



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : 2,3-Difluoro-5-chloropyridine

CAS No. : 89402-43-7

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 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)

Flammable liquids	(Category 3)
Acute toxicity, oral	(Category 4)
Chronic aquatic toxicity	(Category 3)

2.2 Label elements

Pictogram :



Signal word Warning

Hazard statement (s) Flammable liquid and vapor. Harmful if swallowed. Harmful to aquatic life with long lasting effects

precautionary statements(s) Avoid release to the environment

other hazards None



SECTION 3: Composition / information on ingredients

3.1

Component	CAS-No	Weight %
2,3-Difluoro-5-chloropyridine	89402-43-7	<=100

SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice:	If symptoms persist, call a physician.
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 :	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician
4.2 Most important symptoms and effects :	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
4.3 Notes to Physician :	Treat symptomatically

SECTION 5: Firefighting effects

5.1 Extinguishing media

Suitable extinguishing media :	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media: :	No information available
5.2 Flash Point :	No information available
Method :	No information available



Autoignition Temperature:	No information available
Explosion Limits:	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available
Specific Hazards Arising from the Chemical :	Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Hydrogen fluoride
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.
5.5 Further information :	Use water spray to cool unopened containers

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.



7.2 Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature 2 - 8 °C Storage class (TRGS 510): Flammable Liquids

SECTION 8: Exposure controls/personal protection

8.1 Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2 Exposure controls

Personal protective equipment -

Eye / Face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN14387) respirator cartridges as a backup to engine protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: Liquid
b) Odour	No information available
c) Odour Threshold	No information available
d) pH	No information available
e) Melting point / freezing point	No data available
f) Initial boiling point and	135 - 136 °C at 1,013 hPa



boiling range	
g) Flash point	No data available
h) Evaporation rate	No information available
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	No data available No data available
k) Vapour pressure	No data available
l) Vapour density	5.16 - (Air = 1.0)
m) Relative density	1.442 g/cm ³ at 25 °C
n) Solubility	No information available
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	No information available
q) Decomposition temperature	No data available
r) Viscosity	No information available
s) Molecular formula	C ₅ H ₂ ClF ₂ N
t) Molecular Weight	149.53 g/mol

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	No data available
10.2 Chemical stability :	Stable under normal conditions.
10.3 Possibility of hazardous reactions :	No data available
10.4 Conditions to avoid :	Heat, flames and sparks
10.5 Incompatible materials:	Strong oxidizing agents
10.6 Hazardous decomposition products :	Carbon Oxides, Nitrogen oxides (NO _x), Hydrogen chloride gas, Hydrogen fluoride
10.7 Hazardous Polymerization	No data available



SECTION 11: Toxicological information

11.1

Information on toxicological effects

Acute toxicity:

Product Information: No acute toxicity information is available for this product

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 : IARC : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

Mutagenic Effects: No information available.

Reproductive Effects: No information available.

Developmental Effects : No information available.

Teratogenicity: No information available.

STOT - single exposure : None known

STOT - repeated exposure: None known

Aspiration hazard : No information available.

Symptoms / effects, both acute and delayed: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information : No information available

Other Adverse Effects : The toxicological properties have not been fully investigated.



SECTION 12: Ecological information

12.1 Toxicity:	No data available
12.2 Persistence and degradability:	No information available
Bioaccumulation/ Accumulation	No information available
12.3 Mobility:	No data available
12.4 Other adverse effects	Harmful to aquatic life with long lasting effects

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 :	ADR/RID: 1993 IMDG: 1993 IATA: 1993
14.2 UN proper shipping name	
ADR/RID :	FLAMMABLE LIQUID, N. O. S.
IMDG :	FLAMMABLE LIQUID, N. O. S.
IATA :	Flammable liquid, n. o. s.
14.3 Transport hazard class(es)	ADR/RID: 3 IMDG: 3 IATA: 3
14.4 Packaging group:	ADR/RID: III IMDG: III IATA: III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006
- 15.2 Chemical safety assessment**
For this product a chemical safety assessment was not carried out.



SECTION 16: Other information

16.1 Prepared By:	Regulatory affairs Krishna Solvechem Limited
Email:	exports@kscl.co.in
Creation Date:	23-Mar-2012
Revision Date:	19-Jan-2023
Print Date:	19-Jan-2023
Revision Summary:	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.

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1-Bromo-2-methylpropane	-	X	-	-	-