

# MATERIAL SAFETY DATA SHEET

## ( M S D S )

Name of Grade	ECP-100 OR (HF)	CB13003AD
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### 1. Product and company identification

a). Product Name	ECP-100 OR (HF)
b). Recommended use of the chemical and restrictions on use	
General Use	Epoxy compound ( electrical/electronics component)
Limit use	No data
c). Manufacture Information	
Manufacturer	GREENSTAR CO.,LTD.
Address	539-3, Segyo-dong,Pyeongtaek-city,Kyung GI,KOREA
Emergency or Information Contact	TEL: 031) 657-2321~2326      FAX: 031) 657-2327

### 2. Hazards identification

a) Hazard Risk Classification	No information classification
b) Label elements including precautionary statements	
Symbol	Not applicable
Signal word	Not applicable
Hazard risk statement	Not applicable
Precautionary statement	
Prevention	Not applicable
Response	Not applicable
Storage	Not applicable
Disposal	Not applicable
c) Other hazard risk which are not included in the classification criteria	
Health	2
Fire	1
Reactivity	0

### 3. Composition/Information on ingredients

Chemical Name	Other name	CAS No.	Content(%)
DIGLYCIDYL ETHER OF BISPHENOL A	-	25036-25-3	45↓
ALUMINA TRIHYDRATE		21645-51-2	45↓
C.I. PIGMENT BROWN 24		68186-90-3	1↓
INORGANIC FLAME RETARDANTS	-	Mixture	10↓
S1	-	Secret	2↓

#### 4. First aid measures

- a) Eye contact  
Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Consult a physician if signs of irritation appear  
If skin irritation occurs: Get medical advice/attention
- b) Skin contact  
If on skin, wash skin plenty of water for at least 20 minutes.  
Immediately remove contaminated clothing or shoes, isolate from pollution area  
If on slight skin, prevent spread of pollution part  
Consult a physician if effects occur
- c) Inhalation  
Move person to fresh air area  
provide artificial respiration if breathing is not  
Provide oxygen if breathing is difficult.
- d) Ingestion  
Consult a physician if effects occur
- e) Indication of immediate medical attention and notes for physician  
Ensure that medical personnel are aware of the material(s) involved and take

#### 5. Fire-Fighting measure

- a) Suitable and unsuitable extinguishing media  
Use Dry chemical, carbon dioxide, water,  
In case of extinguishment by smothering Use Dry sand, soil
- b) Specific hazards arising from the chemical  
In case of combustion, Toxic fumes might be formed  
May cause explosion of container, when heated  
The rescuer wear a protective equipment
- c) Special protective equipment and precautions for fire-fighters  
If not danger, move container from fire area  
In case of contact with skin and eye, may cause burn

#### 6. Accidental release measures

- a) Personal precautions, protective equipment and emergency  
Eliminate all ignition sources  
Do not touch spilled material without properly protective equipment  
Stop leak if you can do it without risk  
Use care with the material and condition to avoid
- b) Environmental precautions and protective procedures  
Avoid to discharge in the environmental  
Store away from water supply and drainage  
Absorpt with sand or nonflammable material.
- c) Methods and materials for containment and cleaning up  
All disposal methods must be in compliance with applicable local regulations.

#### 7. Handling and storage

- a) Precautions for safe handling  
Avoid inhalation, Avoid contact with eyes, skin, and clothing  
Contaminated work clothing should not be allowed out of the workplace  
Store and handle in accordance with the existing law and regulation  
Avoid prolonged or repeated exposure
- b) Conditions for safe storage  
Store in a well-ventilated and cold place. Keep container tightly closed.  
Avoid to contact with fire source.

## 8. Exposure controls & personal protection

### a) Control parameters

Domestic regulation

68186-90-3: No data

21645-51-2: No data

25036-25-3: No data

ACGIH (TLV)

