

A. GENERAL INFORMATION

This product safety summary is intended to provide a general overview of the chemical substance in the context of ICCA global product strategy. It is not intended to provide emergency response, medical or treatment information nor to provide an overview of all safety and health information. This summary is not intended to replace the Safety Data Sheet. For detailed guidance on the use or regulatory status of this substance, please refer the Safety Data Sheet.

Company Name	M/s GUJARAT FLUORO CHEMICALS LIMITED
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Business Phone	+91 – 2678 – 248107, 248152
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Web Site	www.gfl.co.in

B. CHEMICAL PRODUCT IDENTIFICATION:

Product Name	3,4-Difluoronitrobenzene
Synonyms	3,4-Difluoronitrobenzene
IUPAC Name	3,4-Difluoronitrobenzene
CAS NO	369-34-6
E C No	206-718-2
Molecular Formula	C ₆ H ₃ F ₂ NO ₂

C. USES AND APPLICATIONS:

- ✓ 3,4-Difluoronitrobenzene was used in the preparation of xanthenes and acridones

D. PHYSICAL / CHEMICAL PROPERTIES:

Properties	Value
Physical state and appearance	Clear colorless to Light yellow liquid
Odor	Not available
Molecular Weight	159.09
Color:	Light yellow liquid
PH (1% soln /water)	NA
Boiling Point	81°C at 14 mmHg

Melting Point	NA
Flash Point	80°C
Critical Temperature	Not available.
Relative Density	1.441
Vapor Pressure	Not available.
Vapor Density	5.49
Volatility	Not available.
Odor Threshold	Not available.
Water/Oil Dist. Coefficient	Not available.
Ionicity (in Water)	Not available
Dispersion Properties	Not available

E. HAZARD IDENTIFICATION:

This chemical is considered hazardous by the Regulation (EC) No. 1272/2008 [CLP]

Effect	Value
Acute toxicity	Harmful if inhaled, Harmful in contact with skin, Harmful if swallowed.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes eye irritation.
Respiratory or skin sensitization	Not Available
Germ cell mutagenicity	Not Available
Carcinogenicity	Not Available
Reproductive toxicity	Not Available
Specific target organ toxicity – single exposure	May cause respiratory tract irritation.
Specific target organ toxicity repeated exposure	Not Available
Acute inhalation toxicity	Not Available
Aspiration hazard	Not Available
Additional Information	Not Available

F. ENVIRONMENTAL EFFECTS

Effect	Value
Toxicity : Toxicity to fish - static test LC50 - Leuciscus idus (Golden orfe)	No data available

Toxicity to daphnia and other aquatic invertebrates - static test EC50 Daphnia magna (Water flea)	No data available
Toxicity to bacteria EC10 - Pseudomonas putida	No data available
Persistence and degradability Biodegradability aerobic - Exposure time 28 d	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	No data available
Other adverse effects	No data available.

G. EXPOSURE

Effect	Value
Precautions for safe handling	Combustible liquid , Avoid breathing dusts/mist/vapors/spray. Avoid contact with eyes and skin. Do not ingest. Handle product only in closed system or provide appropriate exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharges, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.
Protection against fire and explosion	Wear self contained breathing apparatus pressure-demand, (approved or equivalent) protective gear to prevent contact with skin and eyes.
Conditions for safe storage, including any incompatibilities	Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.
Further information on storage conditions	Keep container tightly closed and dry; store in a cool place. Keep container in a well-ventilated place. Protect against moisture. Protect from direct sunlight.

H. RISK MANAGEMENT MEASURES

Effect	Value
Eye/face protection	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard. Face shield should be of minimum 8inch.
Skin protection	Wear appropriate gloves and clothing to prevent skin exposure
Body Protection	Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	A NIOSH or CEN approved air purifying respirator with an appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited to airborne that are typically within 10 times the exposure limit. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHAs 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.

I. PERSONAL PROTECTIVE EQUIPMENT AND EMERGENCY MEASURES

- ✓ Control parameters
- ✓ Components with workplace control parameters
- ✓ Exposure controls
- ✓ Appropriate engineering controls
- ✓ Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating /lighting/equipments.

J. ACCIDENTAL RELEASE MEASURES

- ✓ **Personal precautions, Protective equipment and Emergency procedures:** Remove all sources of ignition. Take precautionary measures against static discharge. Use personal protective equipment. Do not breathe the vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentration. Vapours can accumulate in low areas.
- ✓ **Methods and material for contaminant and cleaning up:** Sock up for inert absorbent material (e.g. sand, silica gel, acid binder, universal binder sawdust) Keep in suitable closed


containers for disposal. Remove all source of ignition. Use spark proof too and explosion proof equipment.

- ✓ **Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

K. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Water spray, Carbon dioxide (CO ₂), dry chemical, chemical foam. Water mist can be used to cool the closed containers.
Unsuitable Extinguishing Media	Not available

L. CLASSIFICATION AND LABELLING

Pictogram	
Signal word	Warning
Unsuitable Extinguishing Media	Not available
Hazard Statement	<p>H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled</p> <p>H315 Causes skin irritation</p> <p>H319 Causes serious eye irritation</p> <p>H335 May cause respiratory irritation</p>
Precautionary Statement	<p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P270 Do not eat, drink or smoke while using this product.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>P264 Wash face, hands and any exposed skin thoroughly after handling.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P312 Call a POISON CENTRE or doctor/physician if you feel unwell.</p> <p>P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in comfortable position for breathing.</p>

	<p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container to an approved waste disposal plant.</p>
Signal word	Warning

M. BASIC TRANSPORT INFORMATION

UN Number	UN2810
UN Proper Shipping Name	TOXIC LIQUIDS, ORGANIC, N.O.S. (3,4-Difluoronitrobenzene)
Transport hazard class (es)	6.1
Packaging Group	III
Environmental hazards	Not available

N. REGULATORY INFORMATION

- ✓ Chemical safety assessment: For this product a chemical safety assessment was not carried out

International Inventories	Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture
TSCA	-
EINECS/ ELINCS	Complies
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS KECL	-
Legend	
TSCA	United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL	Domestic Substances List/ Non-Domestic Substances List

EINECS/ELINCS	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
PICCS	Philippines Inventory of Chemicals and Chemical Substances
ENCS	Japan Existing and New Chemical Substances
IECSC	China Inventory of Existing Chemical Substances
AICS	Australian Inventory of Chemical Substances
KECL	Korean Existing and Evaluated Chemical Substances

O. CONCLUSIONS

- ✓ It is used in the preparation of xanthenes and acridones
- ✓ By applying the appropriate Risk Management measures the concentrations to be expected at workplaces and to the general public are below recommended exposure limits.

P. CONTACT INFORMATION

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Q. DISCLAIMER

- ✓ The above information and recommendations provided in GPS safety summary only concern to the specific product as described above and may not apply for the same material if used in combination with any other material or any process.
- ✓ They are in good faith as recommendations only and based on data which is available globally. GFL (Gujarat Fluorochemicals Ltd not imply any guarantee concerning the accuracy and validity and accepts no responsibility for any damage or loss that might arise in connection with then use of this material.