

### Material Safety Data sheet

#### Section 1: Product and Company Information

<b>Product Name</b>	Nitrate Broth		
<b>Catalogue Number</b>	i23220	<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

<b>Classification</b>	Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)		
<b>Label Elements</b>	None required		
<b>Hazards not otherwise classified (HNOC)</b>	None identified		

#### Section 3: Composition / Information on Ingredients

Component	CAS-No	WEIGHT
Water	7732-18-5	99.11
Potassium nitrate	7757-79-1	0.1

#### Section 4: First Aid Measures

##### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Obtain medical attention.

##### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

##### Inhalation

Move to fresh air. Get medical attention immediately if symptoms occur.

##### Ingestion

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

**Most important symptoms/effects None reasonably foreseeable.**

Notes to Physician Treat symptomatically

#### Section 5: Fire Fighting Measures

##### Suitable Extinguishing Media

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

##### Unsuitable Extinguishing Media

No information available

##### Flash Point

No information available

##### Method -

No information available

<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available
<b>Specific Hazards Arising from the Chemical</b>	
Keep product and empty container away from heat and sources of ignition.	
<b>Hazardous Combustion Products</b>	None known
<b>Protective Equipment and Precautions for Firefighters</b>	
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.	

### Section 6: Accidental Release Measures

- Personal Precautions** Ensure adequate ventilation.  
Use personal protective equipment. Avoid dust formation.
- Environmental Precautions**  
Should not be released into the environment.
- Methods for Containment and Clean Up**  
Sweep up or vacuum up spillage and collect in suitable container for disposal. Provide adequate ventilation.

### Section 7: Handling and Storage

<b>Handling</b>	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place

### Section 8: Exposure Controls / PPE

**Exposure Guidelines**  
This product does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies

**Engineering Measures**  
Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**

**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## Section 9: Physical and Chemical Properties

<b>Physical State</b>	Powder
<b>Appearance</b>	No information available
<b>Odor</b>	No information available
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available
<b>Relative Density</b>	No information available
<b>Solubility</b>	No information available
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	No information available

## Section 10: Stability and Reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Avoid dust formation.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	None under normal use conditions
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## Section 11: Toxicological Information

### Acute Toxicity

### Product Information

#### Oral LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

#### Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

#### Vapor LC50

Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90 mL/kg ( Rat )	Not listed	Not listed
Potassium nitrate	3015 mg/kg ( Rat )	> 5000 mg/kg (Rat)	>0.527 mg/l 4h (Rat)

### Toxicologically Synergistic Products

No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Potassium nitrate	7757-79-1	Not listed	Not listed	Not listed	Not listed	Not listed

<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	None known
<b>STOT - repeated exposure</b>	None known
<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects, both acute and Delayed</b>	No information available
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.

### Section 12: Ecological Information

**Ecotoxicity****Do not empty into drains.**

Component	Freshwater Algae	Freshwater Fish	Microtext	Water Flea
Potassium nitrate	> 1700 mg/l EC50 (10 day)	1378 mg/l LC50 (96h)	Not listed	490 mg/l EC50 (48h)

<b>Persistence and Degradability</b>	No information available
<b>Bioaccumulation/ Accumulation</b>	No information available.
<b>Mobility</b>	No information available.

### Section 13: Disposal Consideration

**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### Section 14: Transport Information

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated

### Section 15: Regulatory Information

All of the components in the product are on the following Inventory lists: X = listed

**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Water	X	X	-	231-791-2	-		X	-	X	X	X
Potassium Nitrate	X	X	-	231-818-8	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.  
 N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.  
 P - Indicates a commenced PMN substance  
 R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.  
 S - Indicates a substance that is identified in a proposed or final Significant New Use Rule  
 T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.  
 XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).  
 Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.  
 Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

<b>TSCA 12(b)</b>		Not applicable	
<b>SARA 313</b>			
Component	CAS-No	Weight	% SARA 313 Threshold Values %
Potassium nitrate	7757-79-1	0.1	1.0

**SARA 311/312 Hazardous Categorization**

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

<b>Clean Water Act</b>	Not applicable
<b>Clean Air Act</b>	Not applicable
<b>OSHA</b>	Occupational Safety and Health Administration Not applicable
<b>CERCLA</b>	Not applicable

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Potassium nitrate	X	X	X	X	X

**U.S. Department of Transportation**

<b>Reportable Quantity (RQ)</b>	N
<b>DOT Marine Pollutant</b>	N
<b>DOT Severe Marine Pollutant</b>	N

**U.S. Department of Homeland Security**

**This product contains the following DHS chemicals:**

Component	DHS Chemical Facility Anti-Terrorism Standard
Potassium nitrate	2000 lb STQ

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**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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