

# Material Safety Data Sheet (MSDS)

## Radianz

Date of issue: 2009-03-02

Revision data : 2016-02-01

Version:

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product Name

- Radianz

#### 1.2 Product use

- Application : Kitchen top, counter top, interior wall, ect.
- uses advised against : Do NOT use with strong acid or base chemicals

#### 1.3 Detail of the supplier of the safety data sheet

##### ○ Manufacture

- Name of Supplier : LOTTE ADVANCED MATERIALS
- Address : 334-27, Yeosusandan-ro, Yeosu-si, Jeollanam-do, Republic of Korea
- Department : Development group
- Telephone : 061-689-1160
- Emergency telephone : 061-689-1160
- FAX No. : 061-689-1759

##### ○ Supplier

- Name of Supplier : LOTTE ADVANCED MATERIALS
- Address : 56, Gosan-ro, Uiwang-si, Gyeonggi-do, Republic of Korea
- Department : Marketing group
- Telephone : 031-596-3861
- Emergency telephone : 031-596-3861
- FAX No. : 031-596-3882

### 2. HAZARD IDENTIFICATION

#### 2.1 Classification of the substance or mixture

- Not Classified
- The hazards of this product are associated with its fabrication. Such as sawing, routing and sanding can generate dust.
- Exposure to high concentration of dust or inhalation may cause respiratory irritation and sneeze. This information is according to exposure limits of PMMA (Poly methyl methacrylate).

#### 2.2 Label elements

- Pictogram  
none
- Signal word  
none
- Hazard statement  
none
- Precautionary statement  
Prevention: Not Applicable, Respnse: Not Applicable, Storage: Not Applicable, Disposal: Not Applicable
- NFPA rating  
Health : Not applicable, Flammability : Not applicable, Reactivity : Not applicable

### 2.3. Other hazards

- none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical	Usual Name	CAS No.	Concentration range(%)
Quartz	Silica	14808-60-7	40 - 90 %
Unsaturated Polyester Resin	UPE	-	< 10 %
Pigment	Pigment	Trade secret	< 1 %
Additives	Additives	Trade secret	< 1 %

## 4. FIRST AID MEASURES

### 4.1 Eye Contact

- Rinse thoroughly with plenty of water for over 15 minute and call a doctor immediately.

### 4.2 Skin Contact

- No hazard. Wash with soap and water.

### 4.3 Inhalation

- If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Follow instruction of doctor.

### 4.4 Ingestion

- If vomiting, rinse mouth and follow instruction of doctor.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing Media

- Suitable extinguishing media : Dry chemical
- Unsuitable extinguishing media : Do not use direct water

### 5.2 Special hazards arising from the substance or mixture

- Hazardous Product of Combustion: Carbon Oxides (CO, CO<sub>2</sub>), Various Hydrocarbons.
- Risk of Explosion or Fire: None

### 5.3 Advice for fire-fighters

-- Protective fire fighting clothing

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

- None

### 6.2. Environmental precautions

- AIR: Avoid generation of dust and fine dust dispersed in the air

### 6.3. Methods and material for containment and cleaning up

- Small amount: Brush into dry container or bag.
- Large amount: Suppression occurrence of dust. For disposal of spilled material in appropriate containers collected and clear surface

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

- Radianz is heavy material. It must be moved by proper handling equipment.

### 7.2. Conditions for safe storage, including any incompatibilities

- Avoid contact with heat, sparks, flame or other ignition sources.
- Store in a well-ventilated place. Avoid direct sun light.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

- Occupational Exposure Limits : Not available
- TWA : 0.1mg/m<sup>3</sup> - Quartz
- STEL : Not available
- 0.3mg/m<sup>3</sup> OSHA TWA(Inhalable particles): Calculation: 30mg/m<sup>3</sup> ÷ (%SiO<sub>2</sub> +2)
- 0.1mg/m<sup>3</sup> OSHA TWA(Respirable particles): Calculation: 10mg/m<sup>3</sup> ÷ (%SiO<sub>2</sub> +2)
- ACGIH : Not available
- Biological exposure limit : Not available

\* ACGIH = American Conference of Governmental Industrial Hygienists

### 8.2 Appropriate engineering controls

- Not available

### 8.3 Individual protection measures, such as personal protective equipment

- Respiratory protection**
  - Wear dust mask
- Eye Protection**
  - Wear safely glasses
- Hand Protection**
  - Wear protective gloves
- Skin protection**
  - protectieve clothing

