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| <b>CHEIL INDUSTRIES</b><br>62, Pyoungyo-dong,<br>Yeosu-si, Jeollanam-<br>do, South Korea<br>TEL : (061) 689-1531<br>FAX : (061) 689-1535 | <b>Material Safety Data Sheet</b>                      | File NO.     | MSDS-SC-1100R |
|                                                                                                                                          |                                                        | Issue Date   | 2013.10.30    |
|                                                                                                                                          | <b>GRADE : SC-1100R</b><br><b>CAS No. : 24936-68-3</b> | Revised Date | -             |
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## 1. PRODUCT AND COMPANY IDENTIFICATION

**A. Material:** PC (Polycarbonate)  
CAS No.: 24936-68-3  
RTECS No.:

**A. Chemical name and synonyms:** Polycarbonate Resin  
Poly(oxycarbonyloxy-1,4-phenylene(isopropylidene)-1,4-phenylene)

**B. General characteristics:** Pellet in natural or compounded color

**C. Toxicological classification:** Irritating material

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

|                         |                 |          |
|-------------------------|-----------------|----------|
| <b>A. Polycarbonate</b> | CAS# 24936-68-3 | 99-99.9% |
| <b>B. Anti Oxidant</b>  | -               | 0.1-1.0% |

Substances listed in the ingredients section are chemicals which concentration is more than 0.1% if the substance is on the list of potential carcinogens cited in OSHA Hazard Communication Standard.

### C. Environmentally hazardous substances

None of ingredients contain environmentally prohibited elements such as cadmium, lead and other heavy metals. The possibilities of naturally existing portion of such substances are controlled by Cheil's internal tolerance limits to maintain high level of environmental safety.

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### 3. HAZARD IDENTIFICATION

**A. NFPA ratings (0-4):** Health: 1, Fire: 1 Reactivity: 0

**B. Emergency overview**

Physical status: solid, granule, powder

Main health effects: No major effect on target organs has been reported

Physical danger: Airborne dust may form flammable or explosive mixture with air

**C. Potential health effects:**

|             |                   |                                 |
|-------------|-------------------|---------------------------------|
| Inhalation: | Acute exposure:   | May cause irritation            |
|             | Chronic exposure: | No relevant information found   |
| Skin:       | Acute exposure:   | May cause irritation            |
|             | Chronic exposure: | No relevant information found   |
| Eye:        | Acute exposure:   | May cause irritation            |
|             | Chronic exposure: | No applicable information found |
| Ingestion:  | Acute exposure:   | No applicable information found |
|             | Chronic exposure: | No relevant information found   |

**D. Carcinogenicity**

Occupational Safety and Health Administration (OSHA): None

National Toxicology Program (NTP): None

International Agency for Research on Cancer (IARC): None

### 4. FIRST AID

**A. Inhalation**

Move person to fresh air. Assist breathing if necessary.

Consult a physician

**B. Skin**

Remove contaminated clothing

Wash affected area with mild soap and water until chemicals are completely removed (15-20minutes at least)

Get medical attention if necessary

**C. Eye**

Immediately flush eyes with plenty of water while holding eyelids open

Seek medical attention if irritation persists

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**D. Ingestion**

Material is not expected to be absorbed from the gastrointestinal tract

Do not induce vomiting unless directed to do so by medical personnel

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## 5. FIRE FIGHTING MEASURES

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**A. Fire/explosion hazards**

Airborne dust may form flammable or explosive mixture with air

**B. Flash point: Not applicable**

**C. Auto ignition: above 400°C**

**D. Upper flammability limits/lower flammability limits: Not applicable**

**E. Extinguishing media**

Dry chemical, carbon dioxide, water spray and foam or water fog

**F. Fire fighting instructions**

Keep people away. Isolate fire area and de unnecessary entry. Cool surroundings with water to localize fire zone. Soak thoroughly with water to cool and prevent re-ignition

**G. Hazardous combustion products**

Toxic carbon compounds can be produced during combustion

**H. Fire fighting equipment**

Protective fire fighting clothing (including fire fighting helmet, coat, pants, boots, and gloves), positive-pressure self contained breathing apparatus (SCBA)

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## 6. ACCIDENTAL RELEASE MEASURES

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**A. Protect people**

Isolate area. Keep unnecessary personnel away

**B. Protect the environment**

Keep out of irrigation ditches, sewers, and water supplies. Spills should be collected to prevent contamination of waterways

**C. Cleanup**

Keep unnecessary personnel away. Sweep up

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## 7. HANDLING AND STORAGE

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### A. Handling procedures

Good housekeeping and controlling dusts are necessary for safe handling of products.  
 Avoid friction and keep away from possible ignition sources  
 Earth the dust containers

### B. Storage

Store in cool, dry and well-ventilated place

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### A. Guidelines

No guidelines are enacted by OSHA, ACGIH or NIOSH

### B. Ventilation

Provide supplementary local ventilation to control airborne levels

### C. Exposure controls

- Appropriate engineering controls:  
 A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.
- Individual protection measures, such as personal protective equipment:  
 Respiratory Protection: Use the respirator be given official approval by Korea Occupational Safety & Health Agency. Under conditions of frequent use or heavy exposure, Respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.
- When take shelter (If solid)
  - Dust, mist, fume-purifying respiratory protection
  - Any air-purifying respirator with a corpuscle filter of high efficiency
  - Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
- When take shelter (If liquid)
  - Any chemical cartridge respirator with organic vapour cartridge(s).
  - Any chemical cartridge respirator with a full facepiece and organic vapour cartridge(s).
  - Any air-purifying respirator with a full facepiece and an organic vapour canister.

