spectrum®



SAFETY DATA SHEET

| Preparation Date: 7/24/15 | Revision date 10/01/2019 | Revision Number: G2 |
|--|---|---------------------|
| | 1. IDENTIFICATION | |
| Product identifier | | |
| Product code: Product Name: | JA105 JACK BEAN MEAL, POWDER | |
| Froduct Name. | JACK BEAN MEAL, FOWDER | |
| Other means of identification Synonyms: | Enzyme urease Urease enzyme preparation from Lactobacillus Jack bean urease | fermentum |
| CAS #: RTECS # CI#: | Urea amidohydrolase 9002-13-5 YU1700000 Not available | |
| Recommended use of the chen | nical and restrictions on use | |
| Recommended use: | No information available. | |
| Uses advised against | No information available | |
| Supplier: | Spectrum Chemical Mfg. Corp 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000 | |
| Order Online At: | https://www.spectrumchemical.com_ | |
| Emergency telephone number | Chemtrec 1-800-424-9300 | |
| Contact Person: | Tom Tyner (USA - West Coast) | |
| Contact Person: | Ibad Tirmiz (USA - East Coast) | |
| | 2. HAZARDS IDENTIFICATION | |

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| Skin corrosion/irritation | Category 2 |
|--|-------------|
| Serious eye damage/eye irritation | Category 2A |
| Respiratory sensitization | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |

Label elements

Danger

Hazard statements Causes skin irritation Causes serious eye irritation May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause respiratory irritation



Hazards not otherwise classified (HNOC) Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Avoid breathing dust In case of inadequate ventilation wear respiratory protection Use only outdoors or in a well-ventilated area Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF ON SKIN: Wash with plenty of water

If skin irritation occurs: Get medical attention

Take off contaminated clothing and wash it before reuse

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed Store locked up

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight-% |
|----------------|-----------|----------|
| Jack Bean Meal | 9002-13-5 | 100 |

4. FIRST AID MEASURES

First aid measures

| General Advice: | National Capital Poison Center in the United States can provide assistance have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. | if you |
|---------------------|--|----------|
| Skin Contact: | Wash off immediately with soap and plenty of water removing all contaminated cloth shoes. Get medical attention. If skin irritation persists, call a physician. | ning and |
| Eye Contact: | Flush eyes with water for 15 minutes. Get medical attention. | |
| Product code: JA105 | Product name: JACK BEAN MEAL, Page | 2/12 |

POWDER

| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. | | |
|--|---|--|--|
| Ingestion: | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary. | | |
| Most important symptoms and effe | cts, both acute and delay | <u>ved</u> | |
| Symptoms | Causes serious eye irritation Causes skin irritation May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause irritation of respiratory tract | | |
| Indication of any immediate medica | al attention and special tr | eatment needed | |
| Notes to Physician: | Treat symptomatically. | | |
| Protection of first-aiders First-Aid Providers: Avoid exposure t contaminated clothing and equipment | | ar gloves and other necessary protective clothing. Dispose of | |
| | 5. FIRE-FIGHT | ING MEASURES | |
| Extinguishing Media Suitable Extinguishing Media: | | Dry chemical. Carbon dioxide (CO2). Water spray mist or foam. | |
| Unsuitable Extinguishing Media | 1: | No information available. | |
| Specific hazards arising fron | n the chemical | | |
| Hazardous combustion product | s | No information available. | |
| Specific hazards | | Material in powder form, capable of creating a dust explosion. As with most organic solids, fire is possible at elevated temperatures. | |
| Special Protective Actions for | or Firefighters | | |
| Specific Methods: | | No information available | |
| Special Protective Equipment for | or Firefighters: | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear | |

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| Personal Precautions: | Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Avoid dust formation. Remove all sources of ignition. | | | |
|--|---|--|--|--|
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. | | | |
| Methods and material for containment and cleaning up | | | | |
| Methods for containment | Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading. | | | |
| Methods for cleaning up | Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly. | | | |

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. All equipment used when handling the product must be grounded. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Component | CAS No | OSHA | NIOSH | ACGIH | AIHA WEEL |
|----------------|-----------|------|-------|-------|-----------|
| Jack Bean Meal | 9002-13-5 | None | None | None | None |

Canada

| Component | CAS No | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|----------------|-----------|------------------|------------------------------|------------------|-----------------|
| Jack Bean Meal | 9002-13-5 | None | None | None | None |

Australia and Mexico

| Component | CAS No | Australia | Mexico |
|----------------|-----------|-----------|--------|
| Jack Bean Meal | 9002-13-5 | None | None |

