



Safety Data Sheet

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Document group:	07-6198-1	Version number:	6.02
Revision date:	28/08/2018	Supersedes date:	13/04/2018
Transportation version number:	1.00 (15/03/2011)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

FT-31, Denatonium Benzoate Sensitivity Solution

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Sensitivity Test Solution.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

Not applicable

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Non-Hazardous Ingredients	Mixture			80 - 100	Substance not classified as hazardous
Sodium Chloride	7647-14-5	231-598-3		3 - 7	Substance not classified as hazardous
Denatonium Benzoate	3734-33-6	223-095-2		0 - 1	Acute Tox. 4, H332; Acute Tox. 4, H302; Eye Dam. 1, H318

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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.

Eye contact

No need for first aid is anticipated.

If swallowed

No need for first aid is anticipated.

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

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. 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. Advice 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

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.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. 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.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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 Safety Data Sheet.

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

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.
Appearance/Odour	Clear, odourless solution with a bitter taste. Freezing point = -4 degrees Centigrade
Odour threshold	<i>No data available.</i>
pH	approximately 6.52 Units not available or not applicable.
Boiling point/boiling range	$\geq 100^{\circ}\text{C}$
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	2,399.8 Pa [$@ 20^{\circ}\text{C}$]
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>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>Not applicable.</i>
Density	1.034 g/ml

9.2. Other information

EU Volatile Organic Compounds	<i>No data available.</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 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.	Not specified.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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 Sensitisation

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Name	Species	Value
Overall product	Guinea pig	Not classified
Denatonium Benzoate	Human	Not classified

Respiratory Sensitisation

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 is currently available or the data is not sufficient for classification.

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

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

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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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
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
Denatonium Benzoate	3734-33-6	Crustacea	Experimental	96 hours	LC50	400 mg/l
Denatonium Benzoate	3734-33-6	Green algae	Experimental	72 hours	EC50	282 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 Nbr	Test type	Duration	Study Type	Test result	Protocol
Sodium Chloride	7647-14-5	Data not available or insufficient			N/A	
Denatonium Benzoate	3734-33-6	Experimental Biodegradation	28 days	BOD	18.17 % weight	OECD 301F - Manometric respirometry

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 Kow	2.2	Other methods

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Product components have been assessed to be treatable in properly operating wastewater treatment systems (industrial, municipal, commercial) with a minimum of biological (aerobic) secondary treatment. Waste product may be directly discharged to wastewater treatment systems. Changes in the manner of which a product is used will require an evaluation to determine proper disposal. 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

161002 Aqueous liquid wastes other than those mentioned in 16 10 01

SECTION 14: Transportation information

ADR/IMDG/IATA: Not restricted for transport.

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.

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H332	Harmful if inhaled.

Revision information:

Section 12: Component ecotoxicity information information was modified.
Section 13: 13.1. Waste disposal note information was modified.
Section 14: Transportation classification information was added.
Section 15: Chemical Safety Assessment information was added.
Section 15: Regulations - Inventories information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk