



CF PLUS CHEMICALS
Fluoroalkylation and bioconjugation

www.cfplus.cz

MATERIAL SAFETY DATASHEET

According to regulation (EC) No. 453/2010

Revision Date: 23.09.2020

Creation date: 23.09.2019

Version:1.0.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name:	N-Difluoromethyltributylammonium chloride
Brand:	CF Plus Chemicals
Cat. No.:	DMF001
CAS No.:	1004517-48-9

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

Identified uses:	Laboratory chemicals, Manufacture of substances
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1.3 Details of the supplier of the safety data sheet

Company:	CF Plus Chemicals, s.r.o. Karásek 1767/1 621 00 Brno – Řečkovice Czech Republic
Telephone:	+420 606 117 375
E-mail address:	sales@cfplus.cz

1.4 Emergency telephone number

Emergency phone:	+420 228 880 039 (CHEMTREC) +420 224 919 293 / +420 224 915 402 (Toxicological Information Centre)
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SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008

Skin irrit. (Category 2),	H315
Serious eye irritation (Category 2),	H319
STOT – SE, Respiratory tract irritation (Category 3),	H335

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

2.2 Label elements

Labelling according Regulation (EC) No. 1272/2008

Pictogram



Signal word

Warning

Hazard statements

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statements

P261

Avoid breathing

dust/fume/gas/mist/vapours/spray.

P264

Wash hands thoroughly after handling.

P280

Wear protective gloves/protective
clothing/eye protection/face protection.

P302 + P352

IF ON SKIN: Wash with plenty of soap and
water.

P304 + P340

IF INHALED: Remove victim to fresh air
and Keep at rest in a position 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.

P312

Call a POISON CENTER or doctor/physician
if you feel unwell.

2.3 Other hazards

No.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms:	Difluoromethyl tributylammonium chloride, Difluoromethylation reagent
Formula:	C ₁₃ H ₂₈ ClF ₂ N
Molecular weight:	271.82 g/mol
CAS-No.:	1004517-48-9

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

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. 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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides, Hydrogen fluoride, Hydrogen chloride.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. 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.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature -20 °C. Handle and store under inert gas. Heat and moisture sensitive.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protections

8.1 Control parameters

No data available

8.2 Exposure control

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166. 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. The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

a) Form	Powder
b) Colour	White to off-white
c) Odour	No data available
d) Odour Threshold	No data available
e) pH	No data available
f) Melting point/Freezing point	No data available
g) Initial boiling point and boiling range	No data available
h) Flash point	No data available
i) Evaporation rate	No data available
j) Flammability (solid, gas)	No data available
k) Upper/lower flammability or explosive limits	No data available
l) Vapour pressure	No data available
m) Vapour density	No data available
n) Relative density	No data available
o) Water solubility	No data available
p) Partition coefficient: n-octanol/water	No data available
q) Auto-ignition temperature	No data available
r) Decomposition temperature	No data available
s) Viscosity	No data available
t) Explosive properties	No data available
u) Oxidizing properties	No data available

Other safety information

Surface pension

No data available

Relative vapour density

No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

Reactive towards reducing agents, low valent transition metal compounds, metals, bases, thiols and other good nucleophiles.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Avoid contact with reductants, metals, acids and bases. Possibility of decomposition.

10.4 Conditions to avoid

Avoid contact with reductants, metals, acids and bases. Possibility of decomposition.

10.5 Incompatible materials

Reductants, acids and bases, metals, low valent transition metal compounds.

10.6 Hazardous decomposition products

Nitrogen oxides, carbon oxides, hydrogen fluoride, hydrogen chloride.

In the event of fire: see section 5.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute toxicity

No data available.

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenetic

No data 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.

Reproductive toxicity

No data available.

Specific target organ toxicity – single exposure

Inhalation – may cause respiratory irritation.

Specific target organ toxicity – repeated exposure

No data available.

Aspiration hazard

No data available.

Additional Information

RTECS: No data available.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 (REACH)

Regulation (EC) No. 1907/2008 (CLP)

Regulation (EC) No. 453/2010

Regulation (EU) No. 830/2015

15.2 Chemical safety assessment

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.

SECTION 16: Other information

a) Changes in the revision

b) List of abbreviations

CAS	Chemical Abstracts Service
MSDS	Material Safety Data Sheet
IARC	International Agency for Research on Cancer
RTECS	Registry of Toxic Effects of Chemical Substances
PBT/vPvB	(persistent, bioaccumulative and toxic) (very persistent and very bioaccumulative)
ADR/RID	European Agreements Concerning the International Carriage of Dangerous Goods by Rail (RID) and Road (ADR)
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
STOT – SE	Specific target organ toxicity – single exposure

e) Full text of H and P Statements referred to under sections 2 and 3.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and Keep at rest in a position 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.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.

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