



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification

#### 1.1 Product identifiers

**Product Name :** 3-Chloro-4-fluoroaniline  
**Cat No.:** AC211530000; AC211530250; AC211531000  
**CAS No. :** 367-21-5

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

**Recommended uses :** Laboratory chemicals  
**Uses advised against:** Food, drug, pesticide or biocidal product use.

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

**Company :** Krishna Solvechem Limited.  
B/503, Sahayog, S. V. Road,  
Kandivali (West), Mumbai – 400067. India.  
**Telephone :** +91-22-6123 0222  
**Email :** exports@kscl.co.in

#### 1.4 Emergency telephone number

**Emergency Phone :** +91-8657457330

### SECTION 2: Hazards identification

#### 2.1 Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral and dermal toxicity	(Category 3)
Skin Corrosion/Irritation	(Category 2)
Serious Eye Damage/Eye Irritation	(Category 2)
Specific target organ toxicity (single exposure)	(Category 3)
Target Organs - Respiratory system.	
Specific target organ toxicity (repeated exposure)	(Category 2)

#### 2.2 Label elements

**Pictogram :**



**Signal word**

Danger

**Hazard statement (s)**

May cause damage to organs through prolonged or repeated exposure



**Precautionary  
statement (s)**

**Prevention**

Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
Harmful if inhaled  
Toxic if swallowed, in contact with skin or if inhaled

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not eat, drink or smoke when using this product  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area

**Inhalation :**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell

**IF ON SKIN (or hair):**

If skin irritation occurs: Get medical advice/attention

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

**Eyes:**

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/attention

**Ingestion:**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth

**Storage:**

Store locked up Store in a well-ventilated place.

Keep container tightly closed

**Disposal:**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### SECTION 3: Composition / information on ingredients

#### 3.1

Component	CAS-No	Weight %
Benzenamine, 3-chloro-4-fluoro-	367-21-5	98

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**If inhalation :** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**In case of skin contact :** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**In case of eye contact :** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Ingestion :** Clean mouth with water. Get medical attention

**4.2 Most important symptoms and effects :** No information available

**4.3 Notes to Physician :** Treat symptomatically

### SECTION 5: Firefighting effects

#### 5.1 Extinguishing media

**Suitable extinguishing media :** Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

**Unsuitable Extinguishing Media: :** No information available

**5.2 Flash Point :** 149 °C / 300.2 °F  
**Method :** No information available



<b>Autoignition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available
<b>Specific Hazards Arising from the Chemical :</b>	Keep product and empty container away from heat and sources of ignition.
<b>Hazardous Combustion Products :</b>	Nitrogen oxides (NO <sub>x</sub> ). Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Gaseous hydrogen fluoride (HF). Hydrogen chloride gas.

- 5.4 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.

**NFPA:**

Health	Flammability	Instability	Physical hazards
3	1	0	N/A

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Use personal protective equipment as required.

### 6.2 Environmental precautions

See section 12 for additional Ecological Information

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

Sweep up and shovel into suitable containers for disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breathe dust



## 7.2 Conditions for safe storage

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Acids. Strong oxidizing agents. Acid anhydrides. Acid chlorides. Chloroformates

## SECTION 8: Exposure controls/personal protection

### 8.1 Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

### 8.2 Exposure controls

#### Personal protective equipment -

##### Eye / Face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

##### Skin protection and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

##### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

##### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice..

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Beige Solid
b) Odour	Odorless
c) Odour Threshold	7 – 10 g/l aq. sol
d) pH	No information available
e) Melting point / freezing point	42 - 47 °C / 107.6 - 116.6 °F
f) Initial boiling point and	230 °C / 446 °F @ 760 mmHg



<b>boiling range</b>	
<b>g) Flash point</b>	149 °C / 300.2 °F
<b>h) Evaporation rate</b>	Not applicable
<b>i) Flammability (solid, gas)</b>	No information available
<b>j) Upper/lower flammability or explosive limits</b>	No data available No data available
<b>k) Vapour pressure</b>	0.09 mbar @ 60 °C
<b>l) Vapour density</b>	Not applicable
<b>m) Specific Gravity</b>	No information available
<b>n) Solubility</b>	No information available
<b>o) Partition coefficient: n octanol/water</b>	No data available
<b>p) Auto-ignition temperature</b>	No information available
<b>q) Decomposition temperature</b>	> 300°C.
<b>r) Viscosity</b>	No information available
<b>s) Molecular formula</b>	C <sub>4</sub> H <sub>9</sub> Br
<b>t) Molecular Weight</b>	137.02

