

MATERIAL SAFETY DATA SHEET

Asparagine Broth

Date of Issue: 1/5/2023

MATERIAL SAFETY DATA SHEET

| Section 1. Product and Company Information | | | |
|--|------------------------------|------------------|------------------|
| Product Name | Asparagine Broth | | |
| Catalogue Number | i23269 | Technical Phone: | 0098 21 66787291 |
| e-mail: | ibresco@gmail.com | Fax No: | 0098 2633523460 |
| Company Address | Zist Kavosh Iranian, No.432, | | 09391003565 |
| | East Kokab Av,45 Metri | | |
| | Golshahr, Karaj, Iran. | | |

| Section 2. Composition/Information on Ingredient | | |
|--|--|--|
| Chemical nature | ture Mixture of inorganic and organic compounds | |
| Substance Name | Asparagine Broth for microbiology | |
| Mixture | No disclosure requirement according to Regulation (EC) No. 1907/2006 | |

Section 3. Hazards Identification

Health Hazards: This mixture is not classified as dangerous according to EU legislation.

Other Hazards: None known.

Section 4. First Aid Measures

ORAL EXPOSURE: If swallowed, make victim drink water (two glasses at most). Consult doctor if feeling unwell. **INHALATION EXPOSURE**: If inhaled, supply fresh air or oxygen.

DERMAL EXPOSURE: Remove contaminated clothing. Immediately wash with plenty of water for.

EYE EXPOSURE: Rinse opened eye for at least 15 minutes under running water, lifting lower and upper eyelids occasionally. Seek medical attention.

Section 5. Fire Fighting Measures

EXPLOSION HAZARDS: N/A

FLASH POINT: N/A

ADVISE FOR FIREFIGHTERS: Special protective equipment for firefighters. In the event of fire, wear self-contained breathing apparatus.

EXTINGUISHING MEDIA: Water, Foam, Dry powder, Carbon dioxide (CO₂).

FIREFIGHTING: Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6. Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S): Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Environmental Precautions: Do not empty into drains.

METHODS FOR CLEANING UP: Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Take up with suitable equipment. Dispose of properly. Clean up affected area.

Section 7. Handling and Storage

HANDLING: Observe label precautions. Change contaminated clothing. Wash hands after working with substance. STORAGE: Tightly closed. Dry. Requirements to be met by storerooms and receptacles: 2 - 30°C. Other Precautions: No special measures required.

| Section 8. Exposure Controls / PPE | | | |
|------------------------------------|---------------------------------------|---|------------|
| Components with limit values that | t require monitoring: | | |
| The product does not contain any | relevant quantities of materials with | n critical values that have to be monitor | red at the |
| workplace. | | | |
| OSHA–PEL: N/A | REL: N/A | TLV: N/A | |

| OSHA–PEL: N/A | REL: N/A | TLV: N/A | |
|-----------------------------------|-----------------------------------|--|------|
| Additional Information: Personal | Protection listed below are gener | ral requirements for laboratory personnel. Fol | llow |
| _the usual precautionary measures | for handling chemicals / powder | Avoid contact with eyes, skin, and clothing. | |
| PERSONAL PROTECTIVE EQ | UIPMENT | | |
| | | | |

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

| AppearanceHomogenous, free-flowing powder Tan.PropertyValueAt Temperature or pressurepH 6.0 ± 0.2 $25 ^{\circ}$ CBP/BP RangeN/AMP/MP RangeN/AMP/MP RangeN/AYapor PressureN/AVapor DensityN/ASaturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AVOC ContentN/AVater ContentN/ASolvent ContentN/ASolvent ContentN/ASurface TensionN/ASurface TensionN/AParition CoefficientN/AParition CoefficientN/AParition CoefficientN/AParition CoefficientN/AParition CoefficientN/AParition CoefficientN/APrespondin Temp.N/AParition CoefficientN/AParition CoefficientN/APrespondin Temp.N/AParition CoefficientN/AParition Coeffici | Section 9. Physical and Chemical Properties | | | |
|--|---|--------------------------------------|----------------------------|--|
| pH 6.0 ± 0.2 $25 ^{\circ}$ CBP/BP RangeN/AMP/MP RangeN/AFreezing PointN/AVapor DensityN/AVapor DensityN/ASaturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AVOC ContentN/AVolatile%N/AVolot ContentN/ASolvent ContentN/ASurface TensionN/APartition CoefficientN/APartition CoefficientN/APartition CoefficientN/APartition Temp.N/AFlammabilityN/AAutoignition TempN/AAutoignition TempN/AAutoignition TempN/AAutoignition TempN/AAutoignition TempN/AAutoignition TempN/ASolubilityN/AAutoignition TempN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | Appearance | Homogenous, free-flowing powder Tan. | | |
| Br/BP RangeN/AMP/MP RangeN/AMP/MP RangeN/AFreezing PointN/AVapor PressureN/AVapor DensityN/ASaturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AVolatile%N/AVOC ContentN/AVolatile%N/AVoter ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/APartition CoefficientN/AExplosion LimitsN/AFlash PointN/AAutoignition TempN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Property | Value | At Temperature or pressure | |
| MP/MP RangeN/AFreezing PointN/AVapor PressureN/AVapor DensityN/ASaturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AVolatile%N/AVOC ContentN/AVoter ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/APartition CoefficientN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | рН | 6.0 ± 0.2 | 25 °C | |
| Freezing PointN/AVapor PressureN/AVapor DensityN/ASaturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AOdor ThresholdN/AVOC ContentN/AVOC ContentN/AWater ContentN/ASolvent ContentN/ASolvent ContentN/ASolvent ContentN/ASolvent ContentN/ASolvent ContentN/ASolvent ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AFlash PointN/AFlammabilityN/AAutoignition TempN/AQuical RotationN/AOptical RotationN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | BP/BP Range | N/A | | |
| Vapor PressureN/AVapor DensityN/ASaturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AVolatile%N/AVOC ContentN/AVoC ContentN/AWater ContentN/ASolvent ContentN/ASolvent ContentN/ASolvent ContentN/ASolvent ContentN/APartition CoefficientN/APartition CoefficientN/APeroposition Temp.N/AFlash PointN/AFlammabilityN/AAutoignition TempN/AQuignition TempN/AMatoriant IndexN/ASolubility IndexN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | MP/MP Range | N/A | | |
| Vapor DensityN/ASaturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AOdor ThresholdN/AVolatile%N/AVOC ContentN/AWater ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlarmabilityN/AAutoignition TempN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | Freezing Point | N/A | | |
| Saturated Vapor Conc.N/ABulk DensityN/AOdor ThresholdN/AVolatile%N/AVolc ContentN/AWater ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AFlammabilityN/ARefractive IndexN/AOptical RotationN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | Vapor Pressure | N/A | | |
| Bulk DensityN/AOdor ThresholdN/AVolatile%N/AVolc ContentN/AWater ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | Vapor Density | N/A | | |
| Odor ThresholdN/AVolatile%N/AVOC ContentN/AWater ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlarmabilityN/AAutoignition TempN/AQuical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Saturated Vapor Conc. | N/A | | |
| Odor ThresholdN/AVolatile%N/AVOC ContentN/AWater ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlarmabilityN/AAutoignition TempN/AQuical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Bulk Density | N/A | | |
| VOC ContentN/AWater ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/AQuical RotationN/AOptical RotationN/ASolubility in Water13.5 g/l SolubleSolubility in Water100.0% | | N/A | | |
| Water ContentN/ASolvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/AQuical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Volatile% | N/A | | |
| Solvent ContentN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | VOC Content | N/A | | |
| Evaporation RateN/AEvaporation RateN/AViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Water Content | N/A | | |
| ViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Solvent Content | N/A | | |
| ViscosityN/ASurface TensionN/APartition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Evaporation Rate | N/A | | |
| Partition CoefficientN/ADecomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | | N/A | | |
| Decomposition Temp.N/AFlash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Surface Tension | N/A | | |
| Flash PointN/AExplosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Partition Coefficient | N/A | | |
| Explosion LimitsN/AFlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Decomposition Temp. | N/A | | |
| FlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | | N/A | | |
| FlammabilityN/AAutoignition TempN/ARefractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Explosion Limits | N/A | | |
| Refractive IndexN/AOptical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | | N/A | | |
| Optical RotationN/AMiscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Autoignition Temp | N/A | | |
| Miscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Refractive Index | N/A | | |
| Miscellaneous DataN/ASolubility in Water13.5 g/l SolubleSolids Content100.0% | Optical Rotation | N/A | | |
| Solids Content 100.0% | | N/A | | |
| Solids Content 100.0% | Solubility in Water | 13.5 g/l Soluble | | |
| N/A - not available | Solids Content | - | | |
| | N/A = not available | | | |

Section 10. Stability and Reactivity

STABILITY Chemical Stability: The product is chemically stable under standard ambient conditions (room temperature). 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 assumes. Avoid strong oxidizing agents. HAZARDOUS DECOMPOSITION PRODUCTS May include carbon oxides. HAZARDOUS POLYMERIZATION

No information available.

Section 11. Toxicological Information

ROUTE OF EXPOSURE

Skin irritation: May cause redness and irritation in sensitive individuals Acute dermal toxicity: This information is not available. Eye irritation: May cause redness and irritation in sensitive individuals. Acute inhalation toxicity: May cause irritation in sensitive individuals. Acute oral toxicity: This information is not available.

SIGNS AND SYMPTOMS OF EXPOSURE Carcinogenicity Classification: Not listed. IARC (International Agency for Research on Cancer) - Not listed NTP (National Toxicology Program) - Not listed

Section 12. Ecological Information

Toxicity: This product is not classified as hazardous to the environment under U.S. regulations.

Section 13. Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Dispose in accordance with all applicable federal (40 CFR 261.3), state, and local environmental regulations. Smaller quantities can be disposed of with solid waste.

Contact a licensed professional waste disposal service to dispose of this material if questions arise.

Section 14. Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Marine Pollutant: No

Section 15. Regulatory Information

Does not apply.

For this product a chemical safety assessment was not carried out.

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.

The information contained herein is based on the present state of our knowledge. It characterizes the product with

regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.