



ETHYL DIFLUOROACETATE

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
Address	Survey No 16/3, 26, 27, Ranjitnagar Pin-389 380, Tal. Ghoghamba, Dist. Panchmahals, Gujarat, India
Business Phone	+91 – 2678 – 248107, 248152
Business Fax	+91 – 2678 – 248153
Web Site	www.gfl.co.in

B. CHEMICAL PRODUCT IDENTIFICATION:

Product Name	ETHYL DIFLUOROACETATE
Synonyms	Difluoroacetic acid ethyl ester
IUPAC Name	Ethyl 2,2-difluoroacetate
CAS NO	454-31-9
E C No	207-223-4
Molecular Formula	C ₄ H ₆ F ₂ O ₂

C. USES AND APPLICATIONS:

- ✓ Used in pharmaceutical intermediates, pesticide intermediates
- ✓ Synthesis of antimalarial chloroquine and quinoline piperazine)
- ✓ It is used in the production of co-polymers, esters, amides, methacrylates, acrylonitrile, maleates, vinyl acetate, vinyl chloride, vinylidene chloride, styrene, butadiene and unsaturated polyester.



ETHYL DIFLUOROACETATE

D. PHYSICAL / CHEMICAL PROPERTIES:

Properties	Value
Physical state and appearance	Clear Colourless to pale yellow liquid
Odor	Sweet odour
Molecular Weight	124.09 g/mole
Color:	Clear colourless liquid.
PH (1% soln /water)	Not Available
Boiling Point	99.83°C / @ 1013.7 hPa
Melting Point	-46°C
Flash Point	19° C @ 1013.7 hPa
Critical Temperature	Not available
Relative Density	1.168g/cm ³ at 25°C
Vapor Pressure	30.03 hPa at 20.03 °C
Vapor Density	No information available
Volatility	Not available.
Odor Threshold	Not available.
Water/Oil Dist. Coefficient	Log Pow = 0.87 at 25°C
Ionicity (in Water)	Not available
Dispersion Properties	Not available

E. HAZARD IDENTIFICATION:

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

Effect	Value
Acute toxicity	Oral LD50- >2000 mg/kg
Skin corrosion/irritation	Causes severe skin burns
Serious eye damage/eye irritation	Causes serious eye damage
Respiratory or skin sensitization	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	No information available



ETHYL DIFLUOROACETATE

Reproductive toxicity	No information available
Specific target organ toxicity – single exposure	No information available
Specific target organ toxicity repeated exposure	No information available
Acute inhalation toxicity	Somnolence, after a latency period: Lung oedema
Aspiration hazard	No information available
Additional Information	No information available

F. ENVIRONMENTAL EFFECTS

Effect	Value
Toxicity	Toxicity to daphnia and other aquatic invertebrate EC50-1.17 mg/L
Persistence and degradability	Not Available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	Not Available
Other adverse effects	Not Available

G. EXPOSURE

Effect	Value
Precautions for safe handling	Flammable liquid! Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. 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. Take precautionary measures against static discharges.
Protection against fire and explosion	Wear self contained breathing apparatus for fire fighting if necessary.
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.



ETHYL DIFLUOROACETATE

Further information on storage conditions	Keep container tightly closed and dry; store in a cool place. Keep container in a well-ventilated place.
--	---

H. RISK MANAGEMENT MEASURES

Effect	Value
Eye/face protection	Tightly fitting safety goggles. Face shield (8-inch minimum). 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. Aldrich - 264377. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
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.

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


- ✓ Use proper personal protective equipment (pl refer MSDS)
- ✓ Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.
- ✓ Methods and materials for containment and cleaning up
- ✓ Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations .Keep in suitable, closed containers for disposal.

ETHYL DIFLUOROACETATE

K. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Carbon dioxide (CO ₂), dry chemical, chemical foam. Water mist can be used to cool the closed containers.
-------------------------------------	---

L. CLASSIFICATION AND LABELLING

Pictogram	
Hazard Statement	<p>H225 Highly flammable liquid and vapor H314 causes severe skin burns and eye damage H411 Toxic to aquatic life with long lasting effect</p>
Precautionary Statement	<p>P210 Keep away from heat/spark/open flames/hot surfaces. P233 Keep container tightly closed. P240 Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/.../equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/eye protection/ face protection. P264 Wash hands/face thoroughly after handling. P370+P378 In case of fire use extinguishing media appropriate local surrounding and circumstances to extinguish P310 Immediately call a POISON CENTRE/doctor/... P301+P330+P338 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P363 Wash contaminated clothing before reuse. P321 Specific treatment (see ... on this label) P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/container to an approved waste disposal plant.</p>
Hazard signal	Danger




ETHYL DIFLUOROACETATE

M. BASIC TRANSPORT INFORMATION

UN Number	UN2924
1 UN Proper Shipping Name	Flammable liquid, corrosive, n.o.s. (Ethyl difluoroacetate)
Transport hazard class (es)	3
Packaging Group	II
Environmental hazards	Yes

N. REGULATORY INFORMATION

International Inventories	Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture
TSCA	Complies
EINECS/ ELINCS	Complies
DSL/NDSL	Complies
PICCS	-
ENCS	Complies
IECSC	-
AICS	Complies
KECL	Complies
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

	GUJARAT FLUORO CHEMICALS LIMITED GLOBAL PRODUCT STRATEGY SAFETY SUMMARY	PAGE 7 of 7 ISSUED : 28.08.2020 REVISION : 00
	ETHYL DIFLUOROACETATE	

Chemical Safety Assessment	For this product a chemical safety assessment was not carried out
-----------------------------------	---

O. CONCLUSIONS

- ✓ Used in pharmaceutical intermediates, pesticide intermediates
- ✓ Synthesis of antimalarial chloroquine and quinoline piperazine)

P. CONTACT INFORMATION

Company Name	M/s GUJARAT FLUORO CHEMICALS LIMITED
Address	Survey No 16/3, 26, 27, Ranjitnagar Pin-389 380, Tal. Ghoghamba, Dist. Panchmahals, Gujarat, India
Business Phone	+91 – 2678 – 248107, 248152
Business Fax	+91 – 2678 – 248153
Web Site	www.gfl.co.in

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.