

# Material Safety Data Sheet

## Section 1-IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### IDENTIFICATION OF THE SUBSTANCE OR PREPARATION:

PRODUCT NAME:FLUOROBENZENE

CAS#:462-06-6

EC#:207-321-7

Pre-registration#:

### USE OF THE SUBSTANCE/PREPARATION:

Used as chemical intermediate.

### COMPANY/UNDERTAKING IDENTIFICATION:

SHANDONG FUTONG CHEMICAL CO.,LTD.

YANGKOU TOWN,SHOUGUANG CITY,SHANDONG PROVINCE,CHINA.

Telephone:0086-536-5454568

Fax:0086-536-5454568

### EMERGENCY TELEPHONE:-

## Section 2-HAZARDS IDENTIFICATION

Classification of the substance or mixture:

**Highly flammable liquid Category 2**

Eye damnification/ irritation Category 2A



Signal Word :Danger

Hazard Statement:

H225 Highly flammable liquid and vapour

H319 Causes serious eye irritation

Precautionary statements:

P210 Keep away from heat/sparks/open flames/hot surfaces.-No smoking

P214 Use explosion -proof electrical/ventilating/lighting equipment

P243 Take precautionary measures against static discharge

P301+P338 IF IN EYES: Rinse cautiously with water for several minutes.Remove contact lenses , if present and easy to do .Continue rinsing

P303+P361+P353 IF ON SKIN(or hair ):Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower

P370+P378 In case of fire: use dry chemical ,appropriate foam,CO2,water spray for extinction

## Section 4-FIRST AID MEASURES

## **EYE**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If pain persists or recurs seek medical attention.

## **SKIN**

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. If pain persists or recurs seek medical attention.

## **INHALED**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

## **SWALLOWED**

If swallowed, do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical attention.

## **NOTES TO PHYSICIAN**

Treat symptomatically.

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## **Section 5- FIRE FIGHTING MEASURES**

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### **SUITABLE EXTINGUISHING MEDIA:**

Dry chemical, appropriate foam, CO<sub>2</sub>, water spray/water fog.

### **UNSUITABLE EXTINGUISHING MEDIA:**

NONE

### **SPECIAL HAZARDS:**

Liquid and vapour are highly flammable. Vapour forms an explosive mixture with air. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO).

### **SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS.**

Glasses: Chemical goggles

Gloves: Chemical protective gloves.

Respirator: Self-sustained breathing apparatus

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## **Section 6- ACCIDENTAL RELEASE MEASURES**

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### **PERSONAL PRECAUTIONS**

Remove ignition sources. Control personal contact by using protective equipment. Use a spark-proof tool. A vapor suppressing foam may be used to reduce vapors. Personal protective equipments refer to Section 8.

### **METHODS FOR CLEANING UP**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately.

### **ENVIRONMENTAL PRECAUTIONS**

Prevent the material or washing water entering water environment.

## **Section 7- HANDLING AND STORAGE**

### **HANDLING**



DO NOT allow clothing wet with material to stay in contact with skin. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material. Avoid smoking, naked lights or ignition sources. When handling DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. Containers, even those that have been emptied, may contain explosive vapours. Incompatibility information as indicated in Section 10.

#### **STORAGE**

Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storing and handling recommendations. Incompatibility information as indicated in Section 10.

#### **SPECIFIC USE**

None

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### **Section 8- EXPOSURE CONTROLS/PERSONAL PROTECTION**

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#### **EXPOSURE LIMIT VALUES**

ACGIH: None listed

NIOSH: None listed

OSHA: None listed

IOELVS: None listed

WELS: None listed

#### **ENGINEERING CONTROLS**

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### **EXPOSURE CONTROLS**

##### **RESPIRATORY PROTECTION**

Use a European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

##### **HAND PROTECTION**

Use chemical protective gloves (polyethylene, PVC).

##### **EYE PROTECTION**

Use chemical goggles

##### **SKIN PROTECTION**

Wear appropriate protective clothing to prevent skin exposure

##### **ENVIRONMENTAL EXPOSURE CONTROLS**

As much as possible, keep from being washed into surface waters.

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### **Section 9-PHYSICAL AND CHEMICAL PROPERTIES**

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## GENERAL INFORMATION

Clear, colourless liquid with benzene-like odour.

## IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION

**Ph :** Not available

**Flash Point(°C):**-15

**Explosive properties:**Not available

**Vapour Pressure:**19.92kPa(39.4°C)

**Solubility**

**Boiling Point(°C):**82.8

**Flammability(solid or gas):**Not available

**Oxidising properties:**Not an oxidiser

**Relative Density(water=1):**1.025

**Partition coefficient(n-octant/water):**2.27

**Viscosity:**Not available

**Evaporation rate:**Not available

**Freezing/Melting Point:**-41.9 deg C

**Relative vapour density(air=1):**3.31

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## Section 10-STABILITY AND REACTIVITY

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### Chemical stability:

Stable under normal temperatures and pressures

### CONDITIONS AVOID

Ignition sources, excess heat, electrical sparks, exposure to flame.

### HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon monoxide, carbon dioxide, hydrogen fluoride gas

### Hazardous Polymerization:

Not reported.

