory information

· *Safety, health and environmental regulations/legislation specific for the substance or mixture*· *New Zealand Inventory of Chemicals*

65997-17-3	Glass, oxide, chemicals
41637-38-1	Esterification products of 4,4'-isopropylidenediphenol, ethoxylated and 2-methylprop-2-enoic acid.
2530-85-0	3-trimethoxysilylpropyl methacrylate
72869-86-4	Urethane Dimethacrylate (UDMA)
109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate
68611-44-9	Silane, dichlorodimethyl-, reaction products with silica
1309-37-1	Iron(III)oxide
1309-38-2	Iron (II,III) oxide
7128-64-5	2,5-Thiophendiylbis(5-tert-butyl-1,3-benzoxazol)
9003-08-1	1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde
13463-67-7	titanium dioxide
20344-49-4	Iron hydroxide oxide
10287-53-3	ethyl 4-dimethylaminobenzoate
1879-09-0	6-tert-butyl-2,4-xylenol
2440-22-4	2-(2H-benzotriazol-2-yl)-p-cresol
10373-78-1	Camphorquinone
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

· *HSNO Approval numbers*

1879-09-0	6-tert-butyl-2,4-xylenol	HSR003625
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· *GHS label elements* The product is classified and labelled according to the Globally Harmonised System (GHS).· *Hazard pictograms*

GHS07

· *Signal word* Warning· *Hazard-determining components of labelling:*

Urethane Dimethacrylate (UDMA)

2,2'-ethylenedioxydiethyl dimethacrylate

· *Hazard statements*

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

· *Precautionary statements*

Avoid breathing dust/fume/gas/mist/vapours/spray.

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

Avoid release to the environment.

Wear protective gloves.

(Contd. on page 9)

NZ

Safety Data Sheet in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: Essentia_HiFlo

(Contd. of page 8)

*If skin irritation or rash occurs: Get medical advice/attention.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

- **Relevant phrases**

*H302 Harmful if swallowed.**H310 Fatal in contact with skin.**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.**H351 Suspected of causing cancer.**H373 May cause damage to organs through prolonged or repeated exposure.**H411 Toxic to aquatic life with long lasting effects.**H413 May cause long lasting harmful effects to aquatic life.*

- **Department issuing SDS:** Regulatory affairs

- **Contact:** msds@gc.dental

- **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**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**IATA: International Air Transport Association**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)**DNEL: Derived No-Effect Level (REACH)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute oral toxicity Category 4: Acute toxicity – Category 4**Acute dermal toxicity Category 2: Acute toxicity – Category 2**Acute inhalation toxicity Category 3: Acute toxicity – Category 3**Skin irritation Category 2: Skin corrosion/irritation – Category 2**Serious eye damage Category 1: Serious eye damage/eye irritation – Category 1**Eye irritation Category 2: Serious eye damage/eye irritation – Category 2**Skin sensitisation Category 1: Skin sensitisation – Category 1**Skin sensitisation Sub-category 1B: Skin sensitisation – Category 1B**Carcinogenicity – Category 2: Carcinogenicity – Category 2**Specific target organ toxicity - single exposure Category 3: Specific target organ toxicity (single exposure) – Category 3**Specific target organ toxicity - repeated exposure Category 2: Specific target organ toxicity (repeated exposure) – Category 2**Hazardous to the aquatic environment chronic Category 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2**Hazardous to the aquatic environment chronic Category 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3**Hazardous to the aquatic environment chronic Category 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4*

(Contd. on page 10)

Safety Data Sheet
in accordance with HSNO

Date of issue: 07.07.2025

Version number 6

Revision: 07.07.2025

Trade name: Essentia_HiFlo

(Contd. of page 9)

Sources

- ECHA (<http://echa.europa.eu/>)
- EnviChem (www.echemportal.org)

*** Data compared to the previous version altered.**

This version replaces all previous versions.

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