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

| Eye protection: | Goggles or Safety glasses with side-shields. |
|---------------------------|---|
| Skin and body protection: | Long sleeved clothing Gloves Chemical resistant apron |
| Respiratory protection: | Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent. |
| Hygiene measures: | Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product |

| 9. PHYSICAL AND CHEMICAL PROPERTIES | | | |
|---|---|--|--|
| Physical state: | Appearance: | Color: | |
| Solid | Powder. | White. Off-white. Tan. | |
| Odor: | Taste | Formula | |
| No information available. | No information available. | No information available | |
| Molecular/Formula weight (g/mole): | Flammability (solid, gas) | Flashpoint (°C/°F): | |
| No information available | no data available | No information available | |
| Flash Point Tested according to: | Autoignition Temperature (°C/°F): | Lower Explosion Limit (%): | |
| Not available | No information available | No information available | |
| Upper Explosion Limit (%): | Melting point/range(°C/°F): | Decomposition temperature(°C/°F): | |
| No information available | No information available | No information available | |
| Boiling point/range(°C/°F): | Bulk density: | Density (g/cm3): | |
| No information available | No information available | No information available | |
| Specific gravity: | pH | Vapor pressure @ 20°C (kPa): | |
| No information available | No information available | No information available | |
| Evaporation rate: | Vapor density: | VOC content (g/L): | |
| No information available | No information available | No information available | |
| Odor threshold (ppm): No information available | Partition coefficient (n-octanol/water): No information available | Viscosity: No information available | |
| Product code: JA105 | Product name: JACK BEAN MEAL, | Page 5 / 12 | |

POWDER

Miscibility:

No information available

Solubility: Partially soluble in cold water

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents

| Chemical stability | |
|--------------------------------------|---|
| Stability: | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions: | - Hazardous polymerization does not occur |
| Conditions to avoid: | Heat. Ignition sources. Incompatible materials. |
| Incompatible Materials: | Strong oxidizing agents |
| Hazardous decomposition products: | No information available. |
| Other Information Corrosivity: | No information available |

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure: Ingestion. Inhalation. Skin. Eyes.

Acute Toxicity

Component Information

| Jack Bean Meal | | | | | |
|--|--|--|--|--|--|
| CAS No | 9002-13-5 | | | | |
| LD50/oral/rat = No informa | tion available | | | | |
| LD50/oral/mouse = No info | ormation available | | | | |
| LD50/dermal/rabbit = No i | nformation available | | | | |
| LD50/dermal/rat = No information available | | | | | |
| LC50/inhalation/rat = No in | nformation available | | | | |
| LC50/inhalation/mouse = | No information available | | | | |
| Other LD50 or LC50inform | ation = intraperitoneal guinea pig LD50: 35 mg/kg, intraperitoneal mouse LD50: 50 | | | | |
| mg/kg, intraperitoneal rabbit | LD50: 25 mg/kg, intraperitoneal rat LD50: 48 mg/kg, intravenous rat LD50: 20 mg/kg | | | | |

Product Information

LD50/oral/rat = Value - Acute Toxicity = No information available

LD50/oral/mouse =

Value - Acute Tox = No information available

LD50/dermal/rabbit Value - Acute Toxicity = No information available

LD50/dermal/rat VALUE - Acute Tox = No information available

LC50/inhalation/rat VALUE-Vapor = No information available VALUE-Gas = No information available VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available VALUE - Gas = No information available VALUE - Dust/Mist = No information available

Symptoms

| Skin Contact: | Causes skin irritation. |
|---------------------------------|--|
| Eye Contact: | Causes serious eye irritation. May cause lachrymation. |
| Inhalation | May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Ingestion | Contains Urease which may affect the urinary system and behavior/central nervous system (somnolence, convulsions). |
| Aspiration hazard | No information available. |
| Delayed and immediate effects a | is well as chronic effects from short and long-term exposure |
| Chronic Toxicity | Prolonged or repeated exposure may cause allergic respiratory and skin reactions. |
| Sensitization: | May cause sensitization by inhalation. |
| Mutagenic Effects: | No information available |

Carcinogenic effects:

Not considered carcinogenic.

| Component | CAS No | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|----------------|-----------|------------|------------------------|------------|---------------------------|---|---|
| Jack Bean Meal | 9002-13-5 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

| Reproductive toxicity | No data is available |
|-----------------------|---|
| Reproductive Effects: | No information available |
| Product code: JA105 | Product name: JACK BEAN MEAL, POWDER |

| Developmental Effects: | No information available |
|------------------------|--------------------------|
| Teratogenic Effects: | No information available |
| | |

Specific Target Organ Toxicity

| STOT - single exposure | respiratory system. |
|--------------------------|---------------------------|
| STOT - repeated exposure | No information available. |
| Target Organs: | No information available. |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Ecotoxicity effects: | No data available. | | |
|---|---|--|--|
| Persistence and degradability: | No information available | | |
| Bioaccumulative potential: | No information available. | | |
| Mobility in soil Other adverse effects | No information available No information available. | | |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal.