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## Section 11-TOXICOLOGICAL INFORMATION

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### ACUTE TOXICITY

#### RTECS:

Inhalation, rat: LC50=26908 mg/m<sup>3</sup>

Inhalation, mouse: LC50=45 gm/m<sup>3</sup>/2H

Inhalation, mouse: LC50=45000mg/m<sup>3</sup>/2H

Oral, rat: LD50=4399mg/kg

### SKIN/EYE IRRITATION

Fluorobenzene produced slight to mild erythema in 3 of 6 rabbits 25 hours after treatment. Mild to severe edema was observed in 2 rabbits. At 48 hours, slight to mild erythema was observed in 4 rabbits and slight to mild edema was noted in 3 rabbits. At 72 hours post-treatment, slight to mild erythema was noted in 4 of 6 rabbits and slight to mild edema was observed in 3 rabbits. No other dermal effects were noted. Therefore, fluorobenzene was considered a mild skin irritant.

Instillation of the undiluted liquid into the rabbit eye produced no corneal opacity, mild conjunctival redness with slight chemosis, and moderate blood-tinged discharge in the unwashed eye. Wasgubg if the exposed eye produced more severe effects (slight corneal opacity, moderate ) conjunctival redness with mild chemosis, and copious blood-tinged discharge). The unwashed eye was normal by day 3 post-instillation and the washed eye was normal by day 7. Therefore, fluorobenzene was considered a moderate eye irritant.

### SENSITIZATION



Fluorobenzene does not induce sensitization in the skin of guinea pigs.

#### **MUTAGENICITY**

Not available.

#### **CARCINOGENICITY**

Not listed by ACGIH,NIOSH,NTP,IARC or OSHA.

#### **REPRODUCTIVE TOXICITY**

Not available.

#### **SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSE**

Not available.

#### **SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSE**

Not available.

#### **ASPIRATION HAZARD**

Not available.

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### **Section 12-ECOLOGICAL INFORMATION**

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#### **ECOTOXICITY**

Not available

#### **MOBILITY**

Testing equivalent to a Modified MITI Test 301C indicates that fluorobenzene is not readily biodegradable.

#### **BIOACCUMULATIVE POTENTIAL**

Log Kow of the substance is 2.27. This suggests the potential for bioconcentration in aquatic organisms is low.

#### **RESULTS OF PBT ASSESSMENT**

Not classified as PBT or vPvB.

#### **OTHER ADVERSE EFFECTS**

Not available

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### **Section 13-DISPOSAL CONSIDERATIONS**

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According to the European Waste Catalogue, Waste Codes are not product specific but application specific. Waste Codes should be assigned by the User based on the application in which the product is used.

Recycle wherever possible. Bury or incinerate residue at an approved site. Dispose of in compliance with national, regional, and local provisions.

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### **Section 14-TRANSPORTATION INFORMATION**

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#### **Land transport ADR/RID(cross-border):**

|                      |      |                                |    |
|----------------------|------|--------------------------------|----|
| ADR/RID Class:       | 3    | Hazard identification(Kemler): | 33 |
| UN Number:           | 2387 | Packing Group:                 | II |
| Classification code: | F1   | Hazard Label:                  | 3  |
| Special provisions:  | -    |                                |    |

Shipping Name      FLUOROBENZENE

**Air Transport IATA:**

|                     |               |                    |    |
|---------------------|---------------|--------------------|----|
| ICAO/IATA Class:    | 3             | ICAO/IATA Subrisk: | -  |
| UN Number:          | 2387          | Packing Group:     | II |
| Special provisions: | -             | Hazard Label:      | 3  |
| Shipping Name       | FLUOROBENZENE |                    |    |

**Maritime Transport IMDG:**

|                     |               |                |    |
|---------------------|---------------|----------------|----|
| IMDG Class:         | 3             | IMDG Subrisk:  | -  |
| UN Number:          | 2387          | Packing Group: | II |
| EMS Number:         | F-E,S-D       | Hazard Label:  | 3  |
| Maritime Pollutant: | No            |                |    |
| Shipping Name       | FLUOROBENZENE |                |    |

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**Section 15-REGULATORY INFORMATION**


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**Regulations:** This safety data sheet is in compliance with the following national standards: GB16483-2008, GB13690-2009, GB6944-2005, GB/T15098-2008, GB18218-2009, GB15258-2009, GB6944-2005, GB190-2009, GB191-2009, GB12268-2008, GA57-1993, GB/T 15098-2008, GBZ 2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation [Published by the Ministry of Railways, 2008], Dangerous Chemicals Safety Administrative Regulation [Published by the State Council, 2011], United Nations Regulations on the Transport of Dangerous Goods (UN RTDG).

**Section 16-OTHER INFORMATION**

EU Dangerous substance/Preparations Directives

R11,R36

S16,S25,S51

EU CLP 2008

H225,H319

P210,P241,P243,P301+P351+P338,P303+P361+P353,P370+P378

**ABBREVIATION**

TLV Threshold Limit Value

TWA Time Weighted Average

ES Exposure Standard

IOEIVs Indicative Occupational Exposure Limit Values

WELs Workplace Exposure Limits

STEL Short Term Exposure Limit

RTECS Registry of Toxic Effects of Chemical Substance

IARC International Agency for Research on Cancer

HSBD Hazardous substances data bank

**DISCLAIMER:**

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties

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