



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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SECTION 1: Identification

1.1. Product identifier

3M™ Hot Melt Adhesive 3748PG, 3748TC, 3748Q, 3748B Off-White

Product Identification Numbers

62-3748-7230-7	62-3748-7231-5	62-3748-7232-3	62-3748-9132-3	62-3748-9330-3
62-3748-9334-5	62-3748-9335-2	62-3748-9337-8	62-3748-9339-4	62-3748-9830-2
62-3748-9836-9				

1.2. Recommended use and restrictions on use

Recommended use

Adhesive, Hot-melt adhesive

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586.

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Other hazards

May cause thermal burns. 3M Avoid contact with hot extruded material or applicator tip. Avoid direct eye exposure to vapours. 3M In case of skin contact with molten material, immediately flush with cold water and cover with a clean dressing. Do not attempt to remove adhesive. Have burn treated by a medical doctor.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Polypropylene	9003-07-0	15 - 40
Hydrocarbon resin	Trade Secret	10 - 30
Styrene-Butadiene Polymer	Trade Secret	10 - 30
Ethylene-Propylene Polymer	9010-79-1	1 - 25
Polyethylene	9002-88-4	1 - 25
Polyolefin Wax	8002-74-2	5 - 10

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

No need for first aid is anticipated.

Skin contact

Immediately flush skin with large amounts of cold water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Cover affected area with a clean dressing. Get immediate medical attention.

Eye contact

Immediately flush eyes with large amounts of water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Get immediate medical attention.

If swallowed

No need for first aid is anticipated.

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**

Material will not burn. In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish. 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**

Carbon monoxide.

Carbon dioxide.

Oxides of nitrogen.

Condition

During combustion.

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

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**

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. Observe precautions from other sections.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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**

Avoid skin contact with hot material. For industrial/occupational use only. Not for consumer sale or use.

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**

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
Polyolefin Wax	8002-74-2	ACGIH	TWA(as fume):2 mg/m ³	
Polyolefin Wax	8002-74-2	Singapore PELs	TWA(as fume)(8 hours):2 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

No engineering controls required.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full face shield.
Indirect vented goggles.

Skin/hand protection

No chemical protective gloves are required.

Respiratory protection

None required.

Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Solid.
Specific Physical Form:	Waxy Solid
Color	Off-White
Odor	Mild Resinous
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	280 °C [<i>Test Method:</i> Cleveland Open Cup]
Evaporation rate	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapor Density and/or Relative Vapor Density	Nil
Density	0.92 - 0.94 g/cm3
Relative density	0.92 - 0.94 [<i>Ref Std:</i> WATER=1]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	330 °C
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	4,000 - 6,000 mPa-s [<i>@</i> 190 °C]
Volatile organic compounds (VOC)	0 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	0 % weight
VOC less H2O & exempt solvents	0 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Molecular weight	<i>No data available.</i>
Solids content	100 %

Nanoparticles

This material does not contain nanoparticles.

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.	

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

No health effects are expected.

Skin contact

During heating: Thermal Burns: Signs/symptoms may include intense pain, redness and swelling, and tissue destruction.

Eye contact

During heating: Thermal Burns: Signs/symptoms may include severe pain, redness and swelling, and tissue destruction.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Polypropylene	Dermal		LD50 estimated to be > 5,000 mg/kg
Polypropylene	Ingestion	Mouse	LD50 > 8,000 mg/kg
Hydrocarbon resin	Dermal	Rat	LD50 > 2,000 mg/kg
Hydrocarbon resin	Ingestion	Rat	LD50 > 5,000 mg/kg

Ethylene-Propylene Polymer	Dermal	Rabbit	LD50 > 2,000 mg/kg
Ethylene-Propylene Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Styrene-Butadiene Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Styrene-Butadiene Polymer	Ingestion		LD50 estimated to be > 5,000 mg/kg
Polyethylene	Dermal		LD50 estimated to be > 5,000 mg/kg
Polyethylene	Ingestion	Rat	LD50 > 2,000 mg/kg
Polyolefin Wax	Dermal	Rat	LD50 > 5,000 mg/kg
Polyolefin Wax	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polypropylene	Human and animal	No significant irritation
Ethylene-Propylene Polymer	Rabbit	No significant irritation
Polyethylene	Professional judgement	No significant irritation
Polyolefin Wax	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polypropylene	Professional judgement	No significant irritation
Ethylene-Propylene Polymer	Rabbit	No significant irritation
Polyolefin Wax	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
Polypropylene	Human and animal	Not classified
Polyolefin Wax	Guinea pig	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
Polypropylene	In Vitro	Not mutagenic
Polyolefin Wax	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Polypropylene	Not specified.	Rat	Some positive data exist, but the data are not sufficient for classification
Polyethylene	Not specified.	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Polyolefin Wax	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
Polyolefin Wax	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 15 mg/kg/day	90 days
Polyolefin Wax	Ingestion	hematopoietic system liver immune system skin endocrine system bone, teeth, nails, and/or hair muscles nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days

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 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:**

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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
Polypropylene	9003-07-0		Data not available or insufficient for			N/A

			classification			
Hydrocarbon resin	Trade Secret		Data not available or insufficient for classification			N/A
Styrene-Butadiene Polymer	Trade Secret		Data not available or insufficient for classification			N/A
Ethylene-Propylene Polymer	9010-79-1		Data not available or insufficient for classification			N/A
Polyethylene	9002-88-4		Data not available or insufficient for classification			N/A
Polyolefin Wax	8002-74-2	Green algae	Estimated	96 hours	EC50	>1,000 mg/l
Polyolefin Wax	8002-74-2	Rainbow trout	Estimated	96 hours	LC50	>1,000 mg/l
Polyolefin Wax	8002-74-2	Water flea	Estimated	48 hours	EC50	>10,000 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polypropylene	9003-07-0	Data not available-insufficient			N/A	
Hydrocarbon resin	Trade Secret	Data not available-insufficient			N/A	
Styrene-Butadiene Polymer	Trade Secret	Data not available-insufficient			N/A	
Ethylene-Propylene Polymer	9010-79-1	Data not available-insufficient			N/A	
Polyethylene	9002-88-4	Data not available-insufficient			N/A	
Polyolefin Wax	8002-74-2	Estimated Biodegradation	28 days	BOD	40 % weight	OECD 301F - Manometric respirometry

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polypropylene	9003-07-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbon resin	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Styrene-Butadiene Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethylene-Propylene Polymer	9010-79-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene	9002-88-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyolefin Wax	8002-74-2	Estimated Bioconcentration		Log Kow	10.2	Estimated: Octanol-water partition coefficient

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.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

International Regulations

UN No.: Not restricted for transport.

UN Proper shipping name: Not restricted for transport.

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

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 the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional 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 material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. 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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Public Health Act and Environmental Public Health (General Waste Collection) Regulations: This product is subject to the requirements in the act/regulation.

SECTION 16: Other information

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 Singapore SDSs are available at www.3m.com.sg