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- For Unknown Concentration or Immediately Dangerous to Life or Health
  - Self-contained breathing apparatus (pressure-demand or other positive-pressure mode in combination)
  - Supplied-air respirator with full facepiece
  - Eye Protection: Wear primary eye protection such as splash resistant safety goggles with a secondary protection faceshield. Provide an emergency eye wash station and quick drench shower in the immediate work area.
  - Hand Protection: Wear chemical resistant protected gloves.
  - Body Protection: Wear chemical resistant protected clothing.
- Environmental Exposure Controls: Not available

#### **D. Eye protection**

Use safety glasses if there is a potential for exposure to particles  
 Provide eye washer near workplace

#### **E. Skin protection**

Clean body-covering clothing should be needed

#### **F. Protective gloves**

Wear chemical-resistant gloves

#### **G. Respiratory protection**

When respiratory protection is required for certain operations, use approved air-purifying respirator

**ACGIH** = American Conference of Governmental Industrial Hygienists

**NIOSH** = National Institute for Occupational Safety and Health

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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- A. Physical state and appearance:** Pellet in natural or compounded color
- B. Odor:** minimal
- C. Boiling point:** Not applicable
- D. Melting point:** Not Applicable
- E. Specific gravity or density:** 1.17-1.21
- F. Molecular weight:** 10,000-80,000
- G. Chemical formula:**
- H. Vapor pressure:** Not applicable
- I. Vapor density:** Not applicable
- J. Solubility:** Insoluble
- K. pH:** Not applicable

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**L. Evaporation rate:** Not applicable

**M. Solvent solubility**

Soluble: acetone, methyl-ethyl ketone, dichloromethane

Insoluble: alcohol, aliphatic compound solvents, mineral oil

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## 10. STABILITY AND REACTIVITY

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**A. Chemical reactivity:** stable

**B. Conditions to avoid**

Avoid heat, flame, spark and other ignition sources

Avoid contact with incompatible materials

**C. Incompatibility with other materials**

Acids, flammable materials, base, halogenic carbon compounds, oxidizing materials

**D. Hazardous decomposition products**

Upon heating, cyanides, ammonia, acrylonitrile, styrene, carbon oxides, nitrogen

**E. Hazardous polymerization**

Not likely occurs

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## 11. TOXICOLOGICAL INFORMATION

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**A. Acute oral toxicity:** LD50 has not been determined

**B. Acute inhalation toxicity:** LC50 has not been determined

**C. Semi-acute toxicity:** No relevant information found

**D. Chronic toxicity:** No relevant information found

**E. Mutagenicity:** No relevant information found

**F. Carcinogenicity:** No relevant information found

**G. Other toxicity:** No relevant information found

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## 12. ECOLOGICAL INFORMATION

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**A. Mobility:** This product has not been found to migrate through soils

**B. Persistence/degradability:** No relevant information found

**C. Bioaccumulation:** No relevant information found

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### 13. DISPOSAL CONSIDERATIONS

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**A. Regulatory information:** None

**B. Disposal method:**

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

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### 14. TRANSPORTATION INFORMATION

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**A. U.S. Department of Transportation (D.O.T.) Information**

Not regulated as a hazardous material for transportation

**B. Canadian TDG Information**

Not regulated as a hazardous material for transportation

**C. International Air Transport Association (IATA) Regulation**

Not regulated as a hazardous material for transportation

**D. International Maritime Dangerous Goods (IMDG) Code**

Not regulated as a hazardous material for transportation

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### 15. REGULATORY INFORMATION

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**A. U.S regulations**

**TSCA:** on the list

**TSCA 12(b) export notice:** not on the list

**CERCLA 103 (40 CFR 302.4):** not on the list

**SARA 302 (40 CFR 355.30):** not on the list

**SARA 304 (40 CFR 355.40):** not on the list

**SARA 313 (40 CFR 372.65):** not on the list

**SARA Hazard Category, SARA 311/312 (40 CFR 370.21):**

Not to have met any hazard category

**OSHA Hazard Communication Standard (29 CFR 1910.119):**

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.119

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**TSCA** = Toxic Substance Control Act

**CERCLA** = Comprehensive Environmental Response, Compensation,  
and Liability Act

**SARA** = Superfund Amendments and Reauthorization Act

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## 16. OTHER INFORMATION

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**A. Acute oral toxicity:** LD50 has not been determined

**B. Full text of classification(R- and H-Phrases):** Not applicable

**C. Update history:**

Date of issue: 2013.10.30

Date of revision: -

**D. Reference:**

**E. Others**

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