

Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier

3MTM Hot Melt Adhesive 3762-AE, 3762-PG, 3762-TC, 3762-Q

Product Identification Numbers

62-3762-7230-8	62-3762-7232-4	62-3762-7233-2	62-3762-7234-0	62-3762-9132-4
62-3762-9330-4	62-3762-9531-7	62-3762-9830-3		

1.2. Recommended use and restrictions on use

Recommended use

Adhesive

For Industrial or Professional use only

1.3. Supplier's details

ADDRESS:3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301
Petaling, Jaya, SelangorTelephone:03-7884 2888E Mail:3mmyehsr@mmm.comWebsite:www.3M.com.my

1.4. Emergency telephone number

+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Chronic Aquatic Toxicity: Category 3.

2.2. Label elements Signal word Not applicable

Symbols Not applicable

Pictograms Not applicable

Hazard Statements:
H412Harmful to aquatic life with long lasting effects.Precautionary statementsDisposal:
Disposal:
P501Dispose of contents/container in accordance with applicable
local/regional/national/international regulations.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt	
Ethylene-Vinyl Acetate Polymer	24937-78-8	30 - 60	
Hydrocarbon Resin	68478-07-9	20 - 40	
Polyolefin Wax	8002-74-2	1 - 20	
alpha-Pinene Polymer	31393-98-3	5 - 10	
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	Trade Secret	< 10	
Chlorine	7782-50-5	< 0.005	

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:

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

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

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Toxic Vapor, Gas, Particulate	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. 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. Avoid release to the environment.

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	C.A.S. No.	Agency	Limit type	Additional Comments
Chlorine	7782-50-5	ACGIH	TWA:0.1 ppm;STEL:0.4 ppm	A4: Not class. as human
				carcin
Chlorine	7782-50-5	Malaysia OELs	TWA(8 hours):1.5 mg/m3(0.5	
			ppm)	
Polyolefin Wax	8002-74-2	ACGIH	TWA(as fume):2 mg/m3	
Polyolefin Wax	8002-74-2	Malaysia OELs	TWA(as fume)(8 hours):2	

			mg/m3	
Synthetic Rosin Resin (NTJS	Trade	ACGIH	TWA(as Resin, inhalable	Dermal/Respiratory
Reg. No. 04499600-7062)	Secret		fraction):0.001 mg/m3	Sensitizer
Synthetic Rosin Resin (NTJS	Trade	Malaysia OELs	Limit value not established:	
Reg. No. 04499600-7062)	Secret	-		

ACGIH : American Conference of Governmental Industrial Hygienists

CMRG : Chemical Manufacturer's Recommended Guidelines

Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations

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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

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 Vantad Coggles

Indirect Vented Goggles

Skin/hand protection

No chemical protective gloves are required.

Respiratory protection

None required.

Thermal hazards

Wear heat insulating gloves, indirect vented goggles, and a full face shield 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	Tan		
Odor	Odorless		
Odor threshold	No Data Available		
рН	Not Applicable		
Melting point/Freezing point	No Data Available		
Boiling point/Initial boiling point/Boiling range	Not Applicable		
Flash Point	260 °C [<i>Test Method</i> :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		
Vapor Density and/or Relative Vapor Density	Nil		

Density	0.95 g/ml	
Relative Density	0.95 [<i>Ref Std</i> :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	0 g/l [Test Method:calculated SCAQMD rule 443.1]	
Percent volatile	0 % weight	
OC Less H2O & Exempt Solvents 0 g/l [<i>Test Method</i> :calculated SCAQMD rule 443.1]		
Molecular weightNo 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. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

<u>Substance</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 labeling, 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:

Condition

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	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
Hydrocarbon Resin	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrocarbon Resin	Ingestion	Rat	LD50 > 5,000 mg/kg
Polyolefin Wax	Dermal	Rat	LD50 > 5,000 mg/kg
Polyolefin Wax	Ingestion	Rat	LD50 > 5,000 mg/kg
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	Dermal	Rabbit	LD50 > 2,500 mg/kg
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	Ingestion	Rat	LD50 > 31,500 mg/kg
alpha-Pinene Polymer	Dermal	Professio	LD50 estimated to be $> 5,000 \text{ mg/kg}$
		nal	
		judgeme	
		nt	
alpha-Pinene Polymer	Ingestion	Rat	LD50 > 2,000 mg/kg
Chlorine	Dermal		estimated to be > 5,000 mg/kg
Chlorine	Inhalation-		estimated to be $> 12.5 \text{ mg/l}$
	Dust/Mist		-
Chlorine	Inhalation-		estimated to be $> 50 \text{ mg/l}$
	Vapor		_
Chlorine	Ingestion		estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Ethylene-Vinyl Acetate Polymer	Professio nal judgemen t	No significant irritation
Hydrocarbon Resin	similar compoun ds	No significant irritation
Polyolefin Wax	Rabbit	No significant irritation
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	Rabbit	Minimal irritation
alpha-Pinene Polymer	In vitro data	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ethylene-Vinyl Acetate Polymer	Professio nal judgemen	No significant irritation

	t	
Hydrocarbon Resin	similar	Mild irritant
	compoun	
	ds	
Polyolefin Wax	Rabbit	No significant irritation
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	Rabbit	Moderate irritant
alpha-Pinene Polymer	In vitro	No significant irritation
	data	

