

Safety Data Sheet

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 Document group:
 20-0578-3
 Version number:
 1.01

 Issue Date:
 12/03/2020
 Supersedes date:
 19/09/2016

This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier

3MTM CavilonTM No Sting Barrier Film Spray (IO) Cat. # 3346, 3346E, 3346P

Product Identification Numbers

70-0051-3419-5 70-2007-4661-1 70-2007-4662-9 70-2007-4663-7 70-2007-6394-7

70-2007-6494-5 70-2007-6557-9 70-2007-8434-9

1.2. Recommended use and restrictions on use

Recommended use

Skin protectant barrier film.

1.3. Supplier's details

Address: 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100

Telephone: 080-45543000, contact Product EHS team

E Mail: productehs.in@mmm.com
Website: http://solutions.3mindia.co.in

1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture

Flammable Liquid: Category 2. Aspiration Hazard: Category 1. Acute Aquatic Toxicity: Category 1. Chronic Aquatic Toxicity: Category 1.

2.2. Label elements

Signal Word

DANGER!

Symbols

Flame | Health Hazard | Environment |

Pictograms







HAZARD STATEMENTS:

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

General:

P102 Keep out of reach of children.

Prevention:

P210A Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P273 Avoid release to the environment.

Response:

P331 Do NOT induce vomiting.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P370 + P378G In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry

chemical or carbon dioxide to extinguish.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with applicable

local/regional/national/international regulations.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt	
Hexamethyldisiloxane	107-46-0	65 - 90	
Isooctane	540-84-1	5 - 30	
Acrylate Terpolymer	Trade Secret	3 - 12	-

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

Do not induce vomiting. Get immediate medical attention.

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. Suitable Extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u> Carbon monoxide. Carbon dioxide. Condition

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam 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. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. 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

Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

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
Octane	540-84-1	ACGIH	TWA:300 ppm	

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

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. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eve/face protection

Eye protection not required.

Skin/hand protection

No protective gloves 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

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 stateLiquid.ColorColorless

OdorSlight Odor, OdourlessOdour thresholdNo data available.pHNot applicable.Melting point/Freezing point: NANot applicable.

Boiling point/Initial boiling point/Boiling range 100 °C [Test Method: Tested per ASTM protocol]

Flash point -10 °C [Test Method:Closed Cup]

Evaporation rate <=1 [Test Method:Tested per ASTM protocol] [Ref

Std:ETHER=1] Not applicable.

Flammability (solid, gas)

Flammable Limits(LEL)

Flammable Limits(UEL)

Not app
0.7 %
18.3 %

Vapour pressure < 186,158.4 Pa [@ 55 °C]

Vapour density Not applicable. Density0.78 g/ml

Relative density 0.78 [Test Method: Tested per ASTM protocol] [Ref

Std:WATER=1]

Water solubility <=0.1 % [*Test Method:* Tested per ASTM protocol]

Solubility- non-waterNo data available.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperature351.7 °CDecomposition temperatureNo data available.

Viscosity 5 mPa-s [Test Method: Tested per ASTM protocol]

Molecular weight

Volatile organic compounds (VOC)

Percent volatile

Not applicable.
720 g/l
88 - 94 %

VOC less H2O & exempt solvents *No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

Sparks and/or flames.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products Substance

None known.

Condition

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 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

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

Ingestion

Chemical (aspiration) pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish coloured skin (cyanosis), and may be fatal. Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

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	Inhalation- Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Hexamethyldisiloxane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hexamethyldisiloxane	Inhalation- Vapor (4 hours)	Rat	LC50 106 mg/l
Hexamethyldisiloxane	Ingestion	Rat	LD50 > 5,000 mg/kg
Isooctane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Isooctane	Inhalation- Vapor (4 hours)	Rat	LC50 > 33.5 mg/l
Isooctane	Ingestion	Rat	LD50 > 5,000 mg/kg

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ATE = acute toxicity estimate

Skin Corrosion/Irritation

	1	
Name	Species	Value
	1 *	
Overall product	Human	No significant irritation
Hexamethyldisiloxane	Rabbit	No significant irritation
Isooctane	Human	Minimal irritation
Isoocialic	I	Willima mitation
	and	
	animal	

Serious Eye Damage/Irritation

Name	Species	Value
Hexamethyldisiloxane	Rabbit	Mild irritant
Isooctane	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Hexamethyldisiloxane	Guinea	Not classified
	pig	
Isooctane	Human	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
Hexamethyldisiloxane	In Vitro	Not mutagenic
Hexamethyldisiloxane	In vivo	Not mutagenic
Isooctane	In vivo	Not mutagenic
Isooctane	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Hexamethyldisiloxane	Inhalation	Rat	Some positive data exist, but the data are not
			sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

teproductive unity or Developmental Directs							
Name	Route	Value	Species	Test result	Exposure Duration		
Hexamethyldisiloxane	Inhalation	Not classified for male reproduction	Rat	NOAEL 33 mg/l	13 weeks		
Isooctane	Inhalation	Not classified for development	Rat	NOAEL 5.6 mg/l	during organogenesis		

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Specific Target Organ	1 omicity 5	mgie exposure				
Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Hexamethyldisiloxane	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 33 mg/l	6 hours
Hexamethyldisiloxane	Ingestion	central nervous system depression	Not classified	Guinea pig	LOAEL 22,900 mg/kg	not applicable
Isooctane	Inhalation	central nervous	May cause drowsiness or	Multiple	NOAEL Not	not available

		system depression	dizziness	animal	available	
				species		
Isooctane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Isooctane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not applicable

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Hexamethyldisiloxane	Dermal	liver kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Hexamethyldisiloxane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 4 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	liver	Not classified	Multiple animal species	NOAEL 29 mg/l	15 days
Hexamethyldisiloxane	Inhalation	heart endocrine system immune system nervous system respiratory system	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Isooctane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 5.6 mg/l	12 weeks
Isooctane	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 0.2 mg/l	1 years
Isooctane	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL Not available	4 weeks
Isooctane	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	21 days

Aspiration Hazard

Name	Value		
Isooctane	Aspiration hazard		

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:

GHS Acute 1: Very toxic to aquatic life.

