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## Material Safety Data Sheet

### Hexahydrophthalic anhydride

#### Section 1: Chemical Product and Company Identification

##### 1.1 Product identifiers

**Molecular formula:** C<sub>8</sub>H<sub>10</sub>O<sub>3</sub>

**CAS Nr:** 85-42-7

**EINECS:** 201-604-9

**Molecular weight:** 154.16

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

Identified uses : Hardeners for epoxy resins; Intermediates.

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

**Hefei TNJ Chemical Industry Co.,Ltd.**

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##### 1.3 Contact Information for Emergency: (0086) 551 65418678

#### Section 2: Composition and Information on Ingredients

##### 2.1 Substances

**Common Name:** Hexahydrophthalic anhydride

**Synonyms:** Cyclohexane-1,2-dicarboxylic anhydride; HHPA.

**Formula:** C<sub>8</sub>H<sub>10</sub>O<sub>3</sub>

**Molecular Weight:** 154.16g/mol

Component	Concentration
Hexahydrophthalic anhydride	
CAS-No.: 85-42-7	≧ 99.0% (GC)
EINECS No.: 201-604-9	

### Section 3: Hazards Identification

#### 3.1 Classification of the substance

##### Classification according to Regulation (EC) No 1272/2008[CLP]

Serious eye damage(Category 1)

Respiratory sensitization(Category 1)

Skin sensitization(Category 1)

#### 3.2 GHS Label elements, precautionary statements

Signal word: Danger

##### Hazard statement(s):

H318: Causes serious eye damage.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317: May cause an allergic skin reaction.

##### Precautionary statement(s):

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

#### 3.3 Other hazards

None

### 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 attendance.

##### 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 surgeon.

##### In case of eye contact

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

##### If swallowed

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

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

Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

#### 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 oxides

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

#### 5.4 Further information

No data available

### Section 6: Accidental Release Measures

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

Use personal protective equipment. Avoid forming dust. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

#### 6.2 Environmental precautions

Do not let product enter drains. Discharge into the environment must be avoided.

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

Collect and sweep up, avoid forming dust. Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections

For disposal, please refer to section-13 **DISPOSAL CONSIDERATIONS**.

### Section 7: Handling and Storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid forming dust and aerosol. In places where dust is formed, provide proper ventilation equipment.

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

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

#### 7.3 Specific end uses

No data available

### Section 8: Exposure Controls/Personal Protection

#### 8.1 Control parameters

##### Maximal allowable concentration

No corresponding exposure limit stipulated by the related state.

#### 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**

**Skin protection**

Wear suitable protective gloves.

**Eye/face protection**

Wear safe glasses with protective cover side.

**Skin and body protection**

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

**Respiratory protection**

If exposed to the harmful environment, use respirators and components tested and approved under appropriate government.

**Other protection**

Do not let product enter drains.

## Section 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

a) Appearance: Form: crystalline powder or solid

Color: white

Hazen: ≤50

b) Odour: weak odor

c) pH: no data available

d) Melting point/freezing point: 34-38°C

e) Initial boiling point and boiling range: no data available

f) Upper/lower flammability or explosive limits: no data available

g) Vapour pressure: no data available

h) Vapour density: 1.19 g/cm<sup>3</sup> at 40 °C --lit.

i) Relative density: no data available

j) Water solubility: no data available

k) Partition coefficient: n- octanol/water: no data available

l) Autoignition temperature: no data available

m) Decomposition temperature: no data available

### 9.2 Other safety information

no data available

## Section 10: Stability and Reactivity Data

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under normal conditions of use.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Flames, sparks, and other sources of ignition.

**10.5 Incompatible materials**

Strong oxidizer; Strong acid; Strong base; alkali metals.

**10.6 Hazardous decomposition products**

Other decomposition products - no data available.

## Section 11: Toxicological Information

**11.1 Information on toxicological effects Acute toxicity**

Oral, LD50 : 4040 mg/kg bw (rat);

Inhalation, LC50: > 1100 mg/m<sup>3</sup> (rat).

Dermal, LD50: > 2000 mg/kg bw (rabbit);

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Respiratory or skin sensitization**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

**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**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Signs and Symptoms of Exposure**

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

**Additional Information**

None

## 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**

No data available

**12.6 Other adverse effects**

No data available.

**Section 13: Disposal Considerations**

**13.1 Waste treatment methods**

**Product**

Disposal must be made according to local and national regulations. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**Section 14: Transport Information**

This product is not a hazardous substance.

**14.1 UN number**

Not regulated as hazardous goods.

**14.2 UN proper shipping name**

Not regulated as hazardous goods.

**14.3 Transport hazard class(es)**

Not regulated as hazardous goods.

**14.4 Packaging group**

Not regulated as hazardous goods.

**14.5 Environmental hazards**

ADR/RID: No

IMDG: -

IATA: -No

Marine Pollutant(Yes/No): No

**14.6 Special precautions for user**

No data available

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**

No information available.

**Section 15: Other Regulatory Information**

This safety data sheet complies with the requirements of local laws and regulations.

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

**EINECS:** CAS 85-42-7 is listed in.

Other chemical regulation:

USA/TSCA --listed

Canada/DSL --listed

Australia/AICS --listed

Korea/ECL --listed

Japan/ENCS --listed

China/IECSC --listed

**15.2 Chemical Safety Assessment**

No data available

**Section 16: Other Information**

**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.