

SAMHWA PAINT		MATERIAL SAFETY DATA SHEET	Date of Issue		2018. 9. 7	
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1. CHEMICAL PRODUCT INFORMATION			
Product Name	E5000C, ER-BL 1455-S5, GB		Color
Chemical description			
Application	Machine part		
Hazard			
Manufacture	SAMHWA PAINT IND.CO.,LTD.	Telephone NO.	82-41-881-9320
Address	33-5, Tancheonsaneopdanji-gil, Tancheon-myeon, Gongju-si, Chungcheongnam-do		
2. HAZARDS IDENTIFICATION			
<p>1.Classification of the substance</p> <p>① SENSITIZATION - SKIN - category 1</p> <p>② CARCINOGENICITY - category 1A</p> <p>2.GHS warning label elements, including precautionary statements</p> <div style="text-align: center;">  </div> <p>① Symbol :</p> <p>② Signal word : Danger</p> <p>③ Hazard statements : May cause allergic skin reaction May cause cancer</p> <p>④ Precautionary statements :</p> <p>Prevention- Avoid breathing dust/fume/gas/mist/vapours/spray. Do not handle until all safety precautions have been read and understood. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Response- Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention.</p> <p>Storage- Store locked up.</p> <p>Disposal- Dispose of contents/container to relate laws and regulations.</p>			

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3. CHEMICAL COMPOSITION			
Chemical Name	CAS NO.	Portion(%)	Remarks
4,4'-(1-methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	25036-25-3	41~50%	
Aluminium hydroxide	21645-51-2	21~30%	
Quartz (SiO <sub>2</sub> )	14808-60-7	21~30%	
4. HEALTH HAZARD INFORMATION			
<p>1. Eye contact Wash off immediately with plenty of water, also under the eyelids, for at least 20 minutes.</p> <p>2. Skin contact Remove the contaminated clothes and the skin will be washed with water and soap.</p> <p>3. Inhalation Move to fresh air and if he/she not breathes perform artificial respiration.</p> <p>4. Ingestion Do not induce vomiting unless it is indicated by medical personnel. Never give anything by oral tract to an unconscious. Get medical attention if symptoms appear.</p> <p>5. Note to physician Very small quantities of the product reached in lungs may be fatale. Ingestion of the product may cause chemical irritation that may diffuse to lungs and cause edema. Check carefully the victim and apply intubations in all ingestion cases for all important amounts.</p>			
5.FIRE FIGHTING MEASURES			
<p>1. Flash point :    °C</p> <p>2. Ignition temp : Not determined</p> <p>3. Upper explosion limit / Lower explosion limit : Not determined</p> <p>4. The Fire Service Act : Fourth grade 1st.Petroleum</p> <p>5. Fire extinguisher : CO<sub>2</sub>, Powder, Halogen Fire extinguisher and Sand etc.</p> <p>6. Fire and explosion Method of extinguishing and equipment: Wear suitable protective equipment Use product with caution around heat, sparks, pilot lights, static electricity, and open flame. Due to vapor is heavier than air, keep the distance from the ignition source pour into the fresh air. Remove promptly flammable material. Put out a fire at once with prepared fire extinguisher.</p> <p>7. Hazardous materials in combustion: Could be generated complexed mixture like solid and gas containing CO, SO<sub>2</sub> etc. Unidentified organic and inorganic compound.</p> <p>8. Extinguishing method which must not used for safety : Not applicable</p>			

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## 6.ACCIDENTAL RELEASE MEASURES

### 1. Personal precautions

Evacuate useless personnel, isolate the heat and flame sources, ventilate and wet the area if is possible.

All personnel must be protected against vapours inhalation and against skin and eyes contact.

### 2. Methods for cleaning up

Absorb with dry earth, sand or other non-combustible material and precede according decontamination regulation.

Recovered product will be stored in metallic drums with removable lid or metallic containers, which will be sent to incineration.

### 3. Environmental precautions

Do not let the product to reach water, drain and earth. Prevent the extending in soil.

Prevent entry into sewers, basements or confined areas; dike if needed

## 7.HANDLING AND STORAGE

### 1. Handling

Avoid contact with skin or eyes. Use only up well-ventilated areas.

Avoid breathing vapor. Do not take internally. Take precautionary measures against static is charges.

### 2. Storage

The product must be kept in original container tightly closed. Store between 5-35°C in dry, well-ventilated place away from source of heat, ignition and direct sunlight.

Solvent vapours are heavier than air and spread along floors. Vapours may form explosive mixtures. No smoking.

### 3. Other precautions

Emergency showers and eye wash stations should be readily accessible.