Chronic aquatic hazard:

GHS Chronic 1: Very toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Hexamethyldisi	107-46-0	Green Algae	Experimental	70 hours	EC50	>0.55 mg/l
loxane						
Hexamethyldisi	107-46-0	Rainbow trout	Experimental	96 hours	LC50	0.46 mg/l
loxane						
Hexamethyldisi	107-46-0	Green Algae	Experimental	70 hours	Effect	0.09 mg/l
loxane					Concentration	
					10%	
Hexamethyldisi	107-46-0	Water flea	Experimental	21 days	NOEC	0.08 mg/l
loxane						
Isooctane	540-84-1	Water flea	Estimated	48 hours	EC50	0.4 mg/l
Isooctane	540-84-1	Ricefish	Experimental	96 hours	LC50	0.561 mg/l
Acrylate	Trade Secret		Data not			
Terpolymer			available or			
			insufficient for			
			classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Hexamethyldisi	107-46-0	Experimental		Photolytic half-	22.5 days (t	Other methods
loxane		Photolysis		life (in air)	1/2)	
Hexamethyldisi	107-46-0	Experimental		Hydrolytic	120 hours (t	Other methods
loxane		Hydrolysis		half-life	1/2)	
Isooctane	540-84-1	Experimental		Photolytic half-	8.36 days (t	Other methods
		Photolysis		life (in air)	1/2)	
Isooctane	540-84-1	Experimental	28 days	BOD	0 %	OECD 301C - MITI
		Biodegradation	-		BOD/ThBOD	test (I)
Acrylate	Trade Secret	Data not			N/A	
Terpolymer		available-				
		insufficient				

12.3: Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Hexamethyldisi	107-46-0	Experimental	56 days	Bioaccumulatio	2410	OECD 305C-Bioaccum
loxane		BCF-Carp		n factor		degree fish
Isooctane	540-84-1	Experimental	28 days	Bioaccumulatio	540	OECD 305E -
		BCF-Carp		n factor		Bioaccumulation flow-
						through fish test
Acrylate	Trade Secret	Data not	N/A	N/A	N/A	N/A
Terpolymer		available or				
		insufficient for				
		classification				

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.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

Air Transport (IATA)Regulations

UN No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Classs/Division 3 Subsidiary Risk Not applicable

Packing Group: II

Marine Transport (IMDG)

UN No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Classs/Division 3 Subsidiary Risk Not applicable

Packing Group: II

Environmental Hazards: Not applicable

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.

Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

The Bio Medical Waste (Management & Handling) Rules, 1998

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

None.

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

The product is classified as Very Highly Flammable liquid as per MSIHC Rules, 1989.

SECTION 16: Other information

NFPA Hazard Classification

Health: 1 Flammability: 3 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.

Revision information:

Section 14: Packing group (IMO) information was added.

Company Telephone information was modified.

Section 1: Emergency telephone information was modified.

Label: GHS Classification information was modified.

Label: GHS Environmental Hazard Statements information was modified.

Label: GHS Precautionary - Prevention information was modified.

Label: GHS Precautionary - Storage information was modified.

Label: GHS Target Organ Hazard Statement information was deleted.

Section 2: Ingredient table information was modified.

Section 4: First aid for eye contact information information was modified.

Section 5: Fire - Advice for fire fighters information information was modified.

Section 6: Accidental release clean-up information information was modified.

Section 7: Precautions safe handling information information was modified.

Section 8: Appropriate Engineering controls information information was modified.

Section 8: Eye protection information information was deleted.

Section 8: Occupational exposure limit table information was modified.

Section 8: Personal Protection - Eye information information was added.

Section 8: Personal Protection - Respiratory Information information was modified.

Section 8: Personal Protection - Skin/hand information information was modified.

Section 8: Respiratory protection - recommended respirators guide information was added.

Section 8: Respiratory protection - recommended respirators information information was added.

Section 09: Color information was added.

Section 09: Odor information was added.

Sections 3 and 9: Odour, colour, grade information information was deleted.

Section 9: Property description for optional properties information was modified.

Section 9: Vapour pressure value information was modified.

Section 11: Acute Toxicity table information was modified.

Section 11: Health Effects - Ingestion information information was modified.

Section 11: Prolonged or repeated exposure may cause standard phrases information was deleted.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Target Organs - Repeated Table information was modified.

Section 11: Target Organs - Single Table information was modified.

Section 12: Chronic aquatic hazard information information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12:Bioccumulative potential information information was modified.

Section 13: 13.1. Waste disposal note information was modified.

Section 13: Standard Phrase Category Waste GHS information was modified.

Section 14: Environmental hazards information was added.

Section 14: IMO Subsidiary Risk information was added.

Section 14: IMO transport hazard classes information was added.

Section 14: Proper Shipping Name (IMO) information was added.

Section 14: UN Number (IMO) information was added.

Section 15: Applicable Environmental, Health and Safety Regulations information was modified.

Section 15: MSIHC Part I of Schedule I ingredients information was modified.

Sectio 16: UK disclaimer information was deleted.

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

3M TM Cavilon TM No Sting Barrier Film Spray (IO) Cat. # 3346, 3346E, 3346P
actions the machine as to the switchility of the meaduret for their arm internal and any Vertical
satisfy themselves as to the suitability of the product for their own intended applications.
3M India SDSs are available at http://solutions.3mindia.co.in

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