| Component | CAS No | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|----------------|-----------|---------------------------|---------------------------|---------------------------|---------------------------|
| Jack Bean Meal | 9002-13-5 | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

| UN-No: | Not Regulated |
|--------------------------|--------------------------|
| Proper Shipping Name: | No information available |
| Hazard Class | No information available |
| Subsidiary Class | No information available |
| Packing group: | No information available |
| Emergency Response Guide | No information available |
| Number | |
| Marine Pollutant | No data available |
| DOT RQ (lbs): | No information available |
| Special Provisions | No Information available |
| Symbol(s): | No information available |
| Description: | No information available |
| TDG (Canada) UN-No: | Not Regulated |
| | |

Product name: JACK BEAN MEAL, POWDER

| Proper Shipping Name: Hazard Class Subsidiary Risk: Packing Group: Marine Pollutant Description: | No information available No information available No information available No information available No Information available No information available |
|---|--|
| ADR UN Number Proper Shipping Name: Transport hazard class(es) Packing group Subsidiary Risk: | Not regulated No information available No information available No information available No information available |
| IMDG UN-No: Proper Shipping Name: Hazard Class: Subsidiary Risk: Packing Group: Marine Pollutant | Not Regulated No information available No information available No information available No information available No information available |
| RID UN Number Proper Shipping Name: Transport hazard class(es) Subsidiary Risk: Packing group | Not Regulated No information available No information available No information available No information available |
| ICAO (air) UN-No: Proper Shipping Name: Hazard Class Subsidiary Risk: Packing Group: | Not Regulated No information available No information available No information available No information available |
| IATA UN Number Proper Shipping Name: Transport hazard class(es) Subsidiary Risk: Packing group Precautionary Statements - Response Special Provisions | Not Regulated No information available No information available No information available No information available No information available |
| | 15. REGULATORY INFORMATION |

International Inventories

| Component | CAS No | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | China IECSC | Australia (AICS) | EINECS-No. |
|----------------|-----------|-------------------|---------------------|------------------------|-------------|-------------|---------------------|----------------------|
| Jack Bean Meal | 9002-13-5 | PresentACTIV E | Present KE-35145 | Present | Not present | Present | Present | Present 232-656-0 |

U.S. Regulations

Jack Bean Meal

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1924

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Component | CAS No | Carcinogen | Developmental Toxicity | Male | Female |
|----------------|-----------|------------|------------------------|--------------|--------------|
| | | - | | Reproductive | Reproductive |
| | | | | Toxicity | Toxicity: |
| Jack Bean Meal | 9002-13-5 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Component | CAS No | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|----------------|-----------|---|---|--|------------------------------------|--|
| Jack Bean Meal | 9002-13-5 | None | None | None | None | None |

U.S. TSCA

| Component | | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|----------------|-----------|---|---|
| Jack Bean Meal | 9002-13-5 | Not Applicable | Not Applicable |

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification The WHMIS 2015 classification of this product has not been validated or reviewed yet. Information:

Canada Hazardous Products Regulation This product has not been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

| Component | CAS No | Canada (DSL) | Canada (NDSL) |
|----------------|-------------------------|--------------|--|
| Jack Bean Meal | ack Bean Meal 9002-13-5 | | Not Listed |
| | | | |
| Component | | CAS No | CEPA Schedule I - Toxic Substances |
| Jack Bean Meal | | 9002-13-5 | Not listed |
| Component | | CAS No | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Jack Bean Meal | | 9002-13-5 | Not listed |

EU Classification

EU GHS - SV - CLP 1272/2008

| Component | CAS No | EU GHS - SV - CLP (1272/2008) |
|---------------------|---|-------------------------------|
| Product code: JA105 | Product name: JACK BEAN MEAL, POWDER | Page 10/12 |

EU - CLP (1272/2008)

R-phrase(s)

R36 - Irritating to eyes R38 - Irritating to skin R42 - May cause sensitization by inhalation

S -phrase(s)

S 7 - Keep container tightly closed.

S36 - Wear suitable protective clothing

S38 - In case of insufficient ventilation, wear suitable respiratory equipment

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

| Component | CAS No | Classification | Concentration Limits: | Safety Phrases |
|----------------|-----------|----------------|--------------------------|----------------|
| Jack Bean Meal | 9002-13-5 | | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant



16. OTHER INFORMATION

| Preparation Date: | 7/24/15 |
|-------------------|------------|
| Revision date | 10/01/2019 |
| Prepared by: | Sonia Owen |

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet