

MATERIAL SAFETY DATA SHEET

for

KiwiBerry Extract Powder (EFF-1001.P)

Efficas Medical Foods & Nutrition, LLC.

MSDS Number: EFF-1001.P

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Effective Date: October 8, 2004

1. Chemical Product and Company Identification

Product Name: KiwiBerry Extract Powder
Chemical Family: Fruit extract mixed with additional carbohydrate
Synonyms: EFF-1001.P

Product Use:

KiwiBerry Extract Powder is used as an ingredient in foods, beverages, medical foods, dietary supplements and pet food/animal feed.

2. Composition/Information on Ingredients**Component/Chemical Name:**

1. KiwiBerry Extract obtained by hot water extraction from fruit of *Actinidia arguta* (50% wt/wt). Synonyms include baby kiwi and hardy kiwi.
2. Avicel PH-101 microcrystalline cellulose (CAS # 9004-34-6). MCC

3. Hazards Identification

- Powder may be slippery when wet.
- Individuals with allergy to kiwifruit may potentially be allergic to KiwiBerry Extract Powder.
- No significant health hazard expected.

4. First Aid Measures

Eyes: Flush with plenty of water. Get medical attention if irritation occurs and persists.

Skin: Wash with plenty of soap and water.

Ingestion: Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention. Individuals with allergy to kiwifruit may be allergic to KiwiBerry Extract Powder. If allergic symptoms occur, such as rash, vomiting or shortness of breath, obtain medical attention.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

Notes to Medical Doctor: This product has low toxicity. Treatment is symptomatic and supportive.

5. Fire Fighting Measures

Extinguishing Media: Water.

Fire Hazards: The accumulation of excessive dust on overhead structures may produce explosive concentrations when disturbed and dispersed. The Hazard Class of Dust Deflagrations for microcrystalline cellulose is St-1, the lowest hazard class.

Fire Fighting Procedures: For fires involving this material, do not enter any enclosed or confined fire space without wearing full protective clothing and self-contained breathing apparatus (SCBA) approved for firefighting. This is necessary to protect against the hazards of heat, products of combustion and oxygen deficiency. Do not breathe smoke, gases or vapors generated.

6. Accidental Release Measures

Powder may be slippery when wet. Maintain good housekeeping practices to minimize accumulation of settled dust, especially on overhead surfaces.

Environmental Precautions: No known risks to the environment.

Methods for Clean-up: Sweep or wipe spill.

7. Handling and Storage

Handling:

- Avoid contact with eyes.
- Do not ingest dirty or tainted powder.
- Follow good industrial and hygienic practices.

Storage:

- Store in original container in a secured, cool, dry storage area, 65° – 77° F.
- Do not use or store near heat, open flame or hot surfaces.
- Prevent cross-contamination with other chemicals, water or food.

8. Exposure Controls/Personal Protection

In normal conditions of use, there is no particular caution required.

Hygiene Measures:

- Wash thoroughly with soap and water after handling.
- Clean water should be available for washing in case of eye or skin contamination.
- Wash skin prior to eating, drinking or using tobacco.

Personal Protective Equipment (PPE):

- No special gloves are required.
- Whenever dust in the worker's breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by NIOSH/MSHA, EU CEN or comparable certification organization to protect them against airborne dust.
- Whenever airborne dust concentrations are high, appropriate protective eyewear, such as goggles, should be worn to prevent eye contact.

9. Physical and Chemical Properties

Appearance: Powder, beige to brown in color.

Odor: Slight fruit odor.

Basic Physical Properties:

- Physical State: Powder
- Boiling Point: NA
- Melting Point: NA
- Vapor Pressure: NA
- Vapor Density: NA
- Specific Gravity: NA
- Solubility (H₂O): 50% Soluble (Fruit extract is Soluble, MCC is Insoluble.)
- Percent Volatiles: NA
- Evaporation Rate: NA

10. Stability and Reactivity

Stability: Stable

Hazardous Decomposition Products: None known

Conditions to avoid: None known

11. Toxicological Information

Eye Effects: None known. MCC is non-irritating.
Skin Effects: None known. MCC is non-irritating.
Acute Oral Effects: None produced at up to 1 g/kg body weight.
Carcinogenicity: None known. MCC is not listed.
Teratogenicity: None known
Reproductive Effects: None known

12. Ecological Information

No known hazards. Fruit extract and MCC are inherently biodegradable in soil.

13. Disposal Considerations

Dispose in accordance with all Federal, State and local regulations.

14. Transport Information

Not Department of Transportation (DOT) Regulated.

15. Regulatory Information

Neither ingredient is regulated under SARA Title III or CERCLA.
MCC is an approved food substance under Title 21 of the Code of Federal Regulations.

The enclosed information is presented in good faith and is based upon our best knowledge of the corresponding product as of: October 2004.