CAT# 21628
Date Updated: Feb. 12, 2011

# MATERIAL SAFETY DATA SHEET

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : **cis-endo-5-Norbornene-2,3-dicarboxylic acid**
Product Number : 21628
CAS-No. : 3853-88-1

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Capot Chemical Co.,Ltd.
Joinhands Science Park, No.4028 Nanhuan Road
Hangzhou, Zhejiang, China 310053
Telephone : 0086-571-85586718
Fax : 0086-571-85864795
E-mail address : sales@capotchem.com

### 1.4 Emergency telephone number

Emergency Phone # : 0086-571-85586718

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

For the full text of the R-phrases mentioned in this Section, see Section 16.

### 2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008**

Hazard statement(s)
Precautionary statement(s)
Supplemental Hazard Statements None

### 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| | | |
|---|---|---|
| Synonyms | : | (1S,2R,3R,4S)-bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid |
| Formula | : | C9H10O4 |
| Molecular Weight | : | 182.17 g/mol |
| CAS-No. | : | 3853-88-1 |
| EC-No. | : | Not available |

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

| Component | | Classification | Concentration |
|---|---|---|---|
| **cis-endo-5-Norbornene-2,3-dicarboxylic acid** | | | |
| CAS-No. | 3853-88-1 | | <= 100 % |
| EC-No. | Not available | | |

**Hazardous ingredients according to Directive 1999/45/EC**

| Component | | Classification | Concentration |
|---|---|---|---|
| **cis-endo-5-Norbornene-2,3-dicarboxylic acid** | | | |
| CAS-No. | 3853-88-1 | | <= 100 % |
| EC-No. | Not available | | |

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendanc.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and /or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

carbon dioxide,nitrogen oxides (NOx),Hydrogen chloride gas

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

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## SECTION 6: Accidental release measures

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. Hygroscopic.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Components with workplace control parameters**

### 8.2 Exposure controls

**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance** | Not available |
| **pH** | Not available |
| **Melting point** | Not available |
| **Boiling point** | Not available |
| **Autoignition Temperature** | Not available |
| **Flash Point** | Not available |
| **Explosion Limits: Lower** | Not available |
| **Explosion Limits: Upper** | Not available |
| **Decomposition Temperature** | Not available |
| **Solubility in water** | Not available |
| **Specific Gravity/Density** | Not available |

### 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Avoid moisture.

### 10.5 Incompatible materials

acids, Acid chlorides, Acid anhydrides, Oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitisation**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals. The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling.

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in

igniting as this material is highly flammable. Offer surplus and nonrecyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

## SECTION 14: Transport information

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

**Full text of H-Statements referred to under sections 2 and 3.**

**Full text of R-phrases referred to under sections 2 and 3.**

**Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Capot Chemical Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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