Sensitization:

Skin Sensitization

Name	Species	Value
Polyolefin Wax	Guinea	Not classified
	pig	
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	Guinea	Not classified
	pig	
alpha-Pinene Polymer	Multiple	Not classified
	animal	
	species	

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Polyolefin Wax	In Vitro	Not mutagenic
alpha-Pinene Polymer	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Polyolefin Wax	Ingestion	Rat	Not carcinogenic
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	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
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	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days

		muscles nervous system eyes kidney and/or bladder respiratory system vascular system				
Synthetic Rosin Resin (NTJS Reg. No. 04499600-7062)	Ingestion	hematopoietic system liver kidney and/or bladder heart endocrine system bone marrow immune system nervous system respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
alpha-Pinene Polymer	Ingestion	heart gastrointestinal tract hematopoietic system liver nervous system eyes kidney and/or bladder	Not classified	Rat	NOAEL 331 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 labeling, 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 3: Harmful to aquatic life.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Туре	Exposure	Test Endpoint	Test Result
Ethylene-Vinyl	24937-78-8		Data not			N/A
Acetate			available or			
Polymer			insufficient for			
			classification			
Hydrocarbon	68478-07-9		Data not			N/A
Resin			available or			
			insufficient for			
			classification			
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

alpha-Pinene Polymer	31393-98-3	Activated sludge	Experimental	3 hours	NOEC	1,000 mg/l
alpha-Pinene Polymer	31393-98-3	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
alpha-Pinene Polymer	31393-98-3	Water flea	Endpoint not reached	21 days	EL10	>100 mg/l
Synthetic Rosin Resin (NTJS Reg. No. 04499600- 7062)	Trade Secret	Fathead Minnow	Estimated	96 hours	LC50	1.7 mg/l
Synthetic Rosin Resin (NTJS Reg. No. 04499600- 7062)	Trade Secret	Green algae	Estimated	72 hours	EC50	39.6 mg/l
Synthetic Rosin Resin (NTJS Reg. No. 04499600- 7062)	Trade Secret	Water flea	Estimated	48 hours	EC50	1.6 mg/l
Synthetic Rosin Resin (NTJS Reg. No. 04499600- 7062)	Trade Secret	Green algae	Estimated	72 hours	NOEC	6.25 mg/l
Chlorine	7782-50-5	Crustacea	Experimental	48 hours	EC50	0.005 mg/l
Chlorine	7782-50-5	Crustacea	Experimental	48 hours	EC50	0.00967 mg/l
Chlorine	7782-50-5	Rainbow Trout	Experimental	96 hours	LC50	0.014 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Ethylene-Vinyl Acetate Polymer	24937-78-8	Data not availbl- insufficient			N/A	
Hydrocarbon Resin	68478-07-9	Data not availbl- insufficient			N/A	
Polyolefin Wax	8002-74-2	Estimated Biodegradation	28 days	Biological Oxygen Demand	40 % weight	OECD 301F - Manometric Respiro
alpha-Pinene Polymer	31393-98-3	Experimental Biodegradation	28 days	Biological Oxygen Demand	4 % BOD/ThBOD	OECD 301D - Closed Bottle Test
Synthetic Rosin Resin (NTJS Reg. No. 04499600- 7062)	Trade Secret	Estimated Biodegradation	28 days	Carbon dioxide evolution	56 % weight	OECD 301B - Mod. Sturm or CO2
Chlorine	7782-50-5	Data not availbl- insufficient			N/A	

12.3. Bioaccumulative potential

Material	CAS No.	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
Hydrocarbon Resin	68478-07-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyolefin Wax	8002-74-2	Estimated Bioconcentrati on		Log of Octanol/H2O part. coeff	10.2	Est: Octanol-water part. coeff
alpha-Pinene Polymer	31393-98-3	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	7.41	Non-standard method
Synthetic Rosin Resin (NTJS Reg. No. 04499600- 7062)	Trade Secret	Estimated Bioconcentrati on		Bioaccumulatio n Factor	≤32	Est: Bioconcentration factor
Chlorine	7782-50-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Not hazardous for transportation.

Marine Transport (IMDG)

UN Number:None assigned. Proper Shipping Name:None assigned. Technical Name:None assigned. Hazard Class/Division:None assigned. Subsidiary Risk:None assigned. Packing Group:III Limited Quantity:None assigned. Marine Pollutant: None assigned. Marine Pollutant Technical Name: None assigned. Other Dangerous Goods Descriptions: None assigned.

Air Transport (IATA)

UN Number:None assigned. Proper Shipping Name:None assigned. Technical Name:None assigned. Hazard Class/Division:None assigned. Subsidiary Risk:None assigned. Packing Group:III Limited Quantity:None assigned. Marine Pollutant: None assigned. Marine Pollutant Technical Name: None assigned. Other Dangerous Goods Descriptions: None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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 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.

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 Malaysia SDSs are available at www.3M.com.my