Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier
3M™ Hot Melt Adhesive 3764 TC-Q

Product Identification Numbers
62-3764-9132-0

1.2. Recommended use and restrictions on use

Recommended use
Adhesive, Hot-melt adhesive

For Industrial or Professional use only.

1.3. Supplier's details
Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number
EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Skin Sensitizer: Category 1A.

2.2. Label elements
The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

Signal word
Warning

Symbols
Exclamation mark |

Pictograms

Hazard statements

H317	May cause an allergic skin reaction.

Precautionary statements

Prevention:

P272	Contaminated work clothing should not be allowed out of the workplace.
P280E	Wear protective gloves.

Response:

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Other assigned/identified product hazards
May cause thermal burns. Avoid contact with hot extruded material or applicator tip. Avoid direct eye exposure to vapours. In case of eye/skin contact with molten material, immediately flush with cold water

2.4. Other hazards which do not result in classification
None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Ethylene-Vinyl Acetate Polymer	24937-78-8	< 65
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	68132-00-3	< 40
Hydrocarbon resin	69430-35-9	< 35
Polyethylene Polymer	9006-26-2	1 - 10
Polyolefin Wax	8002-74-2	1 - 10
Antioxidant	6683-19-8	< 2
Maleic anhydride	108-31-6	< 0.01

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you are concerned, get medical advice.

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
Rinse mouth. If you are concerned, get medical advice.

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
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

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.
Irritant vapours or gases.	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
Evacuate area. 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.

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. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

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
Maleic anhydride	108-31-6	ACGIH	TWA(inhalable fraction and vapor):0.01 mg/m3	A4: Not class. as human carcin, Dermal/Respiratory Sensitizer
Maleic anhydride	108-31-6	Australia OELs	TWA(8 hours): 1 mg/m3 (0.25 ppm)	
Polyolefin Wax	8002-74-2	ACGIH	TWA(as fume):2 mg/m3	
Polyolefin Wax	8002-74-2	Australia OELs	TWA(as fume)(8 hours):2 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
Sen: Sensitiser
Sk: Absorption through the skin may be a significant source of exposure.

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.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

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
Colour	White
Odour	Odourless
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	267.8 ºC [*Test Method:*Cleveland Open Cup] [*Details:*Conditions: ASTM D-92-72]
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*No data available.*
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	0.95 g/cm3
Relative density	0.95 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	*Not applicable.*
Volatile organic compounds (VOC)	0 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Percent volatile	0 % weight
VOC less H2O & exempt solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Molecular weight	*No data available.*
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. Conditions to avoid
None known.

10.4. Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

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
May cause additional health effects (see below).

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
May cause additional health effects (see below).

Additional Health Effects:

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

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
Ethylene-Vinyl Acetate Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Ethylene-Vinyl Acetate Polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers,	Dermal		LD50 estimated to be > 5,000 mg/kg

Hydrogenated			
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Ingestion		LD50 estimated to be > 5,000 mg/kg
Hydrocarbon resin	Dermal	Rat	LD50 > 2,000 mg/kg
Hydrocarbon resin	Ingestion	Rat	LD50 > 5,000 mg/kg
Polyethylene Polymer	Dermal	Rabbit	LD50 > 7,940 mg/kg
Polyethylene Polymer	Ingestion	Rat	LD50 > 10,000 mg/kg
Polyolefin Wax	Dermal	Rat	LD50 > 5,000 mg/kg
Polyolefin Wax	Ingestion	Rat	LD50 > 5,000 mg/kg
Antioxidant	Dermal	Rabbit	LD50 > 3,160 mg/kg
Antioxidant	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.95 mg/l
Antioxidant	Ingestion	Rat	LD50 > 10,250 mg/kg
Maleic anhydride	Dermal	Rabbit	LD50 2,620 mg/kg
Maleic anhydride	Ingestion	Rat	LD50 1,030 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Ethylene-Vinyl Acetate Polymer	Professional judgement	No significant irritation
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Professional judgement	No significant irritation
Polyethylene Polymer	Rabbit	No significant irritation
Polyolefin Wax	Rabbit	No significant irritation
Antioxidant	Rabbit	No significant irritation
Maleic anhydride	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Ethylene-Vinyl Acetate Polymer	Professional judgement	No significant irritation
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Professional judgement	No significant irritation
Polyethylene Polymer	Rabbit	Mild irritant
Polyolefin Wax	Rabbit	No significant irritation
Antioxidant	Rabbit	Mild irritant
Maleic anhydride	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Polyolefin Wax	Guinea pig	Not classified
Antioxidant	Human and animal	Not classified
Maleic anhydride	Multiple animal species	Sensitising

Respiratory Sensitisation

Name	Species	Value
Maleic anhydride	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Polyolefin Wax	In Vitro	Not mutagenic

