



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

| | | | |
|------------------------|------------|-------------------------|----------------|
| Document group: | 38-8866-6 | Version number: | 1.00 |
| Issue Date: | 19/06/2018 | Supersedes date: | Initial issue. |

IDENTIFICATION

1.1. Product identifier

3M™ Hazelnut Protein Rapid Kit

1.2. Recommended use and restrictions on use

Recommended use

Screening for the presence of allergens in the food and beverage industry.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

Company Emergency Hotline: +65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

38-5690-3

TRANSPORT INFORMATION

International Regulations

UN No.: Not restricted for transport.

UN Proper shipping name: Not restricted for transport.

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: No

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M Singapore SDSs are available at www.3m.com.sg



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| | | | |
|------------------------|------------|-------------------------|------------|
| Document group: | 38-5690-3 | Version number: | 1.04 |
| Issue Date: | 27/04/2021 | Supersedes date: | 17/12/2019 |

SECTION 1: Identification

1.1. Product identifier

3M Extraction Buffer

1.2. Recommended use and restrictions on use

Recommended use

For screening the presence of allergen proteins in the Food and Beverage industry, Industrial use.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2A

2.2. Label elements

SIGNAL WORD

WARNING!

Symbols

Exclamation mark |

Pictograms



HAZARD STATEMENTS

3M Extraction Buffer

H319 Causes serious eye irritation.

PRECAUTIONARY STATEMENTS

Response:

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | CAS Nbr | % by Wt |
|-----------------|-----------|---------|
| Water | 7732-18-5 | 50 - 99 |
| GLYCEROL | 56-81-5 | 0 - 15 |
| Urea | 57-13-6 | 0 - 15 |
| Gelatins | 9000-70-8 | 0 - 2 |
| Sodium chloride | 7647-14-5 | 0 - 2 |

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

No need for first aid is anticipated. If signs/symptoms persist, get medical attention.

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid eye contact. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | CAS Nbr | Agency | Limit type | Additional comments |
|------------|---------|----------------|---|---------------------|
| GLYCEROL | 56-81-5 | Singapore PELs | TWA(as mist)(8 hours):10 mg/m ³ | |
| Urea | 57-13-6 | AIHA | TWA(as total particulates):10 mg/m ³ | |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect vented goggles.

Skin/hand protection

No chemical protective gloves are required.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

Organic vapor respirators may have short service life.

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | Liquid. |
| Color | Clear Colorless, Light Yellow |
| Odor | Very Slight Alcohol |
| Odour threshold | No data available. |
| pH | No data available. |
| Melting point/Freezing point | No data available. |
| Boiling point/Initial boiling point/Boiling range | No data available. |
| Flash point | Flash point > 93 °C (200 °F) [Test Method:Closed Cup] |
| Evaporation rate | No data available. |
| Flammability (solid, gas) | Not applicable. |
| Flammable Limits(LEL) | No data available. |
| Flammable Limits(UEL) | No data available. |
| Vapour pressure | No data available. |
| Vapor Density and/or Relative Vapor Density | No data available. |
| Density | No data available. |
| Relative density | 1.04 [Ref Std:WATER=1] |
| Water solubility | Soluble |
| Solubility- non-water | Complete |
| Partition coefficient: n-octanol/water | No data available. |
| Autoignition temperature | No data available. |
| Decomposition temperature | No data available. |
| Viscosity/Kinematic Viscosity | No data available. |
| Volatile organic compounds (VOC) | Not applicable. |
| Percent volatile | No data available. |
| VOC less H2O & exempt solvents | Not applicable. |
| Molecular weight | Not applicable. |

Nanoparticles

This material does not contain nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known. | |

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact

Contact with the skin during product use is not expected to result in significant irritation.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Additional information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or

3M Extraction Buffer

the data are not sufficient for classification.

Acute Toxicity

| Name | Route | Species | Value |
|-----------------|--------------------------------|---------|--|
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| GLYCEROL | Dermal | Rabbit | LD50 estimated to be > 5,000 mg/kg |
| GLYCEROL | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Urea | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Urea | Ingestion | Rat | LD50 14,300 mg/kg |
| Sodium chloride | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| Sodium chloride | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 10.5 mg/l |
| Sodium chloride | Ingestion | Rat | LD50 3,550 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|-----------------|---------|---------------------------|
| GLYCEROL | Rabbit | No significant irritation |
| Urea | Rabbit | No significant irritation |
| Sodium chloride | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|-----------------|---------|---------------------------|
| GLYCEROL | Rabbit | No significant irritation |
| Urea | Rabbit | Moderate irritant |
| Sodium chloride | Rabbit | Mild irritant |

Sensitization:**Skin Sensitisation**

| Name | Species | Value |
|----------|------------|----------------|
| GLYCEROL | Guinea pig | Not classified |

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

| Name | Route | Value |
|-----------------|----------|--|
| Urea | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Urea | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Sodium chloride | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Sodium chloride | In vivo | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|-----------------|-----------|-------------------------|--|
| GLYCEROL | Ingestion | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Urea | Ingestion | Multiple animal species | Not carcinogenic |
| Sodium chloride | Ingestion | Rat | Not carcinogenic |