## 9. Physical and chemical properties

9.1 Appearance	
- Physical state	Solid
- Color	Various
9.2 Odor	Minimal
9.3 Odor Threshold	Not applicable
9.4 pH	Not applicable
9.5 Boiling /Freezing point	Not applicable
9.6 Boiling point/boiling range	Not applicable
9.7 Flash point	No data
9.8 Evaporation rate	Not applicable
9.9 Flammability (solid, gas)	Not applicable
9.10 Upper/lower flammability or explosive limits	Not applicable
9.11 Vapour pressure	Not applicable
9.12 Water Solubility	Not soluble in water
9.13 Vapour density	Not applicable
9.14 Relative density	2.3 ~ 2.5
9.15 Partition coefficient	No data
9.16 Autoignition Temperature	over 490 °C
9.17 Decomposition	No data
9.18 Viscosity	Not applicable
9.19 Explosive properties	No data

## 10. STABILITY AND REACTIVITY

### 10.1 Stability and Possibility of Hazardous Reaction

- Stability : Stable under room temperature and normal pressure
- Possibility of Hazardous Reaction: none

### 10.2 Conditions to avoid

- Avoid extreme heat, Direct sun light

### 10.3 Materials to avoid

- Acids, base, solvent, heat, spark, flame

#### 10.4 Hazardous decomposition products

- None

### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

- (Respiratory system)**
  - :High concentration may cause difficulty with breathing.
- (ingestion)**
  - Organic reaction with digestive organs may cause irritation.
- (Eye, Skin)**
  - Not applicable

#### 11.2. Toxicity and irritation

- Acute toxicity:**
  - \* **Oral**
    - Acute exposure : Organic reaction with digestive organs may cause irritation.
    - Chronic overexposure: Not available
  - \* **Dermal**
    - Acute exposure : Particles may cause irritation.
    - Chronic overexposure: Not available
  - \* **Inhalation**
    - Acute exposure : High concentration may cause difficulty with physical breathing.
    - Chronic overexposure: Not available
- Skin corrosion/irritation**
  - Not available
- Eye corrosion/irritation**
  - Not available
- Respiratory sensitization**
  - Not available
- Skin Sensitization**
  - Not available
- Carcinogenic**
  - Not available
- Germ cell mutations**
  - Not available
- Reproductive toxicity**
  - Not available
- Specific target organ toxicity(single exposure)**
  - Not available
- Specific target organ toxicity(repeated exposure)**
  - Not available
- Aspiration hazard**
  - Not available

#### 11.3. TOXICALOGICAL EFFECTS

- Not applicable

### 12. ECOLOGICAL INFORMATION

#### 12.1. Ecotoxicity

- Fish**
  - No data
- Invertebrate**
  - No data

**Algae**

- No data

**12.2 Persistence/degradability**

- Persistence : No data

- Degradability : No data

**12.3 Bioaccumulative potential**

- Biodegradability: No data

- Bioaccumulation: No data

**12.4. Mobility in soil**

- Not available

**12.5 Other adverse effects**

- Not available

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

- Disposal after storage in an appropriate waste container.

**13.2 Require attention**

- All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations

**14. TRANSPORTATION INFORMATION**

**14.1 UN number**

- Not applicable

**14.2 UN proper shipping name**

- Not applicable

**14.3 Transport hazard class(es)**

- Not applicable

**14.4 Packing group**

- Not applicable

**14.5. Environmental hazards**

- Not available

**14.6 Special precautions for user related to transport or transportation measures**

- Not available

**15. REGULATORY INFORMATION**

**15.1. Occupation safety and health acts**

- Not available

**15.2. Chemical Safety Assessment**

- Not available

**15.3. Safety control of dangerous substances Act**

- Not available

**15.4. Wastes control Act**

- Not available

## 15.5. Foreign legal

- Persistent Organic Pollutants Control Act**
  - Not available
- EU**
  - \* **Confirm classific result : Not classified**
  - \* **Harzard words Not applied**
  - \* **Prevention measure: Not applied**
- U.S regulations**
  - \* **OSHA Hazard Communication Standard (29 CFR 1910.119)**
    - Not applicable
  - \* **CERCLA 103 (40CFR302.4)**
    - Not applicable
  - \* **EPCRA 302 (40CFR355.30)**
    - Not applicable
  - \* **EPCRA 304 (40CFR355.40)**
    - Not applicable
  - \* **EPCRA 313 (40CFR372.65)**
    - Not applicable
- Rotterdam convention material**
  - Not applicable
- Stockholm convention material**
  - Not applicable
- Montreal Protocol material**
  - Not applicable
- TSCA (US Toxic Substances Control Act): In compliance with TSCA Inventory requirements for commercial purposes**

## 16. OTHER INFORMATION

### 16.1 Sources of Data

### 16.2 Creation Date

- 2009-03-02

### 16.3 Number of Revision and Latest Revisioni Date

-2nd : 2016.02.01

### 16.4 Others

- While this MSDS explains our best knowledge of the health and safety hazard information of the product, it is provided for your guideline only.
- Because many factors may affect processing or application, we recommend you make tests to determine the suitability of the product for your particular use before to use.