

**Safety Data Sheet (SDS)**  
**High Consistency Rubber**  
**HR-1160(W)LAKE**

Version : GHS2.0

Date of first issue : 2018/05/17

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**1. Identification of the substance/mixture and of the company**

- 1.1 **Product Name** : High Consistency Rubber **HR-1160(W)LAKE**
- 1.2 **Chemical Classification** : Silicone compound
- 1.3 **Recommended Product Usage and Limited Use** : Silicone rubber fabrications
- 1.4 **Company Details**
- Manufacturer / Supplier** :  
**Address** :  
**Telephone Number** :  
**Telefax** :

**2. Hazard Identification**

- 2.1 **GHS Classification (ISHA)** : Not applicable for GHS classification.
- 2.2 **GHS Label Elements (ISHA)**
- Symbol** : Not applicable
- Signal Word** : Not applicable
- Hazard Risk Statement** : Not applicable
- Precautionary Statement**
- Prevention** : P262: Do not get in eyes, on skin, or on clothing.  
P264: Wash the contact area thoroughly after handling.
- Response** : P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
- Storage** : Not applicable
- Disposal** : Not applicable
- 2.3 **Other Hazard** : None known

**3. Composition / Information on Ingredients**

- 3.1 **Substance/Mixture** : Mixture
- 3.2 **Components**

Chemical Name	Common Name or Synonym	CAS No.	% (w/w)
Siloxanes and Silicones, di-Me, vinyl group-terminated	Polydimethylsiloxane, vinyl dimethylsiloxyl terminated	68083-19-2	20-30
Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-terminated	Dimethyl, methylvinyl siloxane, dimethylvinyl-terminated	68083-18-1	40-50
Amorphous fumed silica	Silicon Dioxide	112945-52-5	20-30
Siloxanes and Silicones, di-Me, hydroxy-terminated	-	70131-67-8	< 5
Siloxanes and Silicones, di-Me, Me vinyl, hydroxy-terminated	-	67923-19-7	< 5

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Siloxanes and Silicones, di-Me, Me, hydrogen	-	68037-59-2	< 1
Titanium dioxide	-	13463-67-7	< 1

#### 4. First Aid Measures

##### 4.1 First Aid Measures

- General** : In the case of accident, get medical attention immediately.
- Eyes** : Immediately flush eyes with water.  
Get medical attention if irritation develops and persists.
- Skin** : Immediately flush skin with water.  
Remove contaminated clothing and shoes.  
Wash clothing before reuse.  
Clean shoes before reuse.
- Inhalation** : Remove to fresh air.  
Get medical attention.
- Oral** : DO NOT induce vomiting.  
Get medical attention.  
Rinse your mouth with water.

**4.2 Important Symptoms and Hazard Effects** : No significant adverse effects from normal use.

**4.3 Personal Protection for First Aid or Rescue Personnel** : No respiratory protection should be needed. Use proper protection – safety glasses as a minimum. Washing at mealtime and end of shift is adequate.

**4.4 Note to physicians** : Treat symptomatically and supportively.

#### 5. Fire-Fighting Measures

- 5.1 Suitable Extinguishing Media** : On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide(CO<sub>2</sub>), dry chemical or water spray. Water can be used to cool fire exposed containers.
- 5.2 Unsuitable Extinguishing Media** : None established.
- 5.3 Specific Hazards** : Not available
- 5.4 Special Fire Fighting Procedures** : Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.  
Remove undamaged containers from fire area if it is safe to do so.
- 5.5 Special protective equipment for the Fire Fighters** : Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.

#### 6. Accidental Release Measures

- 6.1 Personal Precautions** : Use personal protective equipment.  
Follow safe handling advise and personal protective equipment recommendations.
- 6.2 Environmental Precautions** : Do not allow large quantities to enter drains or surface waters.  
Prevent further leakage or spillage if safe to do so.  
If large amounts have been spilled, inform the relevant authorities.

