Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
FT-31, Denatonium Benzoate Sensitivity Solution

Product Identification Numbers
70-0707-0965-7
7100004635

1.2. Recommended use and restrictions on use

Recommended use
Sensitivity Test Solution.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Personal Safety Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable

Pictograms
Not applicable

SECTION 3: Composition/information on ingredients

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	< 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
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.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

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. Ventilate the area with fresh air. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

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. Avoid breathing dust/fume/gas/mist/vapors/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
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	*No Data Available*
pH	Approximately 6.52 Units not avail. or not appl.
Melting point	*Not Applicable*
Boiling Point	>=212 ºF

Flash Point	No flash point
Evaporation rate	*Not Applicable*
Flammability	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	18 mmHg [@ 20 ºC]
Relative Vapor Density	*Not Applicable*
Density	1.034 g/ml
Relative Density	1.034 [*Ref Std:*WATER=1]
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	*Not Applicable*
Molecular weight	*Not Applicable*
Volatile Organic Compounds	*Not Applicable*
Percent volatile	*Not Applicable*
VOC Less H2O & Exempt Solvents	*Not Applicable*
Particle Characteristics	*Not Applicable*

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	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

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

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	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,240 mg/kg/day	9 months
SODIUM CHLORIDE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,240 mg/kg/day	9 months
SODIUM CHLORIDE	Ingestion	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	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,700 mg/kg/day	90 days
SODIUM CHLORIDE	Ingestion	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	Not classified	Rat	NOAEL 33 mg/kg/day	90 days
SODIUM CHLORIDE	Ingestion	respiratory system	Not classified	Rat	NOAEL 33 mg/kg/day	90 days
DENATONIUM BENZOATE	Ingestion	endocrine system	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	heart	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	liver	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	immune system	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	muscles	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM	Ingestion	nervous system	Not classified	Rat	NOAEL 16	2 years

BENZOATE					mg/kg/day	
DENATONIUM BENZOATE	Ingestion	eyes	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 16 mg/kg/day	2 years
DENATONIUM BENZOATE	Ingestion	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

Ecotoxicological information

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

Chemical fate information

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

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. 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.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not Applicable.

Health Hazards
Not Applicable.

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories

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.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 1 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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