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3M Scotch-Weld(TM) Vinyl Adhesive 1099

SECTION 1 IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

1.1. Product identifier
3M Scotch-Weld(TM) Vinyl Adhesive 1099
Product Identification Numbers
FS-9100-0586-7 FS-9100-0589-1 FS-9100-0634-5 FS-9100-2535-2 GS-2000-5791-6
GS-2000-5792-4

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses
Plastic adhesive.

Details of Supplier/Manufacturer

Company:	Penske Australia Pty Ltd
Address:	488 Blackshaws Road, Altona North, Victoria 3025
Phone:	(03) 9243 9292
Fax:	(03) 9243 9271
Website:	www.penske.com.au

Emergency Telephone Numbers

All Hours:	1800 625 526
Poisons Information:	
Australia:	13 11 26
New Zealand:	0800 764 766

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:
Flammable Liquid, Category 2 - Flam. Liq. 2; H225
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

Dangerous substances (67/548/EEC)/preparations (1999/45/EC) directive

Indication of danger
Highly flammable; F; R11
Irritant; Xi; R36
R66
R67
Dangerous for the environment; N; R51/53

For full text of R phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER!

Symbols:
GHS02 (Flame) |GHS07 (Exclamation mark)

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Pictograms

Ingredient	CAS Nbr	% by Wt
Acetone	67-64-1	60 – 70

HAZARD STATEMENTS:
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS
Prevention:
P210A Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A Avoid breathing vapors.

Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370 + P378G In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

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

SUPPLEMENTAL INFORMATION
Supplemental Hazard Statements:

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains Formaldehyde. May produce an allergic reaction.

16% of the mixture consists of components of unknown acute dermal toxicity.
36% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 8% of components with unknown hazards to the aquatic environment.

Dangerous substances (67/548/EEC)/preparations(1999/45/EC) directive
Symbol(s)


Highly Flammable


Irritant


Dangerous for the environment

Contains:
No ingredients are assigned to the label.

Risk phrases
R11 Highly flammable.
R36 Irritating to eyes.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.
R51/53 Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases
S16 Keep away from sources of ignition - No Smoking.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

2.3. Other hazards
None known.

SECTION 3 COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Acetone	67-64-1	EINECS 200-662-2	60 - 70	F:R11; Xi:R36; R66; R67 (EU) Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336; EUH066 (CLP)
Acrylonitrile - butadiene polymer	9003-18-3		10 - 20	
Phenolic Resin	Trade Secret		5 - 10	
Phenolic polymer	Trade Secret		5 - 10	
Salicylic acid	69-72-7	EINECS 200-712-3	1 - 5	Repr.Cat.3:R63; Xn:R22; Xi:R36 (Self Classified) Acute Tox. 4, H302; Eye Irrit. 2, H319; Repr. 2, H361d (Self Classified)
Zinc oxide	1314-13-2	EINECS 215-222-5	1 - 3	N:R50/53 (EU) Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=1 (CLP)
Phenol	108-95-2	EINECS 203-632-7	< 0.75	Muta.Cat.3:R68; T:R23-24-25; C:R34; Xn:R48/20; Xn:R48/21; Xn:R48/22 (EU) R52 (Self Classified) Acute Tox. 3, H331; Acute Tox. 3, H311; Acute Tox. 3, H301; Skin Corr. 1B, H314; Muta. 2, H341; STOT RE 1, H372 (CLP) Aquatic Chronic 1, H410,M=1 (Self Classified)
O-Cresol	95-48-7	EINECS 202-423-8	< 0.5	T:R24-25; C:R34 - Nota C (EU) Acute Tox. 3, H311; Acute Tox. 3, H301; Skin Corr. 1B, H314 - Nota C (CLP) Aquatic Chronic 3, H412 (Self Classified)
Formaldehyde	50-00-0	EINECS 200-001-8	< 0.1	Carc.Cat.3:R40; T:R23-24-25; C:R34; R43 - Nota B,D (EU) R52 (Self Classified) Acute Tox. 2, H330; Acute Tox. 3, H311; Acute Tox. 3, H301; Skin Corr. 1B, H314; Skin Sens. 1A, H317; Carc. 2, H351; STOT SE 3, H335 - Nota B,D (CLP)

Please see section 16 for the full text of any R phrases and H statements referred to in this section
Please refer to section 15 for the any applicable Notas that have been applied to the above components

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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 wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop,
get medical attention.
Eye contact
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical
attention.
If swallowed
Rinse mouth. If you feel unwell, get 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. 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

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Advice 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.