Adhere to work practice rules established by government regulations

## 8.EXPOSURE CONTROLS/PERSONAL PROTECTION

### 1. Exposure limit values

Chemical Name	CAS NO.	Interior provision	ACGHI
4,4'-(1-methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	25036-25-3	No data	No data
Aluminium hydroxide	21645-51-2	TWA : 2mg/ m³	No data
Quartz (SiO2)	14808-60-7	TWA : 0.05mg/ m³	No data

### 2. Environmental exposure control

Technical conditions regarding atmosphere protection. Determination of pollutants emission produced by stationary sources rules.

### 3. Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment

### 4. Eye protection: Wear eye/face protection such as chemical goggles or face shield

### 5. Hand protection: For prolonged or repeated contact use solvent protective gloves. Barrier reams may help to protect the exposed areas of hand. However they should not be applied once exposure has occurred. Hand should be washed after contact

### 6. Skin protection: Personnel should wear protective clothing and antistatic footwear.

### 7. Additional: Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| 1. Appearance : colored powder    | 8. Oxidising properties : No data   |
| 2. Odor : odorless                | 9. Vapor pressure : No data         |
| 3. pH : Not applicable            | 10. Specific gravity : 1.59         |
| 4. Solubility : Water-insoluble   | 11. Partition coefficient : No data |
| 5. Boiling point : No data        | 12. Vapor density : No data         |
| 6. Melting point : No data        | 13. Viscosity(25℃) : Not applicable |
| 7. Explosive properties : No data | 14. Molecular weight : No data      |

## 10. STABILITY AND REACTIVITY

- Chemical stability**  
The product is stable if it is kept in original recipient and according with recommendation.
- Condition to avoid**  
Avoid all possible sources of heat, electrostatic discharges, ignition(spark or flame).  
Avoid storage at temperature higher than 35℃ and direct exposure in the sunlight.
- Materials to avoid**  
Strong oxidative substances, strong acid, and alkaline solutions may give exothermic reactions in contact with this product.
- Hazardous decomposition products**  
Thermo oxidative decomposition gives carbon monoxide, carbon dioxide, nitrogen oxides and a dense smoke, which contain other unidentified decomposition products. If this product is heated up to its decomposition temperature may lead to explosion.

## 11. TOXICOLOGICAL INFORMATION

### 1. Toxicity Information

Chemical Name	LD50.Oral	LD50.Skin	LD50.Inhalation (gas)	LD50.Inhalation (vapour)	LD50.Inhalation (mist)
4,4'-(1-methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene) bis(4,1-phenyleneoxymethylene)] bis[oxirane]	LD50 > 2000 mg/kg Rat	LD50 > 2000 mg/kg Rabbit	No data	No data	No data
Aluminium hydroxide	LD50 > 5000 mg/kg Rat	No data	No data	No data	No data
Quartz (SiO2)	No data	No data	No data	No data	No data

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## 12.ECOLOGICAL INFORMATION

### 1. Ecological Information

Chemical Name	LC50. fish	LC50. Water fleas	LC50. algae
4,4'-(1-methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis (4,1- phenyleneoxymethylene)] bis[oxirane]	No data	No data	No data
Aluminium hydroxide	LC50 > 100 mg/ℓ 96hr Other(Salmo trutta)	EC50 > 100 mg/ℓ 48hr Daphnia magna	EC50 > 100 mg/ℓ 72hr Selenastrum capricornutum
Quartz (SiO2)	No data	No data	No data

2. Soil mobility : Not known

3. Persistence and degradability

There is no specific data available on the product itself. The product should not be allowed to enter drains or watercourses or be deposited where they can affect ground or surface waters.

4. Potential bioaccumulation : Be possible.

## 13.DISPOSAL CONSIDERATION

1. Relevant insurance of legislation

Dispose of in accordance with local regulations

2. Waste removal measures

Waste must be disposed of in accordance with state and local environmental regulations.

3. Direction for the waste disposal

Preferred options for disposal are recycling, incineration with energy recovery, and landfill.

## 14.TRANSPORT INFORMATION

1. No dangerous good in sense of these transport regulations.

2. Direction for transport

The product must be kept in original container tightly closed and transport at normal temperature.

3. International Martitie Dangerous Goods Code

U.N Number : Not Applicable

Shipping name : Not Applicable

Hazard class : Not Applicable

Packing group : Not Applicable

4. Maine pollutant : Not Applicable

5. Special precautions for user related to transport or transportation measures

• Land transport (ADR/RID) : Not Applicable

• Sea transport (IMDG) : Not Applicable

6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not Applicable

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### 15.REGULATORY INFORMATION

1. Article of KOREA OCCUPATIONAL SAFETY HEALTHY AGENCY : Not determined.
2. Article of Harmful Chemical Substance : Not applicable
3. Classify of The Fire Service Act : Not applicable

### 16.OTHER INFORMATION

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 release is not to be considered a warranty or quality specification.

The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

This information is based on technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.