

Material Safety Data Sheet

VITAL WHEAT GLUTEN

Section 1 - Product Identification

Synonyms : Hard protein flour, gluten

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Recommended use of the chemical and restrictions on use

The product is used in industrial manufacturing, in particular in :

- Food and Beverage

Section 2 – Composition/Information on Ingredients

The product contains greater than 75.0 percent (%) Vital Wheat Gluten

Chemical Name	EC No/CAS No	Purity, %
Vital Wheat Gluten	8002-80-0	min. 75.0

Section 3 – Hazards Identification

3.1 Classification of the substance according to GHS

Not a hazardous substance according to GHS.

Cautionary Statement

Read label before use

Keep out of reach of children

3.3. Other hazards which do not result in classification

Vital wheat gluten is a white yellow powdered substance that is not flammable, combustible, or explosive, and has low acute oral and dermal toxicity.

Potential health effects

Inhalation and ingestion are the most significant route of exposure in occupational and other settings.

Inhalation

Occasional mild irritation effects to nose and throat may occur from inhalation of vital wheat gluten dust.

Eye contact

Vital wheat gluten can be an eye irritant.

Skin contact

Vital wheat gluten does not cause irritation to intact skin.

Ingestion

Products containing vital wheat gluten are suitable for ingestion. Vital wheat gluten has low acute toxicity.

Potential ecological effects

Vital wheat gluten has minimal effect on the ecology.

Signs and symptoms of exposure

There is no signs and symptoms associated with overdose of Vital wheat gluten.

Section 4 – First-Aid Measures

4.1. Description of first aid measures

Skin contact

No treatment necessary because non-irritating.

Eye contact

Use eye wash fountain or fresh water to cleanse eye. If irritation persists for more than 30 minutes, seek medical attention.

Inhalation

If symptoms such as nose or throat irritation are observed, remove to fresh air.

Ingestion

If large amounts are ingested or injected in a short time, contact a doctor immediately.

Note to physicians

N.A.

4.2. Most important symptoms and effects, both acute and delayed

N.A.

4.3. Indication of any immediate medical attention and special treatment needed

N.A.

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media

Any fire extinguishing media may be used on nearby fires.

5.2. Specific hazards arising from the chemical

Vital wheat gluten is not flammable, combustable or explosive.

5.3. Special protective actions for fire-fighters

N.A.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. In case of exposure to prolonged or high level of airborne dust, wear a personal respirator in compliance with national legislation.

6.2. Environmental precautions

Vital wheat gluten is insoluble and is naturally occurring and stable in the environment.

6.3. Methods and material for containment and cleaning up

Land spill

Vacuum, shovel or sweep up vital wheat gluten and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. No personal protective equipment is needed to clean up land spills.

Spillage into water

Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns to its normal environmental background level.

Section 7 – Handling and Storage

7.1. Precautions for safe Handling

To maintain package integrity and to minimise caking of the product, bags should be handled on a first-in first out basis. Good housekeeping and dust prevention procedures should be followed to minimise dust generation and accumulation. Your supplier can advise you on safe handling, please contact the supplier.

The product should be kept away from strong reducing agents. Apply above handling advice when mixing with other substances.

7.2. Conditions for safe storage, including any incompatibilities

No special handling precautions are required, but dry, indoor storage is recommended. No specific requirements. Provide appropriate ventilation and store bags such as to prevent any accidental damage.

Section 8 – Exposure Controls/Personal Protection

8.1. Control parameters

Occupational exposure limits for dust (total and respirable). are treated by OSHA, Cal OSHA and ACGIH as "Particulate Not Otherwise Classified" or "Nuisance Dust"

ACGIH/TLV 10 mg/m³

Cal OSHA/PEL 10 mg/m³

OSHA/PEL (total dust) 15 mg/m³

OSHA/PEL (respirable dust) 5 mg/m³

8.2. Appropriate engineering controls

Maintain air concentrations below occupational exposure standards.

Use local exhaust ventilation to keep airborne concentrations of dextrose monohydrate dust below permissible exposure levels. Wash hands before breaks and at the end of the workday. Remove and wash soiled clothing.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Respiratory protection

In case of prolonged exposure to dust wear a personal respirator in compliance with national legislation (make reference to the appropriate CEN standard)

Eyes and hands protection

Goggles and gloves are not required for normal industrial exposures, but may be warranted if environment is excessively dusty.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance : white yellow flowing powder

Odour : grain sweet smell

Odour threshold : N.A.

pH @ 20°C : 5.5-7.0

Melting point : N.A

Boiling point : N.A

Flash point : Non flammable

Evaporation rate : N.A.

Flammability : N.A.

Upper/lower flammability or explosive limits : Non explosive

Vapour pressure : Negligible @ 20°C

Vapour density : N.A.

