An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name : 2-Fluoro-4-bromo pyridine, 97% Product Code: F 1476 CAS-No.: 128071-98-7

1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet
Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email info@ottokemi.com

1.4. Emergency telephone number Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Acute toxicity, (Category 4) Skin irritation, (Category 2) Serious eye damage, (Category 1) Specific target organ toxicity single exposure, (Category 3), Respiratory system 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Hazard Statements H302 H315 H318 H335 Precautionary Statements P261 P264 P280 P301 + P312 P302 + P352

P305 + P351 + P338

Supplemental Hazard Statements Reduced Labeling (<= 125 ml) Pictogram Signal Word Hazard Statements H318 Precautionary Statements P305 + P351 + P338

- H302: Harmful if swallowed. H315: Causes skin irritation.
- H318: Causes serious eye damage

H335: May cause respiratory irritation.

Danger

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

Avoid breathing mist or vapors. Wash skin thoroughly after handling. Wear protective gloves/ eye protection/ face protection. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Danger

none

Causes serious eye damage.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. none

DISCLAIMER

Supplemental Hazard

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Statements

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances Formula : 0

Formula : C5H3BrFN Molecular weight : 175,99 g/mol CAS-No. : 128071-98-7

Component	Classification	Concentration
4-Bromo-2-fluoropyridine		
CAS-No. 128071-98-7	Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1;	<= 100 %
	STOT SE 3; H302, H315, H318, H335	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures General advice Show this material safety data sheet to the doctor in attendance. If inhaled After inhalation: fresh air. In case of skin contact In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower In case of eye contact After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses. If swallowed After swallowing: immediately make victim drink water (two glasses at most). Consult a physician. 4.2 Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 4.3 Indication of any immediate medical attention and special treatment needed No data available **SECTION 5: Firefighting measures** 5.1 Extinguishing media Suitable extinguishing media Water Foam Carbon dioxide (CO2) Dry powder Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NOx) Hydrogen bromide gas

Hydrogen fluoride

Combustible.

Vapors are heavier than air and may spread along floors.

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire. 5.3 Advice for firefighters Stav in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. 5.4 Further information Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system. **SECTION 6: Accidental release measures** 6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8. 6.2 Environmental precautions Do not let product enter drains. 6.3 Methods and materials for containment and cleaning up Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area. 6.4 Reference to other sections For disposal see section 13. **SECTION 7: Handling and storage** 7.1 Precautions for safe handling Advice on protection against fire and explosion Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Hvgiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Storage class Storage class (TRGS 510): 10: Combustible liquids 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated **SECTION 8: Exposure controls/personal protection** 8.1 Control parameters Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles Skin protection required . Body Protection protective clothing Respiratory protection required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to

the used respiratory protection system.

Recommended Filter type: Filter type ABEK

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical propertiesa) Physical stateb) Color

c) Odor d) Melting point/freezing point e) Initial boiling point and boiling range f) Flammability (solid, gas) g) Úpper/lower flammability or explosive limits h) Flash point i) Autoignition temperature i) Decomposition temperature k) pH I) Viscosity m) Water solubility n) Partition coefficient: n-octanol/water o) Vapor pressure p) Density Relative density q) Relative vapor density r) Particle characteristics

s) Explosive properties t) Oxidizing properties 9.2 Other safety information Relative vapor density

SECTION 10: Stability and reactivity

10.1 Reactivity
Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
Strong heating.
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
In the event of fire: see section 5

DISCLAIMER

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

liquid No data available No data available No data available

No data available

No data available

No data available

71,1 °C - closed cup No data available

No data available

No data available Viscosity, kinematic: No data available Viscosity, dynamic: No data available No data available log Pow: 1,937

No data available 1,713 g/cm3 at 25 °C No data available No data available

No data available

No data available No data available

6,08 - (Air = 1.0)

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:
Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg
Inhalation LC50 Rat: > 50mg/L.
Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.
Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).
Special Remarks on Toxicity
to Animals: Not available.
Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

	logical information			
12.1 Toxicity				
No data available	and the same distribution			
12.2 Persistence a	nd degradability	A A		
No data available				
12.3 Bioaccumulati	ve potential			
No data available				
12.4 Mobility in soil				
No data available				
	T and vPvB assessment			
This substance/mix	ture contains no components considere	ed to be either persistent,		
	nd toxic (PBT), or very persistent and ve	ry bioaccumulative (vPvB) at		
levels of 0.1% or hi				
12.6 Endocrine dis	rupting properties			
Product:				
Assessment : The substance/mixture does not contain components				
considered to have endocrine disrupting properties				
according to REACH Article 57(f) or Commission				
Delegated regulation (EU) 2017/2100 or Commission				
	Regulation (EU) 2018/605 at levels of	0.1% or higher.		
12.7 Other adverse	effects			
No data available				
SECTION 13: Disp	oosal considerations			
13.1 Waste treatme				
No data available				
SECTION 14: Tran	sport information	- the		
14.1 UN number				
ADR/RID: -		IMDG: -	IATA: -	
14.2 UN proper shi	pping name			
ADR/RID .	Not dangerous goods			
IMDG	: Not dangerous goods			
IATA	: Not dangerous goods			
14.3 Transport haz				
ADR/RID: -		IMDG: -	IATA: -	
14.4 Packaging gro	and			
ADR/RID: -	- - F	IMDG: -	IATA: -	
14.5 Environmenta	l hazards			
ADR/RID: no		IMDG Marine pollutant: no	IATA: no	
14.6 Special preca	utions for user			
No data available				
Further information	: No data available			
SECTION 15: Reg	ulatory information	an and the fact the		

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

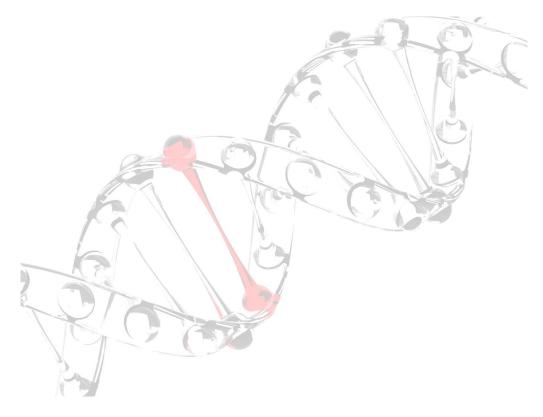
An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work. 15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.



DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.