Safety Data Sheet

Document Group:	11-3432-9	**Version Number:**	4.00
Issue Date:	24/06/2021	**Supercedes Date:**	30/04/2018

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
3M™ Hot Melt Adhesive 3792LM AE, 3792LM B, 3792LM PG, 3792LM Q, 3792LM TC

Product Identification Numbers

62-3760-7232-8	62-3760-7233-6	62-3760-7234-4	62-3760-9132-8	62-3760-9330-8
62-3760-9335-7	62-3760-9339-9	62-3760-9531-1	62-3760-9830-7	

1.2. Recommended use and restrictions on use

Recommended use
Adhesive, hot-melt adhesive for bonding heat sensitive materials such as wood and coated paper

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, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: 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
Not classified as hazardous according to Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

2.2. Label elements
Signal word
Not applicable

Symbols
Not applicable

Pictograms
Not applicable

2.3. Other hazards
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	Mixture	20 - 70
Hydrocarbons, C6-20, polymers, hydrogenated	69430-35-9	10 - 20
Hydrocarbon resin	Mixture	10 - 20
Vinyl Acetate	108-05-4	< 1

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:
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

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. 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. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from oxidizing 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	C.A.S. No.	Agency	Limit type	Additional Comments
Vinyl Acetate	108-05-4	ACGIH	TWA:10 ppm;STEL:15 ppm	A3: Confirmed animal carcin.
Vinyl Acetate	108-05-4	Malaysia OELs	TWA(8 hours):35 mg/m3(10 ppm)	

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 Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Butyl Rubber
Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Butyl rubber
Apron - polymer laminate

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 vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

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	Colorless
Odor	Odorless
Odor 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	>=232.2 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*
Vapor Density and/or Relative Vapor Density	Nil
Density	1.01 g/cm3
Relative Density	1.01 [*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	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 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 polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	**Condition**
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:

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
Hydrocarbon resin	Dermal		LD50 estimated to be > 5,000 mg/kg
Hydrocarbon resin	Ingestion		LD50 estimated to be > 5,000 mg/kg
Hydrocarbons, C6-20, polymers, hydrogenated	Dermal	Rat	LD50 > 2,000 mg/kg
Hydrocarbons, C6-20, polymers, hydrogenated	Ingestion	Rat	LD50 > 5,000 mg/kg
Vinyl Acetate	Dermal	Rabbit	LD50 2,320 mg/kg
Vinyl Acetate	Inhalation-Vapor (4 hours)	Rat	LC50 11.3 mg/l
Vinyl Acetate	Ingestion	Rat	LD50 2,920 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Ethylene-Vinyl Acetate Polymer	Professional judgement	No significant irritation
Hydrocarbon resin	Professional judgement	No significant irritation
Vinyl Acetate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ethylene-Vinyl Acetate Polymer	Professional judgement	No significant irritation
Hydrocarbon resin	Professional judgement	No significant irritation
Vinyl Acetate	Rabbit	Mild irritant

Sensitization:

Skin Sensitization

Name	Species	Value
Vinyl Acetate	Guinea pig	Not classified

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
Vinyl Acetate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Vinyl Acetate	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Vinyl Acetate	Ingestion	Multiple animal species	Carcinogenic
Vinyl Acetate	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Vinyl Acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 140 mg/kg/day	2 generation
Vinyl Acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 140 mg/kg/day	2 generation
Vinyl Acetate	Ingestion	Not classified for development	Rat	NOAEL 700 mg/kg/day	2 generation
Vinyl Acetate	Inhalation	Not classified for development	Rat	NOAEL 0.7 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Vinyl Acetate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Vinyl Acetate	Inhalation	central nervous system depression	Some positive data exist, but the data are not sufficient for classification		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
Vinyl Acetate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.2 mg/l	104 weeks

Vinyl Acetate	Inhalation	heart | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 2.1 mg/l	104 weeks
Vinyl Acetate	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.07 mg/l	120 days
Vinyl Acetate	Inhalation	immune system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	3 months
Vinyl Acetate	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 2.1 mg/l	104 weeks
Vinyl Acetate	Inhalation	gastrointestinal tract	Not classified	Mouse	NOAEL 3.5 mg/l	3 months
Vinyl Acetate	Ingestion	liver	Not classified	Rat	LOAEL 684 mg/kg/day	3 months
Vinyl Acetate	Ingestion	hematopoietic system | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 235 mg/kg/day	104 weeks
Vinyl Acetate	Ingestion	immune system | respiratory system	Not classified	Mouse	NOAEL 950 mg/kg/day	3 months
Vinyl Acetate	Ingestion	heart	Not classified	Rat	NOAEL 235 mg/kg/day	104 weeks

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:
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 #	Organism	Type	Exposure	Test Endpoint	Test Result
Ethylene-Vinyl Acetate Polymer	Mixture		Data not available or insufficient for classification			N/A
Hydrocarbon resin	Mixture		Data not available or insufficient for classification			N/A
Hydrocarbons,	69430-35-9		Data not			N/A

C6-20, polymers, hydrogenated			available or insufficient for classification			
Vinyl Acetate	108-05-4	Green Algae	Experimental	72 hours	EC50	8.9 mg/l
Vinyl Acetate	108-05-4	Medaka	Experimental	96 hours	LC50	2.4 mg/l
Vinyl Acetate	108-05-4	Water flea	Experimental	48 hours	EC50	9.2 mg/l
Vinyl Acetate	108-05-4	Fathead Minnow	Experimental	34 days	NOEC	0.551 mg/l
Vinyl Acetate	108-05-4	Green Algae	Experimental	72 hours	NOEC	0.2 mg/l
Vinyl Acetate	108-05-4	Water flea	Experimental	21 days	NOEC	0.32 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Ethylene-Vinyl Acetate Polymer	Mixture	Data not availbl-insufficient			N/A	
Hydrocarbon resin	Mixture	Estimated Biodegradation	28 days	Biological Oxygen Demand	0 % BOD/ThBOD	Non-standard method
Hydrocarbons, C6-20, polymers, hydrogenated	69430-35-9	Data not availbl-insufficient			N/A	
Vinyl Acetate	108-05-4	Experimental Biodegradation	14 days	Biological Oxygen Demand	90 % BOD/ThBOD	OECD 301C - MITI (I)

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Ethylene-Vinyl Acetate Polymer	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbon resin	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C6-20, polymers, hydrogenated	69430-35-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Vinyl Acetate	108-05-4	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.73	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

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: None assigned.
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: None assigned.
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 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.

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