Bulk density: 0.4-0.5 g/cm³

Solubility in water : insoluble

Partition coefficient: n-octanol/water : N.A

Auto-ignition temperature : N.A.

Decomposition temperature : N.A

Viscosity : N.A.

Section 10 – Stability and Reactivity

10.1. Reactivity

Vital wheat gluten is a stable product.

10.2. Chemical stability

Vital wheat gluten is a stable product.

10.3. Possibility of hazardous reactions

N.A

10.4. Conditions to avoid:

Avoid humid air as vital wheat gluten may react with water.

10.5. Incompatible materials

N.A

10.6. Hazardous decomposition products

N.A

Section 11 – Toxicological Information

11.1. Information on toxicological effect

11.1.1. Substances

Acute toxicity

Low acute oral toxicity.

Skin corrosion / irritation

Non-irritant.

Serious eye damage/ irritation

Vital wheat gluten can be an eye irritant.

Respiratory or skin sensitization

Vital wheat gluten is not a skin sensitizer.

Germcell mutagenicity

Vital wheat gluten is not mutagenic.

Carcinogenicity

Vital wheat gluten is not carcinogenic.

Reproductive toxicity

Vital wheat gluten does not have reproductive toxicity.

STOT-single exposure

N.A.

STOT-repeated exposure

N.A.

Aspiration Hazard

Vital wheat gluten has no aspiration hazard.

Section 12 – Ecological Information

12.1.Toxicity

Vital wheat gluten occurs naturally in many organisms like plants and animals.

Phytotoxicity

Vital wheat gluten is a plant derivative product thus it has no phytotoxicity.

Algal toxicity

No known algal toxicity.

Invertebrate toxicity

No known invertebrate toxicity.

Fish toxicity

No known fish toxicity.

12.2. Persistence and degradability

Vital wheat gluten is naturally occurring and ubiquitous in the environment.

12.3. Bioaccumulative potential

Not significantly bioaccumulative.

12.4. Mobility in soil

The product is insoluble in water and is not leachable through normal soil.

12.5. Other adverse effects

No Data Available

Section 13 – Disposal Considerations

13.1. Disposal methods

Small quantities of vital wheat gluten can usually be disposed of at landfill sites. No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such product should, if possible, be used for an appropriate application.

Section 14 – Transport Information

Vital wheat gluten has no UN Number, and is not regulated under international rail, road, water or air transport regulations.

14.1. UN number : N.A.

14.2. UN proper shipping name : N.A

14.3. Transport of hazard classes : N.A

14.4. Packing group : N.A

14.5. Environmental hazards : N.A.

14.6. Special precautions for user : N.A

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: N.A.

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations

It should be noted that Vital wheat gluten are safe under conditions of normal handling and use, besides, they are essential nutrients to plants, and research shows that they play a beneficial role in human health.

Clean Air Act (Montreal Protocol)

Vital wheat gluten was not manufactured with and does not contain any Class I or Class II ozone depleting substances.

Chemical inventory listing

U.S. EPA TSCA Inventory 1330-43-4

Canadian DSL 1330-43-4

EINECS 215-540-4

South Korea 1-760

Japanese MITI (1)-69

Ensure all national/local regulations are observed.

Section 16 : Additional Information

16.1. Mainly changes made to the previous version of this Material Safety Data Sheet (MSDS):

- This MSDS complies with ISO 11014; the requirements of UN-GHS

Revision No	Revision content
05	<ul style="list-style-type: none">• This SDS is updated in accordance with the GHS (Rev.6) (2015)-Guidance on the Compilation of Safety data Sheets.• This SDS is updated in line with Eti Maden Corporate identity.

16.2. List of abbreviation and acronyms used in this MSDS

SDS : Safety Data Sheets

Index N° : atomic number of the element most characteristic of the properties of the substance

CAS No : Chemical Abstracts Service number

EC No : EINECS Number : European Inventory of Existing Commercial Substances

GHS : Globally Harmonised System of Classification and Labelling

N.A. : Not Applicable

OSHA : Occupational Safety & Health Administration

Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)

PEL : Permissible Exposure Limits

ACGIH : American Conference of Governmental Industrial Hygienists

TLV : Threshold Limit Value

Japanese MITI : Japanese Ministry of International Trade and Industry

EC₅₀ : Half maximal effective concentration

UN : United Nations

U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the authority of the Environmental Protection Agency

Canadian DSL: Canadian Domestic Substances List

16.3. List of relevant hazard statements and precautionary statements used in this MSDS

Hazard Statement

Dextrose monohydrate is not hazardous according to GHS.

Cautionary Statement

Read label before use

Keep out of reach of children

16.4. Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling,

storage, use or disposal of the product. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

