2-Fluoro-6-nitrotoluene

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Description: 2-Fluoro-6-nitrotoluene
Cat No.: L20093
Synonyms: 1-Fluoro-2-methyl-3-nitrobenzene
CAS-No: 769-10-8
Molecular Formula: C7 H6 F N O2
Supplier: Alfa Aesar
Avocado Research Chemicals, Ltd.
Shore Road
Port of Heysham Industrial Park
Heysham, Lancashire LA3 2XY
United Kingdom
Office Tel: +44 (0) 1524 850506
Office Fax: +44 (0) 1524 850608

Emergency Telephone Number
Call Carechem 24 at
+44 (0) 1865 407333 (English only);
+44 (0) 1235 239670 (Multi-language)

E-mail address
uktech@alfa.com
www.alfa.com
Product Safety Department

Recommended Use
Laboratory chemicals.
Uses advised against
No Information available

SECTION 2. HAZARD IDENTIFICATION

Physical State
Liquid
Appearance
Yellow
Odor
Odorless

Emergency Overview
Combustible liquid. Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation.

Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Classification/Effect</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids.</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute Oral Toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute Dermal Toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity - (single exposure)</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label Elements
Signal Word | Warning
---|---
**Hazard Statements**
H227 - Combustible liquid
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation

**Precautionary Statements**
**Prevention**
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

**Response**
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
P330 - Rinse mouth
P362 - Take off contaminated clothing and wash before reuse
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

**Storage**
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Disposal**
P501 - Dispose of contents/ container to an approved waste disposal plant

**Physical and Chemical Hazards**
Combustible material.

**Health Hazards**
Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation.

**Environmental hazards**
Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Fluoro-6-nitrotoluene</td>
<td>769-10-8</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

### SECTION 4. FIRST AID MEASURES

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation
Move to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain medical attention. If not breathing, give artificial respiration.

Ingestion
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms and effects
Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Self-Protection of the First Aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Notes to Physician
Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Extinguishing media which must not be used for safety reasons
No information available.

Specific Hazards Arising from the Chemical
Combustible material. Containers may explode when heated.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions
Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up
Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Remove all sources of ignition.

Refer to protective measures listed in Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

Handling
Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

Specific Use(s)
Use in laboratories

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours

Exposure Controls

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection
Safety glasses with side-shields Goggles (European standard - EN 166)

Hand Protection
Protective gloves

<table>
<thead>
<tr>
<th>Glove material</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile rubber</td>
<td>See manufacturers recommendations</td>
<td>-</td>
<td>EN 374</td>
<td>(minimum requirement)</td>
</tr>
<tr>
<td>Neoprene</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural rubber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection
Long sleeved clothing

Respiratory Protection
Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

Small scale/Laboratory use
Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask: Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls
No information available.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**
Yellow

**Physical State**
Liquid

**Odor**
Odorless

**Odor Threshold**
No data available

**pH**
No information available

**Melting Point/Range**
6.5 - 7 °C / 43.7 - 44.6 °F

**Softening Point**
No data available

**Boiling Point/Range**
97 °C / 206.6 °F

**Flash Point**
88 °C / 190.4 °F

**Evaporation Rate**
No data available

**Flash Point**
Not applicable

**Hazardous Polymerization**
Hazardous polymerization does not occur.

**Conditions to Avoid**

**Materials to avoid**
Strong oxidizing agents.

**Hazardous Decomposition Products**
Carbon monoxide (CO). Carbon dioxide (CO₂).

**SECTION 10. STABILITY AND REACTIVITY**

**Stability**
Stable under normal conditions.

**Hazardous Reactions**
None under normal processing.

**Hazardous Polymerization**
Hazardous polymerization does not occur.

**Explosion Limits**
No data available

**Flash Point**
Not applicable

**Flammable Properties**
explosive air/vapour mixtures possible

**Oxidizing Properties**
explosive air/vapour mixtures possible

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Product Information**

(a) acute toxicity;

(b) skin corrosion/irritation;  Category 2

(c) serious eye damage/irritation;  Category 2
(d) respiratory or skin sensitization; 
   Respiratory  No data available 
   Skin  No data available 

(e) germ cell mutagenicity;  No data available 

(f) carcinogenicity;  No data available 
There are no known carcinogenic chemicals in this product 

(g) reproductive toxicity;  No data available 

(h) STOT-single exposure;  Category 3 
   Results / Target organs  Respiratory system 

(i) STOT-repeated exposure;  No data available 
   Target Organs  None known. 

(j) aspiration hazard;  No data available 

Symptoms / effects, both acute and delayed  Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting 

SECTION 12. ECOLOGICAL INFORMATION 

Ecotoxicity effects  Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants. 

Persistence and Degradability  No information available 

Bioaccumulative Potential  No information available 

Mobility in soil  No information available 

Endocrine Disruptor Information  This product does not contain any known or suspected endocrine disruptors 
Persistent Organic Pollutant  This product does not contain any known or suspected substance 
Ozone Depletion Potential  This product does not contain any known or suspected substance 

SECTION 13. DISPOSAL CONSIDERATIONS 

Waste from Residues / Unused Products  Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations. 

Contaminated Packaging  Dispose of this container to hazardous or special waste collection point. 

Other Information  Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.
SECTION 14. TRANSPORT INFORMATION

Road and Rail Transport Not Regulated

IMDG/IMO Not regulated

IATA Not regulated

Special Precautions for User No special precautions required

SECTION 15. REGULATORY INFORMATION

International Inventories X = listed

<table>
<thead>
<tr>
<th>Component</th>
<th>The Inventory of Hazardous Chemicals (2015 Edition)</th>
<th>List of dangerous goods GB 12268 - 2012</th>
<th>Taiwan Toxic Chemical Substances Inventory</th>
<th>IECSC</th>
<th>EINECS</th>
<th>TSCA</th>
<th>DSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>KECL</th>
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<tbody>
<tr>
<td>2-Fluoro-6-nitrotoluene</td>
<td>-</td>
<td>X</td>
<td>212-203-3</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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</tr>
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</table>

National Regulations

SECTION 16. OTHER INFORMATION

Prepared By Health, Safety and Environmental Department
Creation Date 15-Dec-2011
Revision Date 23-Feb-2018
Revision Summary SDS authoring systems update, replaces ChemGes SDS No. 769-10-8/2.

Training Advice
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.

Legend

- CAS - Chemical Abstracts Service
- EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- IECSC - Chinese Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- ENCS - Japanese Existing and New Chemical Substances
- AICS - Australian Inventory of Chemical Substances
- NZIoC - New Zealand Inventory of Chemicals
2-Fluoro-6-nitrotoluene

WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
PNEC - Predicted No Effect Concentration
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

Key literature references and sources for data
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Disclaimer
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End of Safety Data Sheet