



## Safety Data Sheet

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|                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

### IDENTIFICATION

#### 1.1. Product identifier

3M FT-30 Qualitative Fit Test Kit, Bitter

#### Product Identification Numbers

70-0707-0964-0

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Qualitative Fit Test Kit, Bitter

#### 1.3. Supplier's details

**ADDRESS:** 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301  
Petaling, Jaya, Selangor  
**Telephone:** 03-7884 2888  
**E Mail:** 3mmyehsr@mmm.com  
**Website:** www.3M.com.my

#### 1.4. Emergency telephone number

+60 03-7884 2888

**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:**

07-6198-1, 07-6218-7

### TRANSPORT INFORMATION

This product is a kit that consists of two or more different regulated materials packed in the same outer packaging (ship unit). The transportation classifications of the individual components appear in Section 14 of the attached SDSs.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current

regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

**3M Malaysia SDSs are available at [www.3M.com.my](http://www.3M.com.my)**



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|                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
| <b>Document Group:</b> | 07-6218-7  | <b>Version Number:</b>  | 9.00       |
| <b>Issue Date:</b>     | 10/01/2024 | <b>Supersedes Date:</b> | 23/04/2019 |

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

### SECTION 1: Identification

#### 1.1. Product identifier

FT-32, Denatonium Benzoate Fit Test Solution

#### Product Identification Numbers

70-0707-0966-5

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Fit Test Solution.

For Industrial or Professional use only

#### 1.3. Supplier's details

**ADDRESS:** 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301  
Petaling, Jaya, Selangor  
**Telephone:** 03-7884 2888  
**E Mail:** 3mmyehsr@mmm.com  
**Website:** www.3M.com.my

#### 1.4. Emergency telephone number

+60 03-7884 2888

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Not classified as hazardous according to Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

#### 2.2. Label elements

##### Signal word

Not applicable

##### Symbols

Not applicable

**Pictograms**

Not applicable

**2.3. Other hazards**

None known

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

| Ingredient          | C.A.S. No. | % by Wt  |
|---------------------|------------|----------|
| WATER               | 7732-18-5  | 90 - 100 |
| SODIUM CHLORIDE     | 7647-14-5  | 3 - 10   |
| DENATONIUM BENZOATE | 3734-33-6  | 0 - 1    |

**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:**

If exposed, wash with soap and water. If signs/symptoms develop, get medical attention.

**Eye Contact:**

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, get medical attention.

**If Swallowed:**

Do not induce vomiting. 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**

Non-combustible. Use a fire fighting agent suitable for surrounding fire.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Observe precautions from other sections.

**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**

For industrial/occupational use only. Not for consumer sale or use. Do not eat, drink or smoke when using this product. 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**

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

**8.2. Exposure controls**

**8.2.1. Engineering controls**

No engineering controls required.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

None required.

**Skin/hand protection**

No protective gloves required.

**Respiratory protection**

None required.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

|  |                          |
|--|--------------------------|
| <b>Physical state</b>                                    | Liquid                   |
| <b>Color</b>   | Colorless                |
| <b>Odor</b>  | Odorless                 |
| <b>Odor threshold</b>                                    | <i>No Data Available</i> |
| <b>pH</b>  | Approximately 6.52       |
| <b>Melting point/Freezing point</b>                      | <i>Not Applicable</i>    |
| <b>Boiling point/Initial boiling point/Boiling range</b> | $\geq 100$ °C            |
| <b>Flash Point</b>                                       | No flash point           |
| <b>Evaporation rate</b>                                  | <i>Not Applicable</i>    |

|   |                          |
|---|--------------------------|
| Flammability (solid, gas)                   | Not Applicable           |
| Flammable Limits(LEL)                       | <i>Not Applicable</i>    |
| Flammable Limits(UEL)                       | <i>Not Applicable</i>    |
| Vapor Pressure                              | 2,399.8 Pa [ @ 20 °C ]   |
| Vapor Density and/or Relative Vapor Density | <i>Not Applicable</i>    |
| Density                                     | 1.034 g/ml               |
| Relative Density                            | 1.034 [Ref Std: WATER=1] |
| Water solubility                            | Complete                 |
| Solubility- non-water                       | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water     | <i>No Data Available</i> |
| Autoignition temperature                    | <i>Not Applicable</i>    |
| Decomposition temperature                   | <i>No Data Available</i> |
| Viscosity/Kinematic Viscosity               | <i>Not Applicable</i>    |
| Volatile Organic Compounds                  | <i>Not Applicable</i>    |
| Percent volatile                            | <i>Not Applicable</i>    |
| VOC Less H2O & Exempt Solvents              | <i>Not Applicable</i>    |
| Molecular weight                            | <i>Not Applicable</i>    |

## 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 polymerization will not occur.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

#### Substance

None known.