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- 6.3 Methods for Cleaning up** : Observe all personal protective equipment recommendations described in this SDS. Collect and contain for salvage or disposal.  
For large spills, appropriate containment to keep material from spreading. Store recovered material in appropriate container. Laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which laws and regulations are applicable.

## 7. Handling and Storage

- 7.1 Handling Precautions** : Use with adequate ventilation. Do not take internally. Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking. Take care to prevent spills, waste and minimize release to the environment.
- 7.2 Storage Conditions** : Use reasonable care and store away from oxidizing materials. Do not apply direct heat. Store in accordance with the particular national regulations.
- 7.3 Unsuitable Packaging Materials** : None established.

## 8. Exposure Controls / Personal Protection

### 8.1 Control Parameters

Components	CAS No.	Exposure Limits / Basis
Titanium dioxide	13463-67-7	TWA 10mg/m <sup>3</sup> / KR OEL TWA 15mg/m <sup>3</sup> / OSHA(PEL)

### 8.2 Engineering Controls

- Local Ventilation** : None should be needed.
- General Ventilation** : Recommended.  
Minimize workplace exposure concentrations.

### 8.3 Personal Protective Equipment

- Respiratory protection** : No personal respiratory protective equipment normally required.
- Eye protection** : Recommendation - Protective goggles.
- Hand protection** : Wear appropriate glove.
- Skin protection** : Washing at mealtime and end of shift is adequate.
- Hygiene Measures** : Observe standard industrial hygiene practices for the handling of chemical substances. Do not eat or drink when handling.

## 9. Physical and Chemical Properties

### Physical State

- Form** : Rubber-Crepe
- Color** : White
- Odour** : Odorless

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<b>pH</b>	:	Not available
<b>Melting Point/Freezing Point</b>	:	Not available
<b>Boiling Point/Range</b>	:	Not available
<b>Flash Point</b>	:	> 100 degree C (Seta Closed Cup)
<b>Characteristics of Explosives</b>	:	Not available
<b>Vapor Pressure @25 degree C</b>	:	Not available
<b>Vapor Density(air=1)</b>	:	Not available
<b>Specific Gravity</b>	:	1.12~1.16
<b>Solubility</b>	:	Not available
<b>Octanol/Water Partition</b>	:	Not available
<b>Auto-ignition Temperature</b>	:	Not available
<b>Decomposition Temperature</b>	:	Not available
<b>Odor Threshold</b>	:	Not available
<b>Evaporation Rate</b>	:	Not available
<b>Flammability(Solid, Gas)</b>	:	Not available
<b>Viscosity(Cst)</b>	:	Not available

*The above information is not intended for use in preparing product specifications.*

#### 10. Stability and Reactivity

<b>10.1 Stability</b>	:	Stable.
<b>10.2 Possibility of Hazardous Reaction</b>	:	If stored and handled in accordance with standard industrial practices no hazardous reactions are known.
<b>10.3 Conditions to Avoid</b>	:	None known
<b>10.4 Incompatible materials</b>	:	None known
<b>10.5 Hazardous decomposition products</b>	:	If stored and handled properly- None known Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C(302°F) through oxidation.

#### 11. Toxicological information

<b>11.1 Routes of Exposure</b>	:	Skin contact and accidental ingestion.
<b>11.2 Acute Toxicity</b>		
<b>Eyes</b>	:	No significant irritation expected from a single exposure.
<b>Ingestion(Oral)</b>	:	Low ingestion hazard in normal use.
<b>Inhalation</b>	:	No significant effects expected from a single short-term exposure.
<b>Skin(Dermal)</b>	:	No significant irritation expected from a single short-term exposure.

