



MATERIAL SAFETY DATA SHEET








1. Product and Company Information

Common Name	Light Curing Dental Composit Resins
Model Name	HanFil Flow
Classification	class II a
Licence Number	
A Use of Product and Cautions	For Dental Use Only
Company	HANDAE CHEMICAL CO.,LTD
Address	560-24, Songdu-ri, jinchun-gun, jinchun-eup, chungbuk, Korea
TEL	+82-31-704-0694
FAX	+82-31-718-0008
WEB	http://www.handae.co.kr
E-mail	handaechem@hanmail.net
Establish Date & Revision Date	2020. 02. 12 (Rev. 1)

2. Hazards Identification

Classification	Non-irritation, Non-Harmfulness
Division	N/A

Caution Mark List

	See Instruction for Use
	Storage Temperature Limits
	Do Not Use the Exceeded Expiration Date
	Manufacture Date
	LOT Number
	Manufacturer
	EC Representative

3. Composition / Information on Ingredient

	CAS #	%
- Active substance		
Bis-GMA	1565-94-2	10~40
Tri(ethylene glycol) dimethacrylate	109-16-0	10~20
Urethane dimethacrylate	72869-86-4	10~40
- Non Active substance		
- Excipient		
Silicone dioxide	7631-86-9	50~80
Other Ingredients		to 100

4. First Aid Measures

Skin Exposure	In case of contact with skin, wash with much amount of water for at least 10 minutes. Call a physician.
Eye Exposure	In case of contact with eyes, flush with copious amounts of water and physiological saline for at least 10 minutes. Call a physician.
Dentist Cautions	Protective device for the respiratory tract is highly recommended before use it.

5. Fire Fighting Measures

Stability	Stable
Conditions to Avoid	Direct sunlight, Extreme heat
Hazardous Polymerization	Does not happen
Suitable Extinguishing Media	Incombustibility

6. Accidental Release Measures

Information to Protect the Human Body	Disposable gloves
Information to Protect the Environment	Throw it away after use

7. Handling and Storage

Handling	Dental specialists and the training of Clinical Dentistry, was the handle. Keep tightly closed. Store this materials
Storage	in a shady, cool and dry place(2~27 °C / 35~80 °F).

8. Exposure Controls / PPE

Exposure Limits	Avoid long-term exposure to the human body.
Suitable Engineering Controls	N/A
Personal Protective Equipment	Disposable gloves

9. Physical / Chemical Properties

Form	Paste
Shade	A0, A1, A2, OA2, A3, OA3, A3.5, A4, B1, B2, C2, D3, UO, A2 HV, A3 HV, Blue
Volume/Weight	2 g, 3 g
Light sensibility	Suitability
Depth of Cure	4.82 mm
Water sorption	16.42 $\mu\text{g}/\text{mm}^3$
Solubility	0.00 $\mu\text{g}/\text{mm}^3$
Colour stability	Suitability
Flexural strength	139 MPa
Radio-opacity	4.28 mm
Boiling point	N/A
Melting point	N/A
Flash point	N/A
Freezing point	N/A

10. Stability and Reactivity

Stability	Polymerization by Visible Ray
Possibility	Polymerization
Conditions to Avoid	Direct Sunlight, Extreme heat
Materials to Avoid	Water
Disassembling	N/A

11. Toxicological Information

Cytotoxicity	Suitability
Acute Systemic Toxicity	Suitability
Oral Mucosa Irritation	Suitability
Pyrogenicity	Suitability

12. Ecological Information

Ecology Toxicity	N/A
Residual & Resolvability	N/A
Bioconcentration	N/A
Soil Mobility	N/A
The Others	N/A

13. Disposal Considerations

Method of Disposal of substance or Preparation	Throw it away after use
Cautions	Separate from the mixture of materials banned.

14. Transport Information

Regulatory Information	DOT, IMDG, IATA-DGR
UN Number	
Proper Shipping name	N/A
Class	N/A
Packing Group	N/A
Label	N/A

15. Regulatory Information

Medical Devices Law	For dental use only
International Standard	ISO 4049, ISO 7491 ISO 10993
More Standard	EN 980, EN 1041, EN 1641, EN 13485, EN 14971

16. Other Information

Reference	Korea Medical Devices Law, Ordinance, Regulation ISO, MSDS, handae data
Others	N/A : Not Applicable

NOTE : The Information provided in this material safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and is not to be considered a warranty or representation for which Handae chemical. bears legal responsibility. The Information may not be valid in any process, unless specified in the text.