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Material Safety Data Sheet

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1 Product Identification

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Tradename:  
FT-31, DENATONIUM BENZOATE SENSITIVITY SOLUTION  
Product ID:  
70-0707-0965-7 78-8113-5577-1  
Intended Use of Product:  
Testing liquid  
Division:  
OCCUPATIONAL HEALTH & ENVIRON. SAFETY

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2 Composition/Information on Ingredients

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Ingredient Name	CAS Number	Percentage
WATER	7732-18-5	80 - 100
SODIUM CHLORIDE	7647-14-5	3 - 7
DENATONIUM BENZOATE	3734-33-6	< 0.1

NOTE:

Each percentage is expressed as the ratio of the weight of the ingredient to the weight of the controlled product.

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3 Hazards Identification

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Critical Hazards:

None known.

See Sections 7 and 11 for further information.

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4 First Aid Measures

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Instructions for Eye Contact:

Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Instructions for Skin Contact:

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

Instructions for Inhalation:

Remove person to fresh air. If signs/symptoms develop, get medical attention.

Instructions for Ingestion:

No need for first aid is anticipated.

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5 Fire Fighting Measures

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Flash point:

Not applicable

Lower Explosive Limit (%):

Not applicable

Upper Explosive Limit (%):

Not applicable

Autoignition temperature:

Not applicable

Suitable Extinguishing Media:

Not applicable

Exposure Hazards during Fire:

Material will not burn.

Combustion Products from Fire:

None known

Fire Fighting Procedures:

wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

NFPA: Health

0

NFPA: Fire

0

NFPA: Reactivity

0

NFPA: Unusual Reaction Hazard

none

Special Instructions:

Not applicable.

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6 Accidental Release Measures

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Personal Precautions:

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill.

Spill Response:

Contain spill. Collect as much of the spilled material as possible. Clean up residue with water. Clean up residue with detergent and water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

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## 7 Handling and Storage

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Storage Requirements:  
 Store under normal warehouse conditions.  
 Incompatible Materials:  
 None known.  
 Ventilation:  
 No data available.  
 Fire Prevention:  
 Not applicable.  
 Use Instructions:  
 For industrial or professional use only.

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## 8 Exposure Controls/Personal Protection

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### Personal Protection

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Eye Protection:  
 Avoid eye contact.  
 Hand Protection:  
 Gloves are not required.  
 Skin Protection:  
 No data available.  
 Respiratory Protection:  
 Not applicable.  
 Ingestion (Prevention):  
 Not applicable.  
 Recommended Ventilation:  
 Not applicable.

### Ingredient Exposure Data

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WATER (7732-18-5)	
LD50 (rat, oral)	> 90 ml/kg
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	
No data available.	
SODIUM CHLORIDE (7647-14-5)	
LD50 (rat, oral)	3000 mg/kg
LD50 (dermal, rabbit)	> 10 g/kg
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	
No data available.	
DENATONIUM BENZOATE (3734-33-6)	
LD50 (rat, oral)	584 mg/kg
LC50 (rat, inhalation/4 hours)	No data available.
Exposure Limits	
No data available.	

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## 9 Physical and Chemical Properties

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Physical form,Color,Odour:	FT-31.txt Liquid; clear; Odourless; with Bitter taste; Freezing Point: -4 C
Odour Threshold:	No data available.
pH:	Approx 6.52
Boiling point/boiling range:	Not applicable
Melting point/melting range:	Not applicable
Vapour pressure:	Not applicable
Water Solubility:	Complete
Specific gravity:	1.034 Water=1
Vapour density:	Not applicable
Volatile organic compounds:	Not applicable
Evaporation rate:	Not applicable
Viscosity:	Not applicable
Percent Volatile:	Not applicable

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## 10 Stability and Reactivity

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Conditions to Avoid:  
None known.

Materials to Avoid:  
None known.

Hazardous Decomposition:  
None known

Stability and Reactivity:  
Stable. Hazardous polymerization will not occur.

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## 11 Toxicological Information

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Effects from Eye Contact:  
No health effects are expected.

Effects from Skin Contact:  
No health effects are expected.

Effects from Inhalation:  
Prolonged or repeated exposure may cause: Respiratory Tract  
Irritation: Signs/symptoms may include cough, sneezing, nasal  
discharge, headache, hoarseness, and nose and throat pain.

Effects from Ingestion:  
No health effects are expected.  
Denatonium Benzoate is a very bitter chemical used in many consumer  
products as an aversive agent against child ingestion.

Sensitization Information:  
No data available.

Carcinogenicity:  
No data available.

Mutagenicity:  
No data available.

Reproductive Effects:  
No data available.

Component Based Information:  
No data available.

Product Based Information:  
A Draize Primary Eye Irritation Test (OECD Guideline 405) using  
this material produced scores of zero at all time points (1, 24, 48,

72 hrs post exposure). A Guinea Pig Maximization Test (OECD Guideline 406) using this material showed a reaction in one animal, erythema, at the 24-hour observation post challenge. Therefore, the material has a weak sensitizing potential (% responding >0% - <8%). An Assessment of Acute Inhalatory Toxicity, with a 4-hour exposure (OECD Guideline 403) with this material produced no changes in gross motor skills and no changes in respiratory tract histology. At the maximum airborne concentration of material, statistically significant changes in physical breathing parameters such as expiratory time, retention time, expiratory flow, and enhanced pause were observed. These effects are thought to be indicative of non-specific, irritant action.

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## 12 Ecological Information

Environmental Data:

Ecotoxicity Data:

Not determined.

Ecofate Data:

Not determined.

## 13 Disposal Considerations

Product as Sold:

Discharge spent solutions and small quantities (less than 5 gal.(19 L)) to a wastewater treatment system.

Product Packaging:

No data available.

Potential for Recycling:

Reclaim if feasible.

Special Instructions:

Since regulations vary, consult applicable regulations or authorities before disposal.

## 14 Transportation Information

### Transportation of Dangerous Goods

TDG Classification:

Non-Regulated Material

Special Information:

Contact 3M for more information.

### International Dangerous Goods Classification

## 15 Regulatory Information

WHMIS Classification:

Not Controlled

NOTE:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS

FT-31.txt

contains all the information required by the CPR.

Product Certifications:

The product on this MSDS, or all its components, is included on the following countries' chemical inventories, as noted:

EINECS - European Inventory of Existing Commercial Chemical Substances

DSL - Domestic Substances List (Canada)

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TSCA - Toxic Substances Control Act (USA)

AICS - Australian Inventory of Chemical Substances

16 Other Information

Reason for Reissue:

The following Sections and topics have been updated or revised:  
Ingredient ranges update/revision

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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