

Revision number: 1 Revision date: 07/06/2018

1. IDENTIFICATION

Product name: Product code:

Product use: Restrictions on use:

Company: TCI America 9211 N. Harborgate Street Portland, OR 97203 U.S.A. Telephone: +1-800-423-8616 / +1-503-283-1681 Fax: +1-888-520-1075 / +1-503-283-1987 e-mail: sales-US@TCIchemicals.com www.TCIchemicals.com

2. HAZARD(S) IDENTIFICATION

| OSHA Haz Com: CFR 1910.1200: WHMIS 2015: | Skin Corrosion/Irritation [Category 2] Eye Damage/Irritation [Category 2A] Germ Cell Mutagenicity [Category 2] Flammable Liquids [Category 2] Aquatic Hazard (Acute) [Category 3] Aquatic Hazard (Long-Term) [Category 3] |
|---|--|
| Signal word: | Danger! |
| Hazard Statement(s): | Highly flammable liquid and vapor Causes skin irritation Causes serious eye irritation Suspected of causing genetic defects Harmful to aquatic life Harmful to aquatic life with long lasting effects |

Fluorobenzene

For laboratory research purposes.

Not for drug or household use.

F0034

Pictogram(s) or Symbol(s):



Precautionary Statement(s): [Prevention]

[Response]

[Storage] [Disposal] Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid release to the environment. Wash hands and face thoroughly after handling. Wear protective gloves, protective clothing, face protection. If on skin: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. If exposed or concerned: Get medical advice or attention. In case of fire: Use dry chemical, dry sand or foam to extinguish. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents and container in accordance with local, regional, national regulations (e.g. US: 40 CFR Part 261, EU:91/156/EEC, JP: Waste Disposal and Cleaning Act, etc.). May be harmful if swallowed.

Hazards not otherwise classified: [HNOC] TCI AMERICA SAFETY DATA SHEET

Emergency telephone number:

Chemical Emergencies: TCI America (8:00am - 5:00pm) PST +1-503-286-7624 Transportation Emergencies: Chemtrec 24-Hour +1-800-424-9300 (U.S.A.) +1-703-527-3887 (International) **Responsible department:** TCI America Environmental Health Safety and Security +1- 503-286-7624

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3. COMPOSITION/INFORMATION ON INGREDIENTS

| Substance/mixture: | Substance |
|--------------------|---------------|
| Components: | Fluorobenzene |
| Percent: | >99.0%(GC) |
| CAS RN: | 462-06-6 |
| Molecular Weight: | 96.10 |
| Chemical Formula: | C₀H₅F |

4. FIRST-AID MEASURES

| Description of first aid measures | |
|-----------------------------------|--|
| Inhalation: | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention. |
| Skin contact: | Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention. |
| Eye contact: | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention. |
| Ingestion: | Get medical advice/attention.Rinse mouth. |
| Symptoms/effects: | |
| Acute: | Redness. |
| Delayed: | No data available |

Indication of any immediate medical attention: Not available. Notes to physician: No data available

5. FIRE-FIGHTING MEASURES

| Suitable extinguishing media: Unsuitable extinguishing media: | Dry chemical, foam, water spray, carbon dioxide. Solid streams of water |
|---|---|
| Specific hazards arising from the chemical: Hazardous combustion products: Other specific hazards: | Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. These products include: Carbon oxides Halogenated compounds WARNING: Highly toxic HF gas is produced during combustion. |
| Advice for firefighters: | Wear self-contained breathing apparatus if possible. |

6. ACCIDENTAL RELEASE MEASURES

| Personal precautions, protective equipment and emergency procedures: | Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc. |
|---|--|
| Environmental precautions: Methods and materials for containment and cleaning up: | Prevent product from entering drains. Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. |
| Prevention of secondary hazards: | Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment. |

7. HANDLING AND STORAGE

| Precautions for safe handling: | Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfacesNo smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid all contact! |
|--|--|
| Conditions for safe storage, including a | ny incompatibilities |
| Storage conditions: | Keep container tightly closed. Store in a cool, dark and well-ventilated place. |
| - | Store locked up. |
| | Store away from incompatible materials such as oxidizing agents. |
| Packaging material: | Comply with laws. |

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Appropriate engineering controls: | Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath. |
|-----------------------------------|---|
| Personal protective equipment | |
| Respiratory protection: | Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations. |
| Hand protection: | Impervious gloves. |
| Eye protection: | Safety goggles. A face-shield, if the situation requires. |
| Skin and body protection: | Impervious protective clothing. Protective boots, if the situation requires. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state (20°C): Form: Colour: Odour: Odor threshold: Odour threshold: | Liquid Clear Colorless - Almost colorless Benzene-like No data available No data available | | |
|---|---|---------------------------------------|--------------------|
| Melting point/freezing point: | No data available | pH: | No data available |
| Boiling point/range: | 85°C (185°F) | Vapour pressure: | No data available. |
| Decomposition temperature: | No data available | Vapour density: | 3.31 |
| Relative density: | 1.03 | Dynamic Viscosity: | No data available |
| Kinematic viscosity: | No data available | | |
| Log Pow: | No data available | Evaporation rate(Butyl Acetate=1): | No data available |
| Flash point: | -13°C (9°F) | Autoignition temperature: | No data available |
| Flammability(solid, gas): | No data available | Flammability or explosive limits: | |
| r lannability(cond, guo). | | Lower: | No data available |
| | | Upper: | No data available |
| Solubility(ies): | | | |
| [Water] | Insoluble | | |
| [Other solvents] | | | |
| Miscible: | Ether, Alcohols | | |

