Material Safety Data Sheet (MSDS)
REPLIX UNIVERSAL NANO-HYBRID FLOWABLE RESIN COMPOSITE

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:

Product name : **REPLIX UNIVERSAL NANO-HYBRID FLOWABLE RESIN COMPOSITE**
Synonyms : Replix Light Curing Bulk Fill Flow Nano-Hybrid Composite
Product code : F dan Q1

Recommended Use:

This product will be used as material for dental dental treatment applications.

Manufacturer:

PT HEXA DENTAL INDONESIA
Indonesia Dental Material Manufacture
Jl. Padurenan IV Kav. 120, Gn. Sindur, Bogor, Jawa Barat.
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2. HAZARDS IDENTIFICATION

Classification of the mixture according to GHS 7th Revised Edition & SNI 9030-1:2021

Physical hazards	Not classified	
Health hazards	Serious eye damage	Category 1
	Skin irritation	Category 2
	Skin sensitization	Category 1
	Specific target organ toxicity, single exposure	Category 3
Environmental hazards	Hazardous to the aquatic environment, long-term (chronic) hazard	Category 3

Label Elements

Symbol:

Signal Word: DANGER

Hazard Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

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Precautionary Statements

P233	Keep container tightly closed.
P261	Avoid breathing mist or vapors.
P264	Wash skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local/national/regional/international regulations.

3. INFORMATION AND COMPOSITION INGREDIENT

Chemical Name	Molecular Formula	CAS Number	Concentration
Barium aluminosilicate glass	$BaMgO_6Si_2$	65997-17-3	40-45 %
Bisphenol A glycerolate dimethacrylate	$C_{29}H_{36}O_8$	1565-94-2	20-23 %
Triethylene glycol dimethacrylate	$C_{14}H_{22}O_6$	109-16-0	Proprietary*
Ytterbium fluoride	YbF_3	13760-80-0	Proprietary*

*Designated that a specific chemical identity and/or percentage of composition has been withheld as a trade secret

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AIR MEASURES

After inhalation: Move the person to fresh air. Keep at rest in a comfortable position for breathing.
In case of skin contact: Flush skin with plenty of water for hygiene purposes.
After eye contact: Flush eyes with plenty of water for several minutes for hygiene purposes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.
After swallowing: Rinse mouth with water. Do not induce vomiting. Seek medical attention immediately.

MOST IMPORTANT SYMPTOMS AND EFFECT, BOTH ACCUTE AND DELAYED

Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

OTHER INFORMATION

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIREFIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO_2).

UNSUITABLE EXTINGUISHING MEDIA

Do not use water jet as an extinguisher, as this will spread the fire.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

During fire, gases hazardous to health may be formed.

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ADVICE FOR FIREFIGHTERS

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use standard firefighting procedures and consider the hazards of other involved materials.

OTHER INFORMATION

None combustible liquid.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Use water spray to reduce vapors or divert vapor cloud drift. Prevent product from entering drains.
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.
Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the Safety Data Sheet).

8. PERSONAL PROTECTION AND EXPOSURE CONTROLS

EXPOSURE LIMITS

No specific occupational exposure limits have been established for this material. However, recommended limit of not specified dust are 10 mg/m^3 of total dust or 5 mg/m^3 of respirable dust according to OSHA and NIOSH. Recommended limit of not specified dust are 10 mg/m^3 of total dust or 3 mg/m^3 of respirable dust according to ACGIH.

HYGIENE MEASURE

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

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RESPIRATORY PROTECTION

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable), an approved respirator must be worn, use a NIOSH-approved particulate respirator (e.g., N95, P2, or equivalent).

EYE PROTECTION

Face shield is recommended. Wear safety glasses with side shields (or goggles).

