

### Material Safety Data sheet

#### Section 1: Product and Company Information

<b>Product Name</b>	Novobiocin Supplement for MKTTn		
<b>Catalogue Number</b>	iS47041	<b>Technical Phone</b>	0098 21 66787291
<b>E-mail</b>	ibresco@gmail.com	<b>Fax No</b>	09391003565
<b>Company Address</b>	Zist Kavosh Iranian, No.432, East Kokab Av,45 Metri Golshahr, Karaj, Iran.		

#### Section 2: Hazards Identification

##### Classification of the substance or mixture

##### GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Acute toxicity, Oral (Category 4), H302

Eye irritation (Category 2A), H319

Skin sensitization (Category 1), H317

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

##### Hazard statement(s)

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

##### Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P501 Dispose of contents/ container to an approved waste disposal plant.

##### Hazards not otherwise classified (HNOC) or not covered by GHS

none

### Section 3: Composition / Information on Ingredients

#### Mixture

Synonyms Muller-Kauffmann Tetrathionate Novobiocin Supplement  
Novobiocin Selective Supplement

Component	Classification	Concentration*
<b>Novobiocin monosodium</b>		
Formula	C31H35N2NaO11	<= 100 %
Molecular weight	634.61 g/mol	
CAS-No.	1476-53-5	
EC-No.	216-023-6	

\* Weight %

### Section 4: First Aid Measures

#### Description of first-aid measures

**General advice** Show this material safety data sheet to the doctor in attendance.

**If inhaled** After inhalation: fresh air.

**In case of skin contact** In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

**In case of eye contact** After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

**If swallowed** After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

#### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

#### Indication of any immediate medical attention and special treatment needed

No data available

### Section 5: Fire Fighting Measures

#### Extinguishing media

##### Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder

##### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

#### Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NOx)

Sodium oxides

Combustible.

Development of hazardous combustion gases or vapors possible in the event of fire.

#### Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6: Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### Reference to other sections

For disposal see section 13.

## Section 7: Handling and Storage

### Precautions for safe handling

For precautions see section 2.

### Conditions for safe storage, including any incompatibilities

**Storage conditions** Tightly closed. Dry.

**Storage stability** Recommended storage temperature 2 - 8 °C  
Storage class (TRGS 510): 11: Combustible Solids

## Section 8: Exposure Controls / Personal Protection

### Control parameters

#### Exposure controls

##### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

##### Personal protective equipment

###### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.

###### Skin protection

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

###### Body Protection

protective clothing

###### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

###### Control of environmental exposure

Do not let product enter drains.

### Section 9: Physical and Chemical Properties

Physical state	Powder
Color	Beige
Odor	No data available
Odor Threshold	No data available
Melting point/freezing point	Melting point/range: 215 °C (419 °F)
Initial boiling point and boiling range	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	Not applicable
Vapor pressure	No data available
Vapor density	No data available
Autoignition temperature	No data available
Decomposition temperature	220 °C (428 °F) -
pH	6.5 - 8.5
Viscosity	No data available
Water solubility	Soluble
Partition coefficient: n-octanol/water	log Pow: 2.9 at 25 °C (77 °F) - Bioaccumulation is not expected.
Relative density	No data available
Explosive properties	No data available
Oxidizing properties	No data available
<b>Other safety information</b>	No data available

### Section 10: Stability and Reactivity

#### **Reactivity**

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

#### **Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature).

#### **Possibility of hazardous reactions**

Violent reactions possible with: Strong oxidizing agents

#### **Conditions to avoid**

no information available

#### **Incompatible materials**

Strong oxidizing agents

#### **Hazardous decomposition products**

In the event of fire: see section 5

## Section 11: Toxicological Information

### Information on toxicological effects

#### Mixture

	LD50 Oral - Mouse - 962 mg/kg
	Remarks: (RTECS)
<b>Acute toxicity</b>	Inhalation: No data available Dermal: No data available No data available
<b>Skin corrosion/irritation</b>	No data available
<b>Serious eye damage/eye irritation</b>	Eyes - Rabbit Result: slight irritation Remarks: (External MSDS)
<b>Respiratory or skin sensitization</b>	May cause allergic skin reaction.
<b>Germ cell mutagenicity</b>	No data available
<b>Reproductive toxicity</b>	No data available
<b>Specific target organ toxicity - single exposure</b>	No data available
<b>Specific target organ toxicity - repeated exposure</b>	No data available
<b>Aspiration hazard</b>	No data available

RTECS: RD5425000

Vomiting, Diarrhea

#### Additional Information

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

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Stomach - Irregularities - Based on Human Evidence

## Section 12: Ecological Information

### Toxicity

<b>Mixture</b>	No data available
<b>Persistence and degradability</b>	No data available
<b>Bio accumulative potential</b>	No data available
<b>Mobility in soil</b>	No data available
<b>Results of PBT and vPvB assessment</b>	PBT/vPvB assessment not available as chemical safety assessment not required/not Conducted.
<b>Other adverse effects</b>	No data available

## Section 13: Disposal Consideration

### Waste treatment methods

#### Product

Offer surplus and non- recyclable solutions to a licensed company. Contact a licensed professional waste disposal service to dispose of this material

#### Contaminated packaging

Dispose of as unused product.

#### Section 14: Transport Information

<b>TDG</b>	Not regulated as a dangerous good
<b>IMDG</b>	Not dangerous goods
<b>IATA</b>	Not dangerous goods
<b>Further information</b>	Not classified as dangerous in the meaning of transport regulations.

#### Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

#### Section 16: Other Information

##### **DISCLAIMER**

For R&D use only. Not for drug, household or other uses.

##### **WARRANTY**

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. *ibresco* shall not be held liable for any damage resulting from handling or from contact with the above product.

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