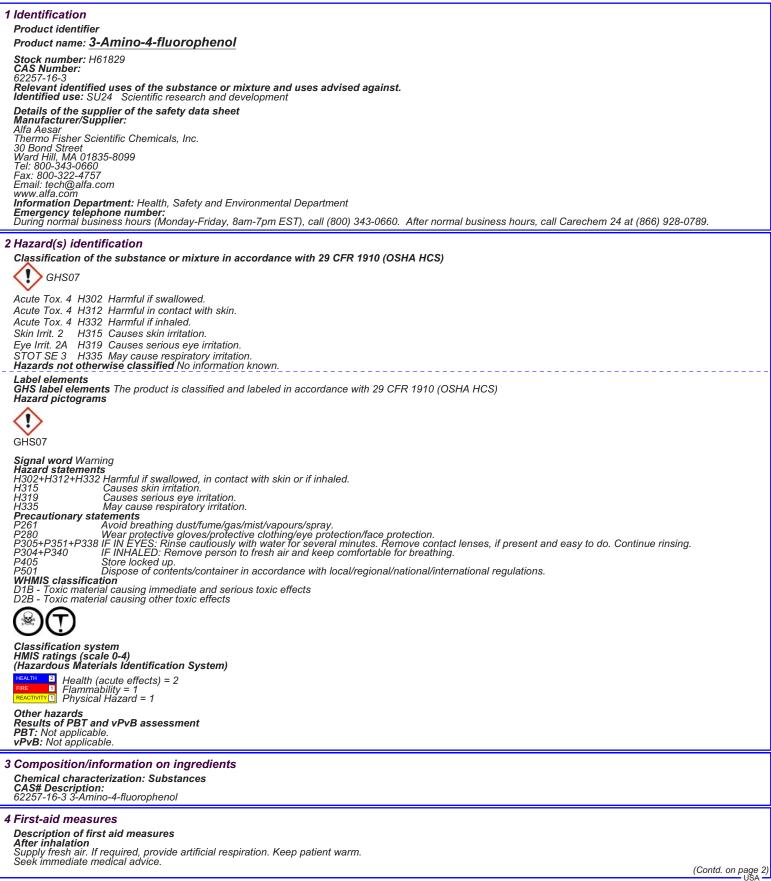


Safety Data Sheet per OSHA HazCom 2012



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Product name: 3-Amino-4-fluorophenol

Product name: 3-AMINO-4-11UOrOphenoi		
After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available.	(Contd. of page 1)	
Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.		
5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Hydrogen fluoride (HF) Nitrogen oxides (NOx) Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.		
6 Accidental release measures		
Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow product to reach sewage system or any water course. Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.		
7 Handling and storage		
Handling Precautions for safe handling Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Information about protection against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Store in cool, dry conditions in well sealed containers. Store in cool, dry conditions in well sealed containers. Specific end use(s) No further relevant information available.		
8 Exposure controls/personal protection		
Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Control parameters Components with limit values that require monitoring at the workplace:		
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Additional information: No data		
Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Remove all four events of a short for the second state of the suitable respirator when high concentrations are present.		
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to de purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Eye protection: Safety glasses Body protection: Protective work clothing.	aerrinne II alf-	
9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Powder		
Color: Yellow-brown Odor: Not determined		
Odor threshold: Not determined.	(Contd. on page 3)	
	USA	

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Product name: 3-Amino-4-fluorophenol		
		(Contd. of page 2
pH-value:	Not applicable.	
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	Not determined Not determined Not determined Not determined Not determined Not determined Not determined.	
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water): Viscosity: dynamic: kinematic: Other information	Not determined. Not determined Not determined Not determined Not determined. Not applicable. Not applicable. Not determined. Not determined. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not applicable.	
10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions Reacts with strong oxidizing agents Conditions to avoid No further relevant information available. Incompatible materials: Oxidizing agents Hazardous decomposition products: Carbon monoxide and carbon dioxide Hydrogen fluoride Nitrogen oxides		
11 Toxicological information		
Information on toxicological effects Acute toxicity: Harmful if inhaled. Harmful if swallowed. Danger through skin absorption. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: Causes skin irritation. Eye irritation or corrosion: Causes serious eye irritation. Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Subscute to chronic toxicity: No effects known. Augustantic toxicity of this substance is not fully known.		

12 Ecological information

Ecological Information
Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: Not applicable.
Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

14 Transport information		
UN-Number DOT, IMDG, IATA	UN2811	
UN proper shipping name DOT IMDG, IATA	Toxic solids, organic, n.o.s. (3-Amino-4-fluorophenol) TOXIC SOLID, ORGANIC, N.O.S. (3-Amino-4-fluorophenol)	
		(Contd. on page 4)

(Contd. on page 4) USA

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Product name: 3-Amino-4-fluorophenol		
	(Contd. of page 3)	
Transport hazard class(es) DOT		
Class	6.1 Toxic substances.	
Label Class	6.1 6.1 (T2) Toxic substances	
Label	6.1	
IMDG, IATA		
$\langle \rangle$		
Class	6.1 Toxic substances.	
Label Packing group	6.1	
Packing group DOT, IMDG, IATA		
Environmental hazards:	Not applicable.	
Special precautions for user EMS Number:	Warning: Toxic substances F-A,S-A	
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Cod	le Not applicable.	
Transport/Additional information:		
DOT Marine Pollutant (DOT):	No	
UN "Model Regulation":	UN2811, Toxic solids, organic, n.o.s. (3-Amino-4-fluorophenol), 6.1, III	
15 Regulatory information		
Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)		
Hazard pictograms		
GHS07		
Signal word Warning Hazard statements H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled. H315 Causes serious eye irritation. H315 Causes serious eye irritation. H316 Causes serious eye irritation. H317 May cause respiratory irritation. Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P304-P331 F1N EVES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304-P330 F1NHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product more state in formulations for commercial purposes. This product is not listed on the Canadian Domestic Substance is not listed. Prop 65 - Chemicals Known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is		
16 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport Association IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Hazardous Materials Identification System (Canada) LC50: Lethal concentration, 50 percent VPVB: very Persistent and very Bioaccumulative VPVB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) (Contd. on page 5		
	- USA	

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Product name: 3-Amino-4-fluorophenol

IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA) Page 5/5 Printing date 11/24/2015 Reviewed on 11/12/2014

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USA -