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**11.3 Chronic Toxicity**

- Ingestion(Oral)** : Repeated ingestion or swallowing large amounts may injure internally
- Inhalation** : No known application information
- Skin(Dermal)** : No known application information
- Other Health Hazard Information** : No known application information

**11.4 Skin Corrosion/Irritation** : Not available

**11.5 Serious Eye Damage/Irritation** : Not available

**11.6 Respiratory Sensitization** : Not available

**11.7 Skin Sensitization** : Not available

**11.8 Carcinogenicity**

- IARC** : Not available
- OSHA** : Not available
- ACGIH** : Not available
- NTP** : Not available
- EU CLP** : Not available

**11.9 Germ Cell Mutagenicity** : Not available

**11.10 Reproductive Toxicity** : Not available

**11.11 Specific target organ toxicity (Single Exposure)** : Not available

**11.12 Specific target organ toxicity (Repeated Exposure)** : Not available

**11.13 Aspiration Hazard** : Not available

**Components: Amorphous fumed silica**

**Acute Toxicity**

**Ingestion(Oral)**

LD50(Rat): >5,000mg/Kg  
Method: OECD Test Guideline 401  
Comparable product

**Inhalation**

LC0(Rat): 0,139mg/l/h4  
Method: analogy OECD-method (maximum concentration attainable in experiments)  
No deaths occurred.  
Comparable product

**Skin(Dermal)**

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LC50(Rabbit): >5,000mg/Kg  
Comparable product

#### **Skin Corrosion/Irritation**

Species: Rabbit  
Result: Not irritating  
Method: analogy OECD-method  
Comparable product

#### **Serious Eye Damage/Irritation**

Species: Rabbit  
Result: Not irritating  
Method: analogy OECD-method  
Comparable product

#### **Components: Titanium dioxide**

##### **Acute Toxicity**

**Ingestion(Oral)**  
LD50(Rat): >5,000mg/Kg  
Interpretation: practically nontoxic

##### **Skin Corrosion/Irritation**

Species: Rabbit  
Result: Not Irritating

##### **Serious Eye Damage/Irritation**

Species: Rabbit  
Result: No eye irritating

##### **Respiratory Sensitization**

Species: Mouse  
Result: Not sensitising

##### **Carcinogenicity**

Species: Mouse(B6C3F1)  
Route of administration: oral: feed  
Assessment: Based on the histopathological examination, TiO<sub>2</sub> was neither toxic nor carcinogenic to B6C3F1 mice under the conditions of this bioassay.

##### **Germ Cell Mutagenicity**

***in Vitro***  
Test: Bacillus subtilis recombination assay  
Result: negative

##### ***in Vivo***

Test: micronucleus assay  
Species: Rat  
Result: negative

##### **Reproductive Toxicity**

Test: Mechanistic investigation of the ovaries  
Species: Mouse  
Result: Not considered further for risk assessment purposes.

## 12. Ecological Information

### 12.1 Ecotoxicity

**Fish** : Not available  
**Daphnia and Invertebrate** : Not available  
**Algae** : Not available

### 12.2 Persistence and Degradability Water

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- Persistence** : Not available
- Degradability** : Not available
- 12.3 Bioaccumulative Potential Bioaccumulation**
- Bioaccumulation** : Not available
- Degradability** : Not available
- 12.4 Mobility in Soil** : This product is a solid and does not contain significant concentrations of water soluble constituents that may be leached from the product. It is therefore not likely to present a danger to terrestrial organisms.
- 12.5 Additional Environmental Information** : No Specific information is available.

#### Components: Amorphous fumed silica

##### **EcoToxicity**

##### **Fish**

LC50(Brachydanio rerio): >10,000mg/l /96h

Method: OECD 203

##### **Daphnia and Invertebrate**

EC50 Daphnia magna: >10,000mg/l /24h

Method: OECD 202

##### **Persistence and Degradability Water**

Inorganic product, Test of the biodegradability cannot be carried out.

#### Components: Titanium dioxide

##### **EcoToxicity**

##### **Fish**

LC50(Fundulus heteroclitus):>1,000mg/L

Duration: 96h

##### **Daphnia and Invertebrate**

EC50(Daphnia magna):>1,000mg/L

Duration: 48h

##### **Algae**

NOEC(Synedra ulna, Scenedesmus quadricauda, Stigeoclonium tenue):>=1mg/L

Duration: 32d

### 13. Disposal Considerations

- 13.1 Residual Waste** : This products fall under Industrial Waste based on Wastes Disposal and Public Cleansing Law. Dispose of in accordance with local regulations.
- 13.2 Contaminated Containers of Packaging** : Dispose of in accordance with local regulations.
- 13.3 Disposal precautions** : Dispose of in accordance with local regulations.