10. STABILITY AND REACTIVITY

Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: No data available Stable under proper conditions. No special reactivity has been reported. Spark, Open flame, Static discharge Oxidizing agents Carbon dioxide, Carbon monoxide, Hydrogen fluoride **TCI AMERICA**

11. TOXICOLOGICAL INFORMATION

RTECS Number: DA0800000

| Acute Toxicity: ihl-rat LC50:26908 mg/m ³ orl-rat LD50:4399 mg/kg | | ihl-mus LC50:45 g/m³/2⊦ | I | |
|---|--|--|--|--|
| Skin corrosion/irritation: No data available | | | | |
| Serious eye damage/irritation: No data available | | | | |
| Respiratory or skin sensitization: No data available | | | | |
| Germ cell mutagenicity: No data available | | | | |
| Carcinogenicity: No data available | | | | |
| IARC: No data available | NTP: | No data available | OSHA: | No data available |
| Reproductive toxicity: No data available | | | | |
| Target organ(s): | No data available | | | |
| | | | | |
| 12. ECOLOGICAL INFORMATION | | | | |
| | | | | |
| 12. ECOLOGICAL INFORMATION Ecotoxicity: Fish: | No data available | | | |
| Ecotoxicity: | No data available No data available | | | |
| Ecotoxicity: Fish: | | | | |
| Ecotoxicity: Fish: Crustacea: | No data available | | | |
| Ecotoxicity: Fish: Crustacea: Algae: Persistence / degradability: Bioaccumulative potential(BCF): Mobility in soil Log Pow: | No data available No data available No data available No data available No data available | | | |
| Ecotoxicity: Fish: Crustacea: Algae: Persistence / degradability: Bioaccumulative potential(BCF): Mobility in soil Log Pow: Soil adsorption (Koc): | No data available No data available No data available No data available No data available No data available | | | |
| Ecotoxicity: Fish: Crustacea: Algae: Persistence / degradability: Bioaccumulative potential(BCF): Mobility in soil Log Pow: | No data available No data available No data available No data available No data available | | | |
| Ecotoxicity: Fish: Crustacea: Algae: Persistence / degradability: Bioaccumulative potential(BCF): Mobility in soil Log Pow: Soil adsorption (Koc): Henry's Law (PaM ³/mol): | No data available No data available No data available No data available No data available No data available | | | |
| Ecotoxicity: Fish: Crustacea: Algae: Persistence / degradability: Bioaccumulative potential(BCF): Mobility in soil Log Pow: Soil adsorption (Koc): Henry's Law (PaM ³ /mol): 13. DISPOSAL CONSIDERATIONS | No data available No data available No data available No data available No data available No data available No data available | s if possible. It is the generator's res | | comply with Federal State and |
| Ecotoxicity: Fish: Crustacea: Algae: Persistence / degradability: Bioaccumulative potential(BCF): Mobility in soil Log Pow: Soil adsorption (Koc): Henry's Law (PaM ³/mol): | No data available No data available Recycle to process Local rules and re- and burn in a cher intended to provid with this section en Identification and I be allowed to ente | s if possible. It is the generator's res gulations. You may be able to dissol nical incinerator equipped with an af e assistance but does not replace th nsure regulatory compliance accordi Listing of Hazardous Waste are lister r the environment, drains, water way sed product. Do not re-use empty co | ve or mix ma terburner and ese laws, no ng to the law d in 40 CFR l vs, or the soil | Iterial with a combustible solvent d scrubber system. This section is r does compliance in accordance r. US EPA guidelines for Parts 261. The product should not |

14. TRANSPORT INFORMATION

| <u>DOT (US)</u> UN number: UN2387 | Proper Shipping Name: Fluorobenzene | Class or Division: 3 Flammable liquid | Packing Group: II | |
|---|--|---|----------------------|--|
| IATA UN number: UN2387 | Proper Shipping Name: Fluorobenzene | Class or Division: 3 Flammable liquid | Packing Group: II | |
| IMDG UN UN2387 numb er: | Proper Shipping Name: Fluorobenzene | Class or Division: 3 Flammable liquid | Packing Group: II | |
| EmS number: | F-E, S-D | | | |

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.):

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

| US Federal Regul | ations | | |
|--------------------|-------------------|------------------------|----------------------|
| CERCLA Hazardo | ous substance and | d Reportable Quantity: | |
| SARA 313: | | Not Listed | |
| SARA 302: | | Not Listed | |
| State Degulation | | | |
| State Regulations | | | |
| State Right-to-Kn | | | |
| Massachuset | ts | Listed | |
| New Jersey | | Listed | |
| Pennsylvania | 1 | Listed | |
| California Propos | sition 65: | Not Listed | |
| Other Information | , | | |
| | <u>.</u> | | HMIS Classification: |
| NFPA Rating: | 0 | | |
| Health: | 2 | | Health: |
| Flammability: | 3 | | Flammability: |
| Instability: | 0 | | Physical: |
| International Inve | entories | | |
| Canada: DSL | | On DSL | |
| EC-No: | | 207-321-7 | |
| L0-110. | | 201-321-1 | |
| | | | |

16. OTHER INFORMATION

Revision date: 07/06/2018

Revision number: 1

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.

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