

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Trade Name (as labeled): ISO RESIN Flow (Powder)
Product Identifier (Part/Item Number): 5290, 5292, 5294, 5296

U.N. Number: Not applicable
U.N. Dangerous Goods Classification: Not applicable

Recommended Use: Self-curing Methyl methacrylate monomer liquid for making acrylic denture base

Restrictions on Use: For Professional Use Only

Manufacturer

Name: DENKEN-HIGHDENTAL Co., Ltd.
Address: 130, Ishigohri-cho, Ohyake, Yamashina-ku, Kyoto, JAPAN 607-8187
Telephone Number: +81-75-571-1000

Supplier

Name: Dentsoll, Inc.
Address: 3145 Reys Miller Rd. Suite A, Norcross, GA 30071, USA
Tel: +1-888-793-7477

Emergency Contact Telephone Number: 770-314-5226
Email address: info@snowrockusa.com

2. HAZARD IDENTIFICATION

Hazard Classifications: corrosive to skin/ skin irritant: Class 1
severe damage to eyes/ eye irritant: Class 2
Specific Target Organ Toxicity (single exposure): Class 3 (irritates respiratory system)
OSHA PEL/TWA: 3 15mg/m

Risk Statements: R36/37/38-Irritating to eyes, respiratory system and skin.

Hazard Statements: H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary Statements: P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
 P262 Do not get in eyes, on skin, or on clothing.
 P264 Wash...thoroughly after handling
 P271 Use only outdoors or in a well-ventilated area
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response Precautionary Statements

P302+P352 IF ON SKINL: Wash with soap and water.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in position comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse continuously with water for several minutes: Remove contact lenses if present and easy to do. Continue rinsing
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P321 Specific treatment
 P332+P313 If skin irritation occurs: Get medical advice/attention
 P337+P313 If eye irritation persists: Get medical advice/attention
 P362 Take off contaminated clothing and wash before reuse

Storage Precautionary Statements

P403+P233 Store in a dry place: Keep container tightly closed
 P405 Store locked up
 P501 Dispose of contents/containers in accordance with local/regional/national/international regulations.

Other Hazards or Dangers (NFPA)

Health 1
 Fire 1
 Reactivity 0
 Dust generation.
 Particular danger of slipping on leaked/spilled product.

Hazardous Material Identification System (HMIS) Rating

Health= 1/ Flammability=1/ Reactivity=0

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description: contains 98.9% or more polymethyl methacrylate

Substance Name	Methyl methacrylate copolymer with eththyl methacrylate
Binomial Name	Poly(ethyl methacrylate-co-methyl methacrylate)
CAS Number	25685-29-4
Content (%)	98.9641%

Dangerous component		
CAS: 94-36-0	dibenzoyl peroxide	≤ 1.0%

EINECS: 202-327-6	Xi R36; Xi R43; E R2	
	Org. Perox. B, H241; Eye Irritant 2, H319; Skin Sens. 1, H317	

4. FIRST AID MEASURES

Routes of Exposure	First Aid Instructions
Eye	If eye irritation persists, get medical advice/attention. If contacted with eye, rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Skin	If slight contact with skin, prevent the area of contamination from spreading. Seek emergency medical care. If contacted with hot substance, in order to abate heat, submerge the affected area in a large pool of cold water or wash. If come in contact with the substance, wash skin and eyes in a running water for 20 minutes. Get rid of contaminated clothes and shoes, and quarantine the contaminated area. Take off contaminated clothes, and wash the clothes before using them again. If skin irritation occurs, get medical advice/attention.
Inhalation	If exposed to a large amount of dusts or fumes, clean with clean air. Remove victim to fresh air. If there are other symptoms or coughs, get medical attention. If breathing is difficult, supply oxygen. If the person does not breathe, perform cardio pulmonary resuscitation. Get medical attention if symptoms persist.
Ingestion	Get emergency medical treatment.
Note to Physicians	Inform the medical personals regarding the subject substance, and instruct them to take necessary safety measures.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	When trying to extinguish fire related with this substance, use dry chemical fire protection, alcohol resistant foam, CO ₂ , or spray water. If extinguishing by smothering, use dry sand or soils.
Specific Hazards Arising from the Chemical:	If heated, the container may explode. It may be harmful to inhale the substance. It may be ignited with heat, spark, or flame. Nonflammable substance. It does not burn, but when heated it may disintegrate and generate corrosive/poisonous fumes. Parts of it may burn, but does not easily ignite fire. During the process of burning, through pyrolysis or combustion, it may generate very hazardous gas.
Precautions for Fire Fighters:	If leaked, it may cause contamination. Rescuers must wear appropriate protective gears.