#### Condition

Not Specified

## 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 labeling, 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:**

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

**Ingestion:**

No known health effects.

**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 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 |
| 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                               |
| DENATONIUM BENZOATE | Inhalation-Dust/Mist           |         | LC50 estimated to be 1 - 5 mg/l                |
| DENATONIUM BENZOATE | Dermal                         | Rat     | LD50 > 2,000 mg/kg                             |
| DENATONIUM BENZOATE | Ingestion                      | Rat     | LD50 584 mg/kg                                 |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                | Species | Value                     |
|---------------------|---------|---------------------------|
| SODIUM CHLORIDE     | Rabbit  | No significant irritation |
| DENATONIUM BENZOATE | Rabbit  | Mild irritant             |

**Serious Eye Damage/Irritation**

| Name                | Species | Value                     |
|---------------------|---------|---------------------------|
| Overall product     | Rabbit  | No significant irritation |
| SODIUM CHLORIDE     | Rabbit  | Mild irritant             |
| DENATONIUM BENZOATE | Rabbit  | Corrosive                 |

**Sensitization:**

**Skin Sensitization**

| Name                | Species    | Value          |
|---------------------|------------|----------------|
| Overall product     | Guinea pig | Not classified |
| DENATONIUM BENZOATE | Human      | Not classified |

**Respiratory Sensitization**

| Name                | Species | Value          |
|---------------------|---------|----------------|
| DENATONIUM BENZOATE | Human   | Not classified |

**Germ Cell Mutagenicity**

**FT-32, Denatonium Benzoate Fit Test Solution**

| Name                | Route    | Value  |
|---------------------|----------|--|
| 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 |
| DENATONIUM BENZOATE | In Vitro | Not mutagenic  |
| DENATONIUM BENZOATE | In vivo  | Not mutagenic  |

**Carcinogenicity**

| Name                | Route     | Species | Value            |
|---------------------|-----------|---------|------------------|
| SODIUM CHLORIDE     | Ingestion | Rat     | Not carcinogenic |
| DENATONIUM BENZOATE | Ingestion | Rat     | Not carcinogenic |

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

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

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

| Name            | Route      | Target Organ(s)        | Value  | Species | Test Result         | Exposure Duration |
|-----------------|------------|------------------------|--|---------|---------------------|-------------------|
| Overall product | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Rat     | NOAEL<br>0.016 mg/l | 4 hours           |

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

**Specific Target Organ Toxicity - repeated exposure**

| Name                | Route     | Target Organ(s)  | Value  | Species | Test Result              | Exposure Duration |
|---------------------|-----------|--|--|---------|--------------------------|-------------------|
| SODIUM CHLORIDE     | Ingestion | blood   kidney and/or bladder   vascular system  | Some positive data exist, but the data are not sufficient for classification | Rat     | NOAEL<br>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<br>1,700 mg/kg/day | 90 days           |
| SODIUM CHLORIDE     | Ingestion | liver   respiratory system   | Not classified   | Rat     | NOAEL 33 mg/kg/day       | 90 days           |
| DENATONIUM BENZOATE | Ingestion | endocrine system   heart   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system | Not classified   | Rat     | NOAEL 16 mg/kg/day       | 2 years           |

**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 labeling, 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 #     | Organism                      | Type         | Exposure | Test Endpoint | Test Result  |
|---------------------|-----------|-------------------------------|--------------|----------|---------------|--------------|
| SODIUM CHLORIDE     | 7647-14-5 | Activated sludge              | Experimental | N/A      | NOEC          | 8,000 mg/l   |
| SODIUM CHLORIDE     | 7647-14-5 | Algae or other aquatic plants | 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     |
| DENATONIUM BENZOATE | 3734-33-6 | Green algae                   | Experimental | 72 hours | EC50          | 281.556 mg/l |
| DENATONIUM BENZOATE | 3734-33-6 | Invertebrate                  | Experimental | 48 hours | LC50          | 400 mg/l     |
| DENATONIUM BENZOATE | 3734-33-6 | Water flea                    | Experimental | 48 hours | EC50          | >500 mg/l    |
| DENATONIUM BENZOATE | 3734-33-6 | Zebra Fish                    | Experimental | 96 hours | LC50          | >100 mg/l    |