Antioxidant	In Vitro	Not mutagenic
Antioxidant	In vivo	Not mutagenic
Maleic anhydride	In vivo	Not mutagenic
Maleic anhydride	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Polyolefin Wax	Ingestion	Rat	Not carcinogenic
Antioxidant	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Antioxidant	Ingestion	Not classified for female reproduction	Rat	NOAEL 688 mg/kg/day	2 generation
Antioxidant	Ingestion	Not classified for male reproduction	Rat	NOAEL 688 mg/kg/day	2 generation
Antioxidant	Ingestion	Not classified for development	Multiple animal species	NOAEL 1,000 mg/kg/day	during organogenesis
Maleic anhydride	Ingestion	Not classified for female reproduction	Rat	NOAEL 55 mg/kg/day	2 generation
Maleic anhydride	Ingestion	Not classified for male reproduction	Rat	NOAEL 55 mg/kg/day	2 generation
Maleic anhydride	Ingestion	Not classified for development	Rat	NOAEL 140 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Maleic anhydride	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethylene-Vinyl Acetate Polymer	Ingestion	liver	Not classified	Rat	NOAEL 4,000 mg/kg/day	90 days
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 |	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days

		nervous system | eyes | kidney and/or bladder | respiratory system | vascular system				
Antioxidant	Ingestion	endocrine system	Not classified	Rat	NOAEL 450 mg/kg/day	2 years
Antioxidant	Ingestion	liver	Not classified	Dog	NOAEL 302 mg/kg/day	90 days
Antioxidant	Ingestion	hematopoietic system | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 2,500 mg/kg/day	90 days
Antioxidant	Ingestion	auditory system | eyes	Not classified	Dog	NOAEL 302 mg/kg/day	90 days
Maleic anhydride	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.0011 mg/l	6 months
Maleic anhydride	Inhalation	endocrine system | hematopoietic system | nervous system | kidney and/or bladder | heart | liver | eyes	Not classified	Rat	NOAEL 0.0098 mg/l	6 months
Maleic anhydride	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 55 mg/kg/day	80 days
Maleic anhydride	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 250 mg/kg/day	183 days
Maleic anhydride	Ingestion	heart | nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	183 days
Maleic anhydride	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 150 mg/kg/day	80 days
Maleic anhydride	Ingestion	hematopoietic system	Not classified	Dog	NOAEL 60 mg/kg/day	90 days
Maleic anhydride	Ingestion	skin | endocrine system | immune system | eyes | respiratory system	Not classified	Rat	NOAEL 150 mg/kg/day	80 days

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

Exposure Levels
Refer Section **8.1 Control Parameters** of this Safety Data Sheet.

Interactive Effects
Not determined.

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 Number	Organism	Type	Exposure	Test endpoint	Test result
Ethylene-Vinyl Acetate Polymer	24937-78-8		Data not available or insufficient for classification			N/A
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	68132-00-3		Data not available or insufficient for classification			N/A
Hydrocarbon resin	69430-35-9		Data not available or insufficient for classification			N/A
Polyethylene Polymer	9006-26-2		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
Antioxidant	6683-19-8	Water flea	Endpoint not reached	24 hours	EC50	>100 mg/l
Antioxidant	6683-19-8	Activated sludge	Experimental	3 hours	IC50	>100 mg/l
Antioxidant	6683-19-8	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Antioxidant	6683-19-8	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Antioxidant	6683-19-8	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Maleic anhydride	108-31-6	Green algae	Estimated	72 hours	EC50	74.4 mg/l
Maleic	108-31-6	Water flea	Estimated	48 hours	EC50	93.8 mg/l

anhydride						
Maleic anhydride	108-31-6	Bacteria	Experimental	18 hours	EC10	44.6 mg/l
Maleic anhydride	108-31-6	Rainbow trout	Experimental	96 hours	LC50	75 mg/l
Maleic anhydride	108-31-6	Green algae	Estimated	72 hours	EC10	11.8 mg/l
Maleic anhydride	108-31-6	Water flea	Experimental	21 days	NOEC	10 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethylene-Vinyl Acetate Polymer	24937-78-8	Data not available-insufficient			N/A	
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	68132-00-3	Estimated Biodegradation	28 days	BOD	0 % BOD/ThBOD	Non-standard method
Hydrocarbon resin	69430-35-9	Data not available-insufficient			N/A	
Polyethylene Polymer	9006-26-2	Data not available-insufficient			N/A	
Polyolefin Wax	8002-74-2	Estimated Biodegradation	28 days	BOD	40 % weight	OECD 301F - Manometric respirometry
Antioxidant	6683-19-8	Experimental Biodegradation	28 days	CO2 evolution	5 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Maleic anhydride	108-31-6	Experimental Hydrolysis		Hydrolytic half-life	22 seconds (t 1/2)	Non-standard method
Maleic anhydride	108-31-6	Estimated Biodegradation	25 days	CO2 evolution	>90 % weight	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethylene-Vinyl Acetate Polymer	24937-78-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	68132-00-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Hydrocarbon resin	69430-35-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene Polymer	9006-26-2	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
Antioxidant	6683-19-8	Experimental BCF-Carp	42 days	Bioaccumulation factor	<2.3	OECD 305C-Bioaccum degree fish
Maleic anhydride	108-31-6	Experimental Bioconcentration		Log Kow	-2.61	Non-standard method

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.

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.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

Hazchem Code: Not applicable
IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.

Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory Status:
The chemical components contained within this product are listed on the Australian Inventory of Chemical Substances and are in compliance with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

Poison Schedule: This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

SECTION 16: Other information

Revision information:
Complete document review.

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 Safety 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.
Greenguard ® is a United States based program. The ‘Low VOC’ reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au