SKIN PROTECTION

Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

ENVIRONMENTAL CONTROLS

The employer should meet the requirements imposed by the environmental protection law.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	: Pasta
Form	: Pasta
Color	: Various white to yellowish
Odor	: Typical odor of ester
Odor threshold	: No information available
Density	: No information available
Specific gravity (25°C)	: No information available
Viscocity	: No information available
Vapor pressure	: No information available
Initial boiling point	: No information available
Melting point	: No information available
Flash point	: No information available
pH	: No information available
Solubility in water	: No information available
Solubility in organic solvent	: No information available
Auto-ignition temperature	: No information available
Softening point	: No information available
Dispersion properties	: No information available
Upper/lower flammability or explosive limits	
Flammability limit-lower (%)	: No information available
Flammability limit-upper (%)	: No information available
Explosive limit-lower (%)	: No information available
Explosive limit-upper (%)	: No information available
Other information	
Explosive properties	: Not explosive
Flammability class	: Not combustible
Oxidizing properties	: Not oxidizing
Percent volatile	: No information available
VOC	: No information available

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10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

The product is chemically stable under normal conditions of handling, storage and use.

REACTIVITY

This material is not reactive under normal conditions of handling, storage and use.

CONDITIONS TO AVOID

Avoid strong heating, open flames, and excessive temperatures that may cause decomposition or ignition. Prevent exposure to direct sunlight for prolonged periods.

INCOMPATIBILITY

Strong oxidizing agents may react with organic materials and should be avoided.

POSSIBILITY OF HAZARDOUS REACTIONS

No hazardous polymerization or other hazardous reactions are expected under normal processing or storage conditions.

HAZARD PRODUCT DECOMPOSITION

Thermal decomposition or incomplete combustion may produce hazardous gases, including carbon monoxide (CO), carbon dioxide (CO_2), amines and peroxide compounds. Combustion may generate dense smoke and irritating fumes.

POLYMERIZATION

Hazardous polymerization will not occur under normal working conditions.

11. TOXICOLOGY INFORMATION

ACUTE TOXICITY

Acute Oral Toxicity Estimate (ATE) calculated: >2000 mg/kg. Acute Dermal Toxicity Estimate (ATE) calculated: >2000 mg/kg. Inhalation Acute Toxicity Estimate (ATE) calculated: >10 mg/l. Based on ATE information, this product is not expected to be classified as an acute toxicity (oral, dermal and/or inhalation).

IRRITANCY

This product is expected to be material cause serious eye damage (category 1) and cause skin irritation (category 2), based on the available data and the known hazards of the components.

SENSITIZATION

This product is expected to be a material that cause skin sensitization (category 1), based on the available data and the known hazards of the components.

CARCINOGENICITY

This product is not regulated as a carcinogen by OSHA, IARC, and not listed as A1 or A2 carcinogens by ACGIH, based on the available data and the known hazards of the components.

SPESIFIC TARGET ORGAN OXICITY

This product is expected to be specific target organ toxicity (respiratory system) through single exposure (category 3), based on the available data and the known hazards of the components.

REPRODUCTIVE TOXICITY

This product is not expected to be a reproductive toxin, based on the available data and the known hazards of the components.

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TETRAGENOCITY

This product is not expected to be a teratogen or an embryo toxin, based on the available data and the known hazards of the components.

MUTAGENICITY

This product is not expected to be a mutagen, based on the available data and the known hazards of the components.

12. ECOLOGYCAL INFORMATION

ECOTOXICITY

Harmful to aquatic life with long lasting effects.

PERSISTENCE AND DEGRADABILITY

No data is available on the degradability of any ingredients in the mixture.

BIOACCUMULATIVE POTENTIAL

No data is available on the bioaccumulative potential of any ingredients in the mixture.

MOBILITY IN SOIL

No information available.

OTHER ADVERSE EFFECTS

The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. DISPOSAL CONSIDERATIONS

DISPOSAL INSTRUCTIONS

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemicals or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

LOCAL DISPOSAL REGULATIONS

Dispose in accordance with all applicable regulations.