	<p>In order to get rid of the fire fighting water, dig a ditch. Make sure that the substance does not get released.</p> <p>If not dangerous, remove the container from the area of fire.</p> <p>When trying to extinguish fire, make sure to keep a safe distance and evacuate from the area.</p> <p>If it is a large fire started by a tanker, use droid fire extinguishing equipment. If not available, leave the fire to burn.</p> <p>If contacted, it may cause skin or eye burns.</p> <p>If it is a fire started by a tanker, even after the fire is extinguished, cool the container with a large amount of water.</p> <p>In the event of a large fire by a tanker, if a pressure relief valve makes a high-pitched sound or the tanker's color changes, leave the area immediately.</p> <p>In the event of a large fire by a tanker, evacuate to a safe area if the tanker is in flames.</p>
Fire Fighting Procedures:	<p>If it is a fire started by a tanker, extinguish from a maximum distance, or use un-manned extinguishing equipments.</p> <p>If it is a fire started by a tanker, step away from the tanker that is burning in flames.</p>

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	<p>Remove all sources of ignition.</p> <p>Avoid inhaling dusts, fumes, gas, mists, steams(...) sprays.</p> <p>If spilled, immediately wipe them off, and follow the precautionary statements.</p> <p>If not dangerous, stop the leak.</p> <p>Do not handle or touch broken containers or leaks without wearing appropriate safety gears.</p> <p>Avoid contact with skin, eyes, or clothing.</p> <p>Prevent the diffusion by covering with a plastic sheet.</p> <p>Be mindful of substances and conditions that should be avoided.</p>
Environmental precautions	<p>Prevent the substance from flowing into waterway, sewage, basement, or an enclosed area. Do not allow to flow into lakes, streams, ponds, groundwater or soil. Report releases as required by local, state, and national authorities.</p>
Methods and material for containment and cleaning up:	<p>Use inert substances (for example, dried sand or soil) to absorb spills, and place them into a chemical waste container.</p> <p>After absorbing the liquid, wash away the contaminated area with detergent and water.</p>

7. HANDLING AND STORAGE

Precautions for Safe Handling	<p>Only adequately trained personnel should handle this product.</p> <p>For use in dentistry only. Be careful of high heat.</p>
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	<p>When working with it, be mindful of engineering management and personal safety gears. Avoid inhaling dusts, fumes, gas, mist, steams (...) sprays.</p> <p>Handle it only in a well-ventilated area, or outside area.</p> <p>Even after the container is empty, it may still contain residues. Therefore, follow all MSDS/label precautionary statements.</p> <p>Avoid contacts with the skin for an extensive period of time, or for a continuous period of time. After handling, wash hands thoroughly. Use with care when handling/storing. Be mindful of substances and conditions that need to be avoided.</p>
Conditions for Safe Storage	Containers should be tightly sealed and stored in a well ventilated area. It should be stored in a cool, dry place. Be mindful of substances and conditions that need to be avoided.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The Chemical's Exposure Limits and Biological Exposure Limits	<p>Domestic Regulations- No further relevant information available</p> <p>ACGIH Regulations- No further relevant information available</p> <p>Biological Exposure standards- No further relevant information available</p>
Ingredients with limit values that require monitoring at the workplace	<p>94-36-0 dibenzoyl peroxide</p> <p>Exposure limit for Long-term value: 5mg/m³</p>
Appropriate Engineering Controls	Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits
Individual Protection Measures (PPE)	<p>Respiratory Protection: Wear a mask that has been certified by Korea Occupational Safety and Health Agency to be appropriate for the chemical characteristics.</p> <p>Eye Protection: chemical safety glasses with side shields or chemical goggles</p> <p>Hand Protection: protective gloves</p> <p>Body Protection: Information not available</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Characteristics Color	Solid White or Pink
b. Odor	Pungent odor
c. Odor Threshold	Not available
d. pH	Not available
e. Melting/freezing point	Not available
f. Initial boiling point and range:	Not available
g. Flash point (solid, gas)	Not available
h. Explosive limits	-/-
i. Vapor pressure	Not available
j. Solubility	Insoluble Water reactive