### 12.2. Persistence and degradability

| Material            | CAS No.   | Test Type                                | Duration | Study Type                  | Test Result        | Protocol                       |
|---------------------|-----------|--|----------|-----------------------------|--------------------|--------------------------------|
| SODIUM CHLORIDE     | 7647-14-5 | Data not available or insufficient       | N/A      | N/A                         | N/A                | N/A                            |
| DENATONIUM BENZOATE | 3734-33-6 | Experimental Biodegradation              | 28 days  | Biological Oxygen Demand    | 18.17 %BOD/ThO D   | OECD 301F - Manometric Respiro |
| DENATONIUM BENZOATE | 3734-33-6 | Experimental Aquatic Inherent Biodegrad. | 28 days  | Percent degraded            | 36 %removal of DOC | OECD 302B Zahn-Wellens/EVPA    |
| DENATONIUM BENZOATE | 3734-33-6 | Experimental Hydrolysis                  |          | Hydrolytic half-life (pH 7) | >1 years (t 1/2)   | EPA N 161-1 Hydrolysis         |

### 12.3. Bioaccumulative potential

| Material        | CAS No.   | Test Type   | Duration | Study Type | Test Result | Protocol              |
|-----------------|-----------|---|----------|------------|-------------|-----------------------|
| SODIUM CHLORIDE | 7647-14-5 | Data not available or insufficient for classification | N/A      | N/A        | N/A         | N/A                   |
| DENATONIUM      | 3734-33-6 | Experimental  |          | Log of     | 2.2         | OECD 117 log Kow HPLC |

|          |  |                  |  |                         |  |        |
|----------|--|------------------|--|-------------------------|--|--------|
| BENZOATE |  | Bioconcentration |  | Octanol/H2O part. coeff |  | method |
|----------|--|------------------|--|-------------------------|--|--------|

**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**

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

**SECTION 14: Transport Information**

Not hazardous for transportation.

**Marine Transport (IMDG)**

- UN Number:**None assigned.
- Proper Shipping Name:**None assigned.
- Technical Name:**None assigned.
- Hazard Class/Division:**None assigned.
- Subsidiary Risk:**None assigned.
- Packing Group:**None assigned.
- Limited Quantity:**None assigned.
- Marine Pollutant:** None assigned.
- Marine Pollutant Technical Name:** None assigned.
- Other Dangerous Goods Descriptions:** None assigned.

**Air Transport (IATA)**

- UN Number:**None assigned.
- Proper Shipping Name:**None assigned.
- Technical Name:**None assigned.
- Hazard Class/Division:**None assigned.
- Subsidiary Risk:**None assigned.
- Packing Group:**None assigned.
- Limited Quantity:**None assigned.
- Marine Pollutant:** None assigned.
- Marine Pollutant Technical Name:** None assigned.
- Other Dangerous Goods Descriptions:** None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

## 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. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

## SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

**3M Malaysia SDSs are available at [www.3M.com.my](http://www.3M.com.my)**



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|------------------------|------------|-------------------------|------------|
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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

### SECTION 1: Identification

#### 1.1. Product identifier

FT-31, Denatonium Benzoate Sensitivity Solution

#### Product Identification Numbers

70-0707-0965-7

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Sensitivity Test Solution.

For Industrial or Professional use only

#### 1.3. Supplier's details

**ADDRESS:** 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301  
Petaling, Jaya, Selangor  
**Telephone:** 03-7884 2888  
**E Mail:** 3mmyehsr@mmm.com  
**Website:** www.3M.com.my

#### 1.4. Emergency telephone number

+60 03-7884 2888

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Not classified as hazardous according to Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

#### 2.2. Label elements

##### Signal word

Not applicable

##### Symbols

Not applicable

**Pictograms**

Not applicable

**2.3. Other hazards**

None known

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

| Ingredient          | C.A.S. No. | % by Wt  |
|---------------------|------------|----------|
| WATER               | 7732-18-5  | 90 - 100 |
| SODIUM CHLORIDE     | 7647-14-5  | 3 - 10   |
| DENATONIUM BENZOATE | 3734-33-6  | 0 - 1    |

**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:**

If exposed, wash with soap and water. If signs/symptoms develop, get medical attention.