Reproductive Toxicity**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test result | Exposure Duration |
|----------|-----------|--|---------|-----------------------------|-------------------|
| GLYCEROL | Ingestion | Not classified for female reproduction | Rat | NOAEL 2,000 mg/kg/day | 2 generation |
| GLYCEROL | Ingestion | Not classified for male reproduction | Rat | NOAEL 2,000 mg/kg/day | 2 generation |
| GLYCEROL | Ingestion | Not classified for development | Rat | NOAEL 2,000 mg/kg/day | 2 generation |

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|------|------------|------------------------|--|------------------------|---------------------|-------------------|
| Urea | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Professional judgement | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|-----------------|------------|--|--|---------|------------------------|-------------------|
| GLYCEROL | Inhalation | respiratory system heart liver kidney and/or bladder | Not classified | Rat | NOAEL 3.91 mg/l | 14 days |
| GLYCEROL | Ingestion | endocrine system hematopoietic system liver kidney and/or bladder | Not classified | Rat | NOAEL 10,000 mg/kg/day | 2 years |
| Urea | Dermal | heart endocrine system hematopoietic system liver immune system nervous system kidney and/or bladder | Not classified | Rat | NOAEL Not available | 25 weeks |
| Urea | Ingestion | liver endocrine system kidney and/or bladder | Not classified | Rat | NOAEL 2,700 mg/kg/day | 28 days |
| Sodium chloride | Ingestion | blood kidney and/or bladder vascular system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 2,240 mg/kg/day | 9 months |
| Sodium chloride | Ingestion | nervous system eyes | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1,700 mg/kg/day | 90 days |
| Sodium chloride | Ingestion | liver respiratory system | Not classified | Rat | NOAEL 33 mg/kg/day | 90 days |

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

| Material | CAS Nbr | Organism | Type | Exposure | Test endpoint | Test result |
|-----------------|-----------|------------------|---|----------|---------------|--------------|
| GLYCEROL | 56-81-5 | Bacteria | Experimental | 16 hours | NOEC | 10,000 mg/l |
| GLYCEROL | 56-81-5 | Rainbow trout | Experimental | 96 hours | LC50 | 54,000 mg/l |
| GLYCEROL | 56-81-5 | Water flea | Experimental | 48 hours | LC50 | 1,955 mg/l |
| Urea | 57-13-6 | Bacteria | Experimental | 16 hours | NOEC | >10,000 mg/l |
| Urea | 57-13-6 | Fish other | Experimental | 96 hours | LC50 | 130 mg/l |
| Urea | 57-13-6 | Water flea | Experimental | 48 hours | EC50 | 6,600 mg/l |
| Gelatins | 9000-70-8 | | Data not available or insufficient for classification | | | N/A |
| Sodium chloride | 7647-14-5 | Activated sludge | Experimental | | NOEC | 8,000 mg/l |
| Sodium chloride | 7647-14-5 | Algae other | Experimental | 96 hours | EC50 | 2,430 mg/l |
| Sodium chloride | 7647-14-5 | Bluegill | Experimental | 96 hours | LC50 | 5,840 mg/l |
| Sodium chloride | 7647-14-5 | Water flea | Experimental | 48 hours | LC50 | 874 mg/l |
| Sodium chloride | 7647-14-5 | Fathead minnow | Experimental | 33 days | NOEC | 252 mg/l |
| Sodium chloride | 7647-14-5 | Water flea | Experimental | 21 days | NOEC | 314 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|----------|-----------|----------------------------------|----------|--------------------------------|-----------------|-------------------------------|
| GLYCEROL | 56-81-5 | Experimental Biodegradation | 14 days | BOD | 63 % BOD/ThBOD | OECD 301C - MITI test (I) |
| Urea | 57-13-6 | Estimated Biodegradation | 21 days | Dissolv. Organic Carbon Deplet | 90-100 % weight | OECD 301A - DOC Die Away Test |
| Gelatins | 9000-70-8 | Data not available- insufficient | | | N/A | |
| Sodium | 7647-14-5 | Data not | | | N/A | |

3M Extraction Buffer

| | | | | | | |
|----------|--|------------------------|--|--|--|--|
| chloride | | available-insufficient | | | | |
|----------|--|------------------------|--|--|--|--|

12.3 : Bioaccumulative potential

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|-----------------|-----------|---|----------|------------|-------------|---------------------|
| GLYCEROL | 56-81-5 | Experimental Bioconcentration | | Log Kow | -1.76 | Non-standard method |
| Urea | 57-13-6 | Experimental Bioconcentration | | Log Kow | -1.73 | Non-standard method |
| Gelatins | 9000-70-8 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Sodium chloride | 7647-14-5 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

SECTION 14: Transport Information**International Regulations**

UN No.: Not restricted for transport.

UN Proper shipping name: Not restricted for transport.

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: No

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Global inventory status

Contact 3M for more information.

SECTION 16: Other information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

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