Clariant Corporation
4000 Monroe Road
Charlotte, NC 28205
704.331.7000

Clariant

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Attention: TSCA 8(e) Coordinator

Dear Sir:

In accordance with Section 8(e) of the Toxic Substance Control Act (TSCA), Clariant Corporation is submitting the following information on 2,4-Difluoroaniline (CAS Number 367-25-9).

In rabbit patch tests using 2,4-Difluoroaniline, the test animals died within 1-3 days.

Additionally:

The oral LD50 for the substance is 820 mg/kg (female rat).

The dermal LD50 for the substance is 672 mg/kg. (rat).

The inhalation LC50 in a test with added oxygen is 6.21 mg/l (4 hour test, rat).

The substance is an irritant to the skin in rabbits, and there is a serious risk of damage to the eyes based upon tests in the rabbit.

This information was included in the Clariant GmbH MSDS, which is attached.

This submission does not contain any confidential business information. If the agency would like further information, please contact me at the address below or by phone at (704) 331-7798.

8EHQ-98-14260

88980000227

Sincerely,

William N. Turner
Product Safety Manager
Fine Chemicals Division
Clariant Corporation
4000 Monroe Road
Charlotte, NC 28205

Cc: D. Lisman
G. Pasek
M. Griffin

1. Identification of the substance/preparation and company

Product details
Trade name
2,4-Difluoroaniline

Supplier details
Clariant GmbH
D-65926 Frankfurt am Main
Telephone no. : ++49(0)69-305-18000

Information provided by
Division Fine Chemicals

Emergency telephone number : ++49(0)69-305-6418

2. Composition/information on ingredients

Chemical characterization
1-Amino-2,4-Difluorobenzene
2,4-Difluoro-1-aminobenzol

CAS number : 367-25-9
UN number : 2810
EINECS number : 206-687-5

3. Hazards identification

Toxic by inhalation, in contact with skin and if swallowed.
Causes burns.

4. First aid measures

General information
Remove affected person from danger area, lay him down.
Remove contaminated clothing immediately and dispose of safely.
Casaulty should be kept quiet and covered up.
Seek medical advice immediately

After inhalation
Remove the casualty into fresh air and keep him calm.

Take medical treatment.

After contact with skin
In case of contact with skin wash off immediately with polyethylene glycol 400, then with plenty of water

After contact with eyes
In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice

After ingestion
Induce the patient to vomit of his own accord only if fully conscious. Summon a doctor immediately.

Hints for the physician

Symptoms
Cyanosis

5. Fire-fighting measures

Suitable extinguishing media
foam
carbon dioxide
dry powder
water spray jet (limited)

Special hazards from the substance itself, its combustion products or from its vapours
In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)
Nitrous gases (NOx)
Hydrogen fluoride (HF)

Special protective equipment for firefighting
Use self-contained breathing apparatus

* 6. Accidental release measures

Methods for cleaning up/taking up

Pick up with liquid binding materials and if necessary fill in containers capable of being locked.
Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations

When picked up, treat material as prescribed under heading "Disposal".
Containers in which spilt substance has been collected must be adequately labelled

7. Handling and storage

Handling

Advice on protection against fire and explosion

The product is combustible.

Temperature class : T1

Storage

Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place

8. Exposure controls/personal protection

Personal protective equipment

General protective measures

Do not inhale vapours
Contact with eyes and skin must be avoided

Hygiene measures
Keep away from foodstuffs and beverages.
Wash hands before breaks and after work.

Respiratory protection :	Protective mask
Hand protection :	Gloves (solvent-proof)
Eye protection :	safety glasses/face shield
Body protection :	impermeable protective overalls

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9. Physical and chemical properties

Appearance

Form : Liquid
Colour : colourless
Odour : slightly aromatic

Data relevant to safety

Changes in physical state

Freezing point

1.2 0C

Boiling point

171 0C
at 1013 mbar

Flash point :

71 0C

Method : DIN 51758

Ignition temperature :

> 600 0C

Method : DIN 51794

Lower explosion limit :

	1.4	% vol

Upper explosion limit :

	9.5	% vol

Vapour pressure :

	0.7	mbar
at	20	0C
	6.9	mbar
at	50	0C

Density :

	1.3	g/cm3
at	20	0C

Solubility in water :

	20	g/l
at	20	0C

Octanol/water partition coefficient (log pOW) : 1.54
Method : OECD 107

10. Stability and reactivity

Thermal decomposition :

>	500	0C
Heating rate	10	K/min

Method : DTA

Hazardous decomposition products
Nitrous gases
Hydrogen fluoride

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11. Toxicological information

Acute oral toxicity : (LD50)
820 mg/kg
Species : rat (female)

Acute inhalation toxicity : (LC50)
6.21 mg/l
Duration of exposure 4 h
with added oxygen
Species : rat

Acute dermal toxicity : (LD50)
672 mg/kg
Species : rat (female)

Irritant effect on skin :
irritant
Species : rabbit

Irritant effect on eyes :
irritant -
risk of serious damage to eyes
Species : rabbit eye

Remarks

Can be absorbed through skin
Experience in Factory: possibility of methaemoglobinaemia
Methaemoglobin formation observed in animal tests (cat)
Labelling with T (Poisonous) has been established through the results of the Patch-Tests on rabbits: Death of all test animals within 1 - 3 days.

12. Ecological information

Data on elimination (persistence and degradability) :

Ready degradability :

	>	90	%
Duration of test		28	d

Method : OECD 301 A

Ecotoxic effect

Fish toxicity : (LC50)

	>	22	mg/l
Duration of exposure		48	h

Species : zebra fish
Method : OECD 203

Fish toxicity : (LC50)

10	to	22	mg/l
Duration of exposure		96	h

Species : zebra fish
Method : OECD 203

Bacteria toxicity : (EC50)

361.2 mg/l

Species : Pseudomonas putida
Method : DIN 38412 T.8

13. Disposal considerations

Product

Special waste incineration plant, after consultation with operators

* 14. Transport information

Road transport

ADR 6.1 / 25 B
Product characteristic
2810 GIFTIGER ORGANISCHER FLUESSIGER STOFF,N.A.G.(2,4-DIFLUORANILIN)
Hazard no. : 60 Substance number 2810

RID 6.1 / 25 B
Product characteristic
2810 GIFTIGER ORGANISCHER FLUESSIGER STOFF,N.A.G.(2,4-DIFLUORANILIN)
Hazard no. : 60 Substance number 2810

Inland waterways transport

ADNR 6.1 / 25 B
Product characteristic
2810 GIFTIGER ORGANISCHER FLUESSIGER STOFF,N.A.G.(2,4-DIFLUORANILIN)

Marine transport

IMDG/UN 6.1 / 2810 / II
EmS : 6.1-02 MFAG : 4.2
Correct technical name
TOXIC LIQUID,ORGANIC,N.O.S.(2,4-DIFLUOROANILINE)

Air transport

ICAO/IATA-DGR 6.1 / 2810 / II
Correct technical name
TOXIC LIQUID,ORGANIC,N.O.S.(2,4-DIFLUOROANILINE)

Dispatch by post Not permitted.

15. Regulatory information

Labelling in accordance with GefStoffV/EC
hazard warning labelling compulsory

Hazard symbols T Toxic

R phrases

23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
34	Causes burns.

S phrases

36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

National regulations :

VbF (Germany) Hazard classification : A III

Water Hazard Class (Ger.) : 1 (self-classification)

16. Other information

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

Chapter which has been changed in respect of its previous version is marked with '*' .

Date of printing : 11.09.98