HAZARDOUS WASTE CODE

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

WASTE FROM RESIDU/UNUSED PRODUCT

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

CONTAMINATED PACKAGING

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

ADR/RID (LAND TRANSPORT)

Proper shipping name	**DENTAL TREATMENT MATERIAL, NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION**
UN Number	None allocated.
Transport hazard class(es):	

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Class	Not applicable.
Subsidiary risk label(s)	Not applicable.
Packing group	Not applicable.
Environmental hazards	NO

IATA (AIR TRANSPORT)

Proper shipping name	**DENTAL TREATMENT MATERIAL, NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION**
UN Number	None allocated.
Transport hazard class(es):	
Class	Not applicable.
Subsidiary risk label(s)	Not applicable.
Packing group	Not applicable.
Environmental hazards	NO

IMDG (SEA TRANSPORT)

Proper shipping name	**DENTAL TREATMENT MATERIAL, NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION**
UN Number	None allocated.
Transport hazard class(es):	
Class	Not applicable.
Subsidiary risk label(s)	Not applicable.
Packing group	Not applicable.
Environmental hazards	NO

15. REGULATORY INFORMATION

INDONESIAN REGULATION

Indonesian Ministry of Industry Regulation No 23/M-IND/PER/4/2013 regarding classification of hazardous materials.
SNI 9030-1:2021 Sistem harmonisasi global – Bagian 1: Klasifikasi bahaya bahan kimia.
SNI 9030-2:2021 Sistem harmonisasi global – Bagian 2: Lembar data keselamatan dan pelabelan bahan kimia.

JAPAN REGULATION

JIS 7252 (Latest Version JIS7252-2019) regarding Classification of Chemicals Based on GHS - Chemical classification.
Japan Poisonous and Deleterious Substances Control Law (PDSCL): This material is not included as "Poisonous substance" or "Deleterious substance".

US REGULATIONS

Toxic Substances Control Act (TSCA)
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)
Not regulated.
SARA 304 Emergency release notification
Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not regulated.
SARA 311/312 Hazardous chemical Yes

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Classified hazard categories	Serious eye damage or eye irritation Skin corrosion or skin irritation Respiratory or skin sensitization Specific target organ toxicity, single exposure

SARA 313 (TRI reporting)
Not regulated.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Not regulated.

DEA Exempt Chemical Mixtures Code Number
Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not regulated.

EU REGULATIONS

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, as amended).

Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) (OJ L 133, 31.5.2010).

CHINA REGULATIONS

State Council Decree No. 591-2011 "Regulations on safe management of hazardous chemicals".

National Standard GB 30000.2-29-2013 "Safety rules for classification and labelling of chemicals".

National Standard GB/T 17519-2013 "Guidance on the compilation of safety data sheet for chemical products".

INTERNATIONAL INVENTORIES

Country(s) or region	Inventory name	On inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (EGL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PIGGS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION

ABBREVATION LIST

ACGIH — American Conference of Governmental Industrial Hygienists
ADR/RID — European Agreements Concerning the International Carriage of Dangerous Goods by Road/ by Rail
CAS — Chemical Abstract Service
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act

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CFR — Code of Federal Regulations
DOT — Department of Transportation
EPA — Environmental Protection Agency
IATA — International Air Transport Association
IARC — International Agency for Research on Cancer
IMDG — International Maritime Dangerous Goods
NIOSH — National Institute of Occupational Safety and Health
OSHA — Occupational Safety and Health Administration
PEL — Permissible Exposure Limit
RCRA — Resource Conservation and Recovery Act
REL — Recommended Exposure Limit
SARA — Superfund Amendments and Reauthorization Act
SNI — Standard Nasional Indonesia
TLV — Threshold Limit Value
TWA — Time-Weighted Average

This Material Safety Data Sheet (MSDS) was prepared according to Globally Harmonized System of Classification and Labeling (GHS) 7th Revised Edition. The information provided in this Safety Data Sheet (SDS) is according to the best of our knowledge, literature sources and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated**.** Use of products that are not in accordance with Safety Data Sheet (SDS) or in combination with any other product or process is the responsibility of the user. **Issued on November 17th, 2025.**