68186-90-3: No data

21645-51-2: No data

25036-25-3: No data

Biological exposure regulation

68186-90-3: No data

21645-51-2: No data

25036-25-3: No data

Wash hands before breaks and at the end of workday

Mechanical exhaust required

### b) Appropriate engineering controls

Install a local ventilation

Handle in accordance with good industrial hygiene and safety practice

### c) Personal protective equipment

-Respiratory protection

For greater protection a face piece chemical cartridge respirator is recommended

## 9. Physical and chemical properties

### a) Appearance

physical state

Powder

color

Orange

### b) Odor

Inodorous

### c) Odor threshold

No data

### d) PH

No data

### E) Melting/freezing point

No data

### f) Initial boiling point and boiling range

No data

### g) Flashing point

650 CLOSED CUP

### h) Evaporation rate

No data

### i) Flammability

No data

### j) Upper/lower flammability or explosive limits

No data

### k) Vapor pressure

No data

### L) Solubility

No data

### m) Vapor density

No data

### n) Specific gravity

1.65±0.1

### o) Partition coefficient

No data

### p) Auto-ignition temperature

No data

### q) Decomposition temperature

> 400°C

### r) Viscosity

No data

### s) Formula mass (Mw)

No data

## 10. Stability and reactivity

Stable in recommended conditions

### a) Chemical stability

May cause explosion of container when heated

In case of combustion, irritant, toxic fumes might be formed

Can be poisonous when inhaled

### b) Possibility of hazardous reactions

Isolate from heat, electrical equipment, sparks and open flame

### c) Conditions to avoid

combustibles, reducing agents, irritant, toxic fumes

### d) Hazardous decomposition products

in case of combustion, May produce hazardous corrosive/ toxicity fumes

## 11. Toxicological information

a) Information on the likely route of exposure	In case of short- term exposure, may cause irritant, allergy reaction, stethemia In case of long - term exposure, may cause allergy reaction In case of short- term exposure, may cause diarrhea, sicchasia, vomit May cause skin, eye irritation
b) Health information from short and long -term exposure	
Acute toxic	
Oral	68186-90-3: LD50 > 10000 mg/kg Rat 21645-51-2: LD50 > 5000 mg/kg Rat (oral(rat)) 25036-25-3: LD50 > 2000 mg/kg Rat (Dow Chemical)
Dermal	No data
Inhalation	No data
Skin corrosive/irritant	68186-90-3: Non irritant (rabbit) 21645-51-2: Non irritant 25036-25-3: Irritant : inhalation, skin, eye
Serious eye damage/eye irritation	68186-90-3: Non irritant (rabbit) 21645-51-2: Non irritant 25036-25-3: No data
Respiratory sensitization	No data
Skin sensitization	No data
Carcinogenicity	
OSHA	No data
Labor Department notification	No data
IARC	No data
ACGIH	No data
NTP	No data
EU CLP	No data
Germ Cell Mutagenicity	No data
Reproductive toxicity	No data
Specific target organ toxicity (single exposure)	No data
Specific target organ toxicity (repeated exposure)	21645-51-2 : In case of long-term administration for kidney hypofunction patient, cause hypoparathyroidism and nervous system abnormality
Aspiration hazard	No data

## 12. Ecological information

### a) Aquatic and terrestrial ecotoxicity

#### Fish

68186-90-3: LC50 > 10000 mg/l 96 hr *Leuciscus idus*

21645-51-2: LC50 > 100 mg/l 96 hr 기타 (*Salmo trutta*)

25036-25-3: No data

#### Crustacean

68186-90-3: EC50 > 100 mg/l 48 hr *Daphnia magna*

21645-51-2: EC50 > 100 mg/l 48 hr *Daphnia magna*

25036-25-3: No data

#### Birds

68186-90-3: EC50 > 100 mg/l 72 hr *Scenedesmus subspicatus*

21645-51-2: EC50 > 100 mg/l 72 hr *Selenastrum capricornutum*

25036-25-3: No data

### b) Persistence and degradability

#### Persistence

No data

#### Degradability

No data

### c) Bioaccumulative potential

#### Concentration

21645-51-2: BCF 3.162

#### Bio resolvability

No data

### d) Mobility in soil

No data

### e) Other adverse effects

No data

## 13. Disposal considerations

### a) Disposal method and precaution

Dispose of contents/container to the regulations

## 14. Transport information

### a) UN number

No information classification

### b) UN proper shipping name

No data

### c) Transport hazard class

No data

### d) Packing group

No data

### e) Marine pollution

No data

### f) Special precaution in connection with transport or conveyance

#### Emergency procedure at fire

Not applicable

#### Emergency procedure at leakages

Not applicable

## 15. Regulatory information

a) Occupational safety and health act	68186-90-3: No data 21645-51-2: Administered substance / Special medical examination material (cycle : 12 month) 25036-25-3: No data
b) Toxic chemical control act	68186-90-3: Toxic material 21645-51-2: No data 25036-25-3: No data
c) Safety control dangerous	No data
d) Wastes control act	Specific waste
e) Other requirements in domestic and other countries	
Domestic regulation	
Persistent organic pollutant control act	Not applicable
Other countries	
USA	Not applicable
EU (Classification)	Not applicable
EU (Risk phrases)	Not applicable
EU (Safety phrases)	Not applicable

## 16. Other information

a) Information source and references	ICSC,IUCLID,OECD,QSAR etc.
b) Issuing date	2018-01-01
c) Revision number and date	
Revision no	-
Revision date	-
d) Others	

○ The Written Material safety data sheet is some edited and modified data on reference to the MSDS of Korea occupational safety and health agency.