### 14. Transport Information

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- 14.1 Road and Rail Transport** : Not Applicable
- 14.2 Air Transport (IATA)** : Not subject to IATA regulations.
- 14.3 Sea Transport (IMDG)** : Not subject to IMDG code.
- UN number** : Not applicable
- Proper shipping name** : Not applicable
- Class** : Not applicable
- Subsidiary risk** : Not applicable
- Packing group** : Not applicable
- Labels** : Not applicable
- EmS Code** : Not applicable
- Marine pollutant** : Not applicable
- 14.4 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not applicable for product as supplied.
- 14.5 Special Requirements and Additional Information** : None

**15. Regulatory Information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

National and local regulations must be observed.  
 For information on labelling please refer to section 2 of this document.

**15.2 Regulation under the Occupational Safety and Health Act**

Harmful Substances Prohibited : Not Applicable  
 Harmful Substances Required : Not Applicable  
 Controlled Hazardous Substances

Components	CAS No.	Exposure Limits / Basis
Titanium dioxide	13463-67-7	TWA 10mg/m3 / KR OEL TWA 15mg/m3 / OSHA(PEL)

**15.3 Regulation under the Chemical control Act**

Toxic Chemicals : Not Applicable  
 Observational chemicals : Not Applicable  
 Restricted Chemicals : Not Applicable  
 Prohibited Chemicals : Not Applicable  
 Toxic Release Inventory : Not Applicable  
 Accident Precaution Chemicals : Not Applicable

**15.4 Dangerous Substances Safety Management Act**

Not Applicable to Dangerous Materials



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## 15.5 Wastes Control Act

Industrial waste – Follow article 13 of the act to dispose the product waste

## 15.6 Other International Regulations

### Details of international registration status

Listed on or in accordance with the following inventories

<b>REACH - European Union</b>	: All Ingredients (pre-)registered or exempt.
<b>KECL - Korea</b>	: All Ingredients listed, exempt or notified.
<b>ENCS/ISHL - Japan</b>	: All components are listed on ENCS/ISHL or its exempt rule.
<b>AICS - Australia</b>	: All Ingredients listed or exempt.
<b>IECSC - China</b>	: All Ingredients listed or exempt.
<b>DSL - Canada</b>	: Not determined.
<b>PICCS - Philippines</b>	: All Ingredients listed or exempt.
<b>NZIoC - New Zealand</b>	: All Ingredients listed or exempt.
<b>TCSI - Taiwan</b>	: All Ingredients listed or exempt.
<b>TSCA – USA</b>	: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

## 16. Other Information

<b>16.1 Information Source</b>	: Internal Technical data Raw material SDSs OECD eChem Portal European Chemicals Agency(ECHA), <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
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## 16.2 Abbreviations

KR OEL : Occupational Exposure Limits Korea  
KR OEL/TWA : Time Weighted Average  
AICS : Australian Inventory of Chemical Substances  
DSL : Domestic Substances List(Canada)  
EmS : Emergency Schedule  
ENCS : Existing and New Chemical Substances(Japan)  
GHS : Globally Harmonized System  
IARC : International Maritime Dangerous Goods  
ISHA : Industrial Safety and Health Act  
KECL : Korea Existing Chemicals List  
MARPOL : International Convention for the Prevention of Pollution from Ships  
NTP : National Toxicology Program  
NZIoC : New Zealand Inventory of Chemicals  
PICCS : Philippines Inventory of Chemicals and Chemical Substances  
REACH : Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
TCSI : Taiwan Chemical Substance Inventory  
TSCA : Toxic Substances Control Act(United States)

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This information is offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.