**Eye Contact:**

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, get medical attention.

**If Swallowed:**

Do not induce vomiting. 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**

Non-combustible. Use a fire fighting agent suitable for surrounding fire. Use a fire fighting agent suitable for the surrounding fire.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Observe precautions from other sections.

**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**

For industrial/occupational use only. Not for consumer sale or use. Do not eat, drink or smoke when using this product. 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**

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

**8.2. Exposure controls**

**8.2.1. Engineering controls**

No engineering controls required.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

None required.

**Skin/hand protection**

No protective gloves required.

**Respiratory protection**

None required.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

|   |  |
|---|--|
| Physical state                                    | Liquid   |
| Color   | Colorless  |
| Odor  | Odorless   |
| Odor threshold                                    | <i>No Data Available</i>                         |
| pH  | Approximately 6.52 Units not avail. or not appl. |
| Melting point/Freezing point                      | <i>Not Applicable</i>                            |
| Boiling point/Initial boiling point/Boiling range | $\geq 100$ °C                                    |
| Flash Point                                       | No flash point                                   |

|   |                          |
|---|--------------------------|
| Evaporation rate                            | <i>Not Applicable</i>    |
| Flammability (solid, gas)                   | Not Applicable           |
| Flammable Limits(LEL)                       | <i>Not Applicable</i>    |
| Flammable Limits(UEL)                       | <i>Not Applicable</i>    |
| Vapor Pressure                              | 2,399.8 Pa [ @ 20 °C ]   |
| Vapor Density and/or Relative Vapor Density | <i>Not Applicable</i>    |
| Density                                     | 1.034 g/ml               |
| Relative Density                            | 1.034 [Ref Std: WATER=1] |
| Water solubility                            | Complete                 |
| Solubility- non-water                       | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water     | <i>No Data Available</i> |
| Autoignition temperature                    | <i>Not Applicable</i>    |
| Decomposition temperature                   | <i>No Data Available</i> |
| Viscosity/Kinematic Viscosity               | <i>Not Applicable</i>    |
| Volatile Organic Compounds                  | <i>Not Applicable</i>    |
| Percent volatile                            | <i>Not Applicable</i>    |
| VOC Less H2O & Exempt Solvents              | <i>Not Applicable</i>    |
| Molecular weight                            | <i>Not Applicable</i>    |

## 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 polymerization will not occur.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

Substance

None known.

Condition

Not Specified

## 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 labeling, 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:**

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

**Ingestion:**

No known health effects.

**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 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 |
| 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                               |
| DENATONIUM BENZOATE | Inhalation-Dust/Mist           |         | LC50 estimated to be 1 - 5 mg/l                |
| DENATONIUM BENZOATE | Dermal                         | Rat     | LD50 > 2,000 mg/kg                             |
| DENATONIUM BENZOATE | Ingestion                      | Rat     | LD50 584 mg/kg                                 |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                | Species | Value                     |
|---------------------|---------|---------------------------|
| SODIUM CHLORIDE     | Rabbit  | No significant irritation |
| DENATONIUM BENZOATE | Rabbit  | Mild irritant             |

**Serious Eye Damage/Irritation**

| Name                | Species | Value         |
|---------------------|---------|---------------|
| SODIUM CHLORIDE     | Rabbit  | Mild irritant |
| DENATONIUM BENZOATE | Rabbit  | Corrosive     |

**Sensitization:**

**Skin Sensitization**

| Name                | Species    | Value          |
|---------------------|------------|----------------|
| Overall product     | Guinea pig | Not classified |
| DENATONIUM BENZOATE | Human      | Not classified |

**Respiratory Sensitization**

| Name                | Species | Value          |
|---------------------|---------|----------------|
| DENATONIUM BENZOATE | Human   | Not classified |



**Germ Cell Mutagenicity**

| Name                | Route    | Value  |
|---------------------|----------|--|
| 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 |
| DENATONIUM BENZOATE | In Vitro | Not mutagenic  |
| DENATONIUM BENZOATE | In vivo  | Not mutagenic  |

**Carcinogenicity**

| Name                | Route     | Species | Value            |
|---------------------|-----------|---------|------------------|
| SODIUM CHLORIDE     | Ingestion | Rat     | Not carcinogenic |
| DENATONIUM BENZOATE | Ingestion | Rat     | Not carcinogenic |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

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

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

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

**Specific Target Organ Toxicity - repeated exposure**

| Name                | Route     | Target Organ(s)  | Value  | Species | Test Result           | Exposure Duration |
|---------------------|-----------|--|--|---------|-----------------------|-------------------|
| 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           |
| DENATONIUM BENZOATE | Ingestion | endocrine system   heart   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system | Not classified   | Rat     | NOAEL 16 mg/kg/day    | 2 years           |

**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 labeling, 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 #     | Organism                      | Type         | Exposure | Test Endpoint | Test Result  |
|---------------------|-----------|-------------------------------|--------------|----------|---------------|--------------|
| SODIUM CHLORIDE     | 7647-14-5 | Activated sludge              | Experimental | N/A      | NOEC          | 8,000 mg/l   |
| SODIUM CHLORIDE     | 7647-14-5 | Algae or other aquatic plants | 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     |
| DENATONIUM BENZOATE | 3734-33-6 | Green algae                   | Experimental | 72 hours | EC50          | 281.556 mg/l |
| DENATONIUM BENZOATE | 3734-33-6 | Invertebrate                  | Experimental | 48 hours | LC50          | 400 mg/l     |
| DENATONIUM BENZOATE | 3734-33-6 | Water flea                    | Experimental | 48 hours | EC50          | >500 mg/l    |
| DENATONIUM BENZOATE | 3734-33-6 | Zebra Fish                    | Experimental | 96 hours | LC50          | >100 mg/l    |

### 12.2. Persistence and degradability

| Material            | CAS No.   | Test Type                                | Duration | Study Type                  | Test Result        | Protocol                       |
|---------------------|-----------|--|----------|-----------------------------|--------------------|--------------------------------|
| SODIUM CHLORIDE     | 7647-14-5 | Data not available or insufficient       | N/A      | N/A                         | N/A                | N/A                            |
| DENATONIUM BENZOATE | 3734-33-6 | Experimental Biodegradation              | 28 days  | Biological Oxygen Demand    | 18.17 %BOD/ThO D   | OECD 301F - Manometric Respiro |
| DENATONIUM BENZOATE | 3734-33-6 | Experimental Aquatic Inherent Biodegrad. | 28 days  | Percent degraded            | 36 %removal of DOC | OECD 302B Zahn-Wellens/EVPA    |
| DENATONIUM BENZOATE | 3734-33-6 | Experimental Hydrolysis                  |          | Hydrolytic half-life (pH 7) | >1 years (t 1/2)   | EPA N 161-1 Hydrolysis         |

### 12.3. Bioaccumulative potential

| Material            | CAS No.   | Test Type   | Duration | Study Type                     | Test Result | Protocol                     |
|---------------------|-----------|---|----------|--------------------------------|-------------|------------------------------|
| SODIUM CHLORIDE     | 7647-14-5 | Data not available or insufficient for classification | N/A      | N/A                            | N/A         | N/A                          |
| DENATONIUM BENZOATE | 3734-33-6 | Experimental Bioconcentration                         |          | Log of Octanol/H2O part. coeff | 2.2         | OECD 117 log Kow HPLC method |

### 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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

### SECTION 14: Transport Information

Not hazardous for transportation.

#### Marine Transport (IMDG)

**UN Number:**None assigned.

**Proper Shipping Name:**None assigned.

**Technical Name:**None assigned.

**Hazard Class/Division:**None assigned.

**Subsidiary Risk:**None assigned.

**Packing Group:**None assigned.

**Limited Quantity:**None assigned.

**Marine Pollutant:** None assigned.

**Marine Pollutant Technical Name:** None assigned.

**Other Dangerous Goods Descriptions:**

None assigned.

#### Air Transport (IATA)

**UN Number:**None assigned.

**Proper Shipping Name:**None assigned.

**Technical Name:**None assigned.

**Hazard Class/Division:**None assigned.

**Subsidiary Risk:**None assigned.

**Packing Group:**None assigned.

**Limited Quantity:**None assigned.

**Marine Pollutant:** None assigned.

**Marine Pollutant Technical Name:** None assigned.

**Other Dangerous Goods Descriptions:**

None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

### 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. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

**SECTION 16: Other information**

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

**3M Malaysia SDSs are available at [www.3M.com.my](http://www.3M.com.my)**