## SECTION 10: Stability and Reactivity

<b>10.1 Reactive Hazard :</b>	None known, based on information available
<b>10.2 Chemical stability :</b>	Stable under normal conditions.
<b>10.3 Possibility of hazardous reactions :</b>	None under normal processing.
<b>10.4 Conditions to avoid :</b>	Incompatible products.
<b>10.5 Incompatible materials:</b>	Acids, Strong oxidizing agents, Acid anhydrides, Acid chlorides, Chloroformates
<b>10.6 Hazardous decomposition products :</b>	Nitrogen oxides (NO <sub>x</sub> ), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Gaseous hydrogen fluoride (HF), Hydrogen chloride gas
<b>10.7 Hazardous Polymerization</b>	Hazardous polymerization does not occur

## SECTION 11: Toxicological information

### 11.1

#### Information on toxicological effects

##### Acute toxicity:

##### Product Information:

##### Component Information

##### Toxicologically Synergistic Products

No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

##### Irritation :

No information available

##### Sensitization:

No information available

##### Carcinogenicity :

The table below indicates whether each agency has Any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Benzenamine, 3-chloro-4-fluoro	367-21-5	Not listed	Not listed	Not listed	Not listed	Not listed

##### Mutagenic Effects:

No information available.

##### Reproductive Effects:

No information available.

##### Developmental Effects :

No information available.

##### Teratogenicity:

No information available.

##### STOT - single exposure :

Respiratory system

##### STOT - repeated exposure:

None known

##### Aspiration hazard :

No information available.

##### Symptoms / effects, both acute and delayed:

No information available

##### Endocrine Disruptor Information :

No information available

##### Other Adverse Effects :

The toxicological properties have not been fully investigated.



## SECTION 12: Ecological information

### 12.1

Ecotoxicity:

**12.2 Persistence and degradability:** Soluble in water Persistence is unlikely based on information Available.

**Bioaccumulation/ Accumulation** No information available

**12.3 Mobility:** Will likely be mobile in the environment due to its water solubility.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## SECTION 14: Transport information

### 14.1 UN number :

DOT : UN2810 TDG : UN2810  
IATA : UN2810 IMDG : UN2810

### 14.2 UN proper shipping name

**IMDG :** Toxic solid, organic, n. o. s.

**IATA :** TOXIC SOLID, ORGANIC, N. O. S. \*

**14.3 Transport hazard class(es)** DOT: 6.1 TDG: 6.1 IMDG: 6.1 IATA: 6.1

**14.4 Packaging group:** DOT: III TDG: III IMDG: III IATA: III

## SECTION 15: Regulatory information

### 15.1 United states of America Inventory:

Component	CAS-No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
Benzenamine, 3-chloro-4-fluoro	367-21-5	X	ACTIVE	-

**Legend:**





X - Listed

**TSCA 12(b)** - Notices of Export                      Not applicable

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan(ISHL), Australia(AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Benzenamine, 3-chloro-4-fluoro-	367-21-5	-	X	206-682-8	X	X	X	-	X	KE-05685

**SARA 313**

Not applicable

See section 2 for more information

Not applicable

Not applicable

Not applicable

Not applicable

This product does not contain any Proposition 65

Not applicable

## Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N



**U.S. Department of Homeland Security** - This product does not contain the any DHS Chemicals.

**Other International Regulations**

**Mexico – Grade**

No information available

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

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Benzenamine, 3-chloro-4-fluoro-	367-21-5	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Benzenamine, 3-chloro-4-fluoro-	367-21-5	Not applicable	Not applicable	Not applicable	Not applicable

**SECTION 16: Other information**

<b>16.1 Prepared By:</b>	Regulatory affairs Krishna Solvechem Limited
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<b>Revision Date:</b>	19-Jan-2023
<b>Print Date:</b>	19-Jan-2023
<b>Revision Summary:</b>	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 C F R 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**16.2 Disclaimer:**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.