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Revision 5.1

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. Product identifier**

Trade name: Nadolol
CAS-number: 42200-33-9

Reach registration number: NA

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

The uses of the chemical: Active pharmaceutical ingredients
Classification of the economic activities (NACE): 212
Use categories (UC62): 41

1.3. Details of the supplier of the safety data sheet:

Manufacturer/importer: Fermion Oy
Street address: Koivu-Mankkaan tie 6 A
Post-office box: P.O. Box 28
Postcode: 02101 Espoo, Finland
Telephone number: +358 10 4261
Telefax: +358 0 9452 1764
E-mail address: chemicalsafety@orion.fi
VAT Reg. No: FI18552129

1.4. Emergency telephone number

Poison Center: +358 9 471 977

SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture**

This product does not meet the classification requirements of the current European legislation on classification and labelling.

2.2. Label elements

-

2.3. Other hazards

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May form combustible dust concentrations in air.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Name of the ingredient	CAS-number:	EC-number	Reach registration number:
Nadolol	42200-33-9	255-706-3	NA

Request for Confidentiality by Annex 2 No

Substance indicated Confidential No

Other information

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Special instructions	Helpers should ensure their own protection.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
Skin contact	Remove/Take off immediately all contaminated clothing. Wash with soap and water. Get medical advice/attention.
Eye contact	Flush with water while holding eyelids open for at least 15 min. Get immediate medical advice/attention.
Ingestion	Never give anything by mouth to an unconscious person.

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Rinse mouth.
Do NOT induce vomiting.
Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

See section 11 for symptoms of exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Data not available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	Foam
	Water
	Powder
	Carbon dioxide

5.2. Special hazards arising from the substance or mixture

May emit toxic fumes of oxides of nitrogen during heating or fire.

5.3. Advice for fire-fighters

Special protective equipment for fire-fighters	Isolating breathing apparatus eg. compressed breathing apparatus and isolating protective clothing.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required.
Access of extra people to the spill area must be prevented.

6.2. Environmental precautions

Data not available.

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6.3. Methods and material for containment and cleaning up

Collect spilled powder without dusting into tight closed container.

6.4. Reference to other sections

See Section 8 and 13

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handle in well-ventilated space.
Avoid dust formation.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Do not get in eyes, on skin, or on clothing.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed.
Protect from sunlight.
See incompatible materials in section 10.5.

7.3. Specific end use(s)

No information identified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

International OEL values	-
DNELs	-
PNECs	-

8.2. Exposure controls

Appropriate engineering controls

Handle in well-ventilated space.
Avoid dust formation.

Respiratory protection

Use respirator, filtration P3. In laboratories work in fume hood or under dust control hood.
See particular department's regulations of protection.

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Hand protection

Use protective gloves (e.g. nitrile or neopren gloves).

Eye protection

Use protective goggles.

Skin protection

In dust making work use disposal overalls and extra throwaway sleeves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Powder
Colour	White
Odour	Odourless
Odour threshold	-

9.1. Information on basic physical and chemical properties

Melting point	124 - 136 °C
Water solubility	Soluble
Solubility	Soluble in ethanol

9.2. Other information

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

-

10.2. Chemical stability

Stable when stored and handled according to instructions of use.

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10.3. Possibility of hazardous reactions

Dust may form explosive mixtures with air.

10.4. Conditions to avoid

Acidic conditions

10.5. Incompatible materials

Strong oxidants

10.6 Hazardous decomposition products

May emit toxic fumes of oxides of carbon and nitrogen during heating or fire.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Known clinical effects:

nausea
vomiting
spasm
dizziness
headache
low blood pressure on standing
rash
urticaria
photosensitivity
electrolyte disturbance
muscular spasms
weakness
restlessness
LD50 = 5300 mg/kg (rat, oral)
LD50 = 120 mg/kg (mouse, intraperitoneal)

Skin irritation and corrosion

Data not available.

Skin sensitization

Data not available.

Serious eye damage and irritation

Data not available.

Respiratory irritation

Data not available.

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Respiratory sensitization Data not available.

Carcinogenicity Animal studies showed no carcinogenic effects.
Not listed as a carcinogen by IARC, NTP or US OSHA.

Germ cell mutagenicity Data not available.

Reproductive toxicity Embryo/Fetal development:
LOAEL: 500 mg/kg/day (rat, oral) => Not teratogenic
LOAEL: 5-10 times human dose (rabbit, oral) => Embryotoxicity, fetotoxicity, not teratogenic

STOT-single exposure Data not available.

STOT-repeated exposure Data not available.

Aspiration hazard Data not available.

Repeated dose toxicity Data not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

LC50(48 h): > 100 mg/l, fish

LC50(48 h): > 100 mg/l, Daphnia magna

EC50(48 h): 163,4 mg/l, Ceriodaphnia dubia

Toxic effects on other organisms

Data not available.

12.2.Persistence and degradability

Data not available.

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12.3. Bioaccumulative potential

Octanol-water partition coefficient(KOW) Data not available.

Bioconcentration factor Data not available.

12.4. Mobility in soil

Data not available.

12.5. Results of PBT and vPvB assessment

Data not available.

12.6. Other adverse effects

Data not available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Chemical incinerator equipped with an afterburner and scrubber is the recommended method of disposal for this material. Observe all local and national regulations when disposing of this material.

SECTION 14: TRANSPORT INFORMATION

14.1. UN Number

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14.2. UN Proper shipping name

14.3. Transport hazard class(es) (ADR/RID,IMDG,ICAO/IATA)

This product is not regulated under the transport regulations.

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14.4. Packing group

-

14.5. Environmental hazard

-

14.6. Special precautions for user

-

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not applicable

SECTION 15: REGULATORY INFORMATION

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

The product has not been fully tested.

15.2. Chemical Safety Assessment

No

SECTION 16: OTHER INFORMATION

Further information

Abbreviations:

LOAEL = Lowest Observed Adverse Effect Level

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Fermion Oy shall not be held liable for any damage resulting from handling or from contact with the above product.

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Sources of key data used to compile the Safety Data Sheet

Information provided by the supplier

Information which has been added, deleted or revised

Updated section / sections:

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