k. Vapor density	Not available
l. Specific gravity	1.25
m. Partition coefficient: n-octanol/water:	Not available
n. Auto-ignition temperature	Not available
o. Decomposition temperature	240°C/464°F
p. Flammability	Not available
q. Molecular Weight	Not available

10. STABILITY AND REACTIVITY

Chemical Stability and Possibility of Hazardous Reactions:	If heated, the container may explode. Some parts may burn, but it does not ignite easily. Nonflammable. The substance itself does not burn, however if it is heated, it may disintegrate and emit corrosive/poisonous fumes. In the event of fire, it may give out irritating, corrosive, poisonous gas.
Conditions to Avoid:	Keep away from heat, spark, flame or ignition sources.
Incompatible materials:	Avoid combustible materials, reductants. Avoid strong oxidizing agents.
Hazardous Decomposition Products:	When it is burning, it may generate irritating, corrosive, poisonous gas through pyrolysis or combustion. Corrosive/poisonous fumes. When burned, it generates methacrylate monomer and oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Information regarding high probability of exposure	Not available
Information on toxicological effects	
Acute toxicity oral	Not available
Acute toxicity respiratory	Not available
Skin corrosiveness or irritation	It causes skin irritation.
Severe damages to eyes or irritation	It causes irritation to eyes.
Respiratory Hyper-sensitivity	Not available
Skin Hyper-sensitivity	Not available
Carcinogenic according to Occupational Safety and Health Acts	Not available
Carcinogenic according to the Dept. of Labor Law	Not available
IARC	Group 3
OSHA	Not available
ACGIH	Not available
NTP	Not available
EU CLP	Not available
Germ Cell Mutagenicity	Not available

Reproduction Toxicity	Not available
Specific Target Organ Toxicity (single exposure)	If inhaled, it irritates the air way.
Specific Target Organ Toxicity (multiple exposures)	Not available
Toxicity if Taken	Not available

12. ECOLOGICAL INFORMATION

Ecological Toxicity: Aquatic/Crustacean/Fowl	Not data available
Persistence and Degradability	Not data available
Bio-accumulative Potential	No data available
Mobility in Soil	No data available
Other Adverse Effects	No data available

13. DISPOSAL CONSIDERATIONS

Disposal Method: Dispose the contents and its container in accordance with the disposal rules and regulations.

Precautions for Disposing: Dispose the contents in accordance with the disposal rules and regulations.

14. TRANSPORT INFORMATION

U.N. Identification Number	Not available
U.N. Proper Shipping Name	Not applicable
Transport Hazard Class	Not applicable
Packing Group	Not applicable
Environmental Hazards	Not applicable
Marine Pollutant	Not applicable
Special Precautions for User (Fire or Release)	Not applicable

15. REGULATORY INFORMATION

No applicable regulation available.

16. OTHER INFORMATION

The information provided on this MSDS is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally binding contractual relationship.

Other reference materials:

The Chemical Database, The Department of Chemistry at the University of Akron
(<http://ull.chemistry.uakron.edu/>)

Corporate Solution from Thomson Micromedex (<http://csi.micromedex.com>)

The date this MSDS was first prepared: 2015-06-06

Number of revisions issued: 1 times

The most recent date of revisions: 2015-06-06

Other information: not available.