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. 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. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. 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/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 release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators…) as required. 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. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

7.2. Conditions for safe storage including any incompatibilities

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

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Phenol	108-95-2	Health and Safety Comm. (UK)	TWA:7.8 mg/m3(2 ppm);STEL:16 mg/m3(4 ppm)	Skin Notation
Formaldehyde	50-00-0	Health and Safety Comm. (UK)	TWA:2.5 mg/m3(2 ppm);STEL:2.5 mg/m3(2 ppm)	
Acetone	67-64-1	Health and Safety Comm. (UK)	TWA:1210 mg/m³(500 ppm);STEL:3620 mg/m³(1500 ppm)	

Health and Safety Comm. (UK): UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls
Provide appropriate local exhaust ventilation on open containers. 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)
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:
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.
Gloves made from the following material(s) are recommended: Butyl rubber. Nitrile rubber.
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 – Nitrile

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 face piece or full face piece air-purifying respirator suitable for formaldehyde and particulates
Half face piece or full face piece air-purifying respirator suitable for organic vapors 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 state	Liquid.
Specific Physical Form:	Liquid.
Appearance/Odor	Off-white, ketone odor
Odor threshold	*No data available.*
pH	*No data available.*
Boiling point/boiling range	56 ºC [*Details:* Acetone value]
Melting point	*No data available.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidizing properties	Not classified
Flash point	-18 ºC [*Details:* Closed cup]
Auto ignition temperature	*No data available.*
Flammable Limits (LEL)	2.1 % volume [*Details:* Acetone value LEL]
Flammable Limits (UEL)	13 % volume [*Details :*Acetone value UEL]
Vapor pressure	23,998 Pa
Relative density	0.870 - 0.900 [*Ref Std:* WATER=1]
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	1.90 [*Ref Std:* WATER=1]
Vapor density	2.00 [*Ref Std:* AIR=1]

Decomposition temperature	*No data available.*
Viscosity	1,500 - 5,000 MPa-s [*Details:*@ 26 °C]
Density	*No data available.*

9.2. Other information

Volatile organic compounds (VOC)	*No data available.*
Percent volatile	62 - 67 %
VOC less H2O & exempt solvents	*No data available.*

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
Heat.
Sparks and/or flames.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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. May cause target organ effects after inhalation.

Skin contact
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. May cause target organ effects after ingestion.

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Target Organ Effects:
Single exposure may cause:
Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation-Vapor (4 hours)	Rat	LC50 76 mg/l
Acetone	Ingestion	Rat	LD50 5,800 mg/kg
Acrylonitrile - butadiene polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile - butadiene polymer	Ingestion	Rat	LD50 > 30,000 mg/kg
Phenolic polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Phenolic Resin	Ingestion	Rat	LD50 5,660 mg/kg
Salicylic acid	Dermal	Rat	LD50 > 2,000 mg/kg
Salicylic acid	Ingestion	Rat	LD50 891 mg/kg
Zinc oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Zinc oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Phenol	Inhalation-Vapor		LC50 estimated to be 2 - 10 mg/l
Phenol	Dermal	Rat	LD50 670 mg/kg
Phenol	Ingestion	Rat	LD50 340 mg/kg
O-Cresol	Dermal	Rabbit	LD50 890 mg/kg
O-Cresol	Inhalation-Vapor (4 hours)	Rat	LC50 > 24.5 mg/l
O-Cresol	Ingestion	Rat	LD50 121 mg/kg
Formaldehyde	Dermal	Rabbit	LD50 270 mg/kg
Formaldehyde	Inhalation-Gas (4 hours)	Rat	LC50 470 ppm
Formaldehyde	Ingestion	Rat	LD50 800 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acetone	Mouse	Minimal irritation
Acrylonitrile - butadiene polymer		No significant irritation
Salicylic acid	Rabbit	No significant irritation
Zinc oxide	Human and animal	No significant irritation
Phenol	Rat	Corrosive
Formaldehyde	official classification	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Acetone	Rabbit	Severe irritant
Acrylonitrile - butadiene polymer		No significant irritation
Salicylic acid	Rabbit	Corrosive
Zinc oxide	Rabbit	Mild irritant
Phenol	Rabbit	Corrosive
Formaldehyde	official classification	Corrosive

Skin Sensitisation

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Skin Sensitisation

Name	Species	Value
Salicylic acid	Mouse	Not sensitizing
Zinc oxide	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Phenol	Guinea pig	Not sensitizing
Formaldehyde	Guinea pig	Sensitising

Photosensitisation

Name	Species	Value
Salicylic acid	Mouse	Not sensitizing

Respiratory Sensitisation

Name	Species	Value
Formaldehyde	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Salicylic acid	In Vitro	Not mutagenic
Salicylic acid	In vivo	Not mutagenic
Zinc oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc oxide	In vivo	Some positive data exist, but the data are not sufficient for classification
Phenol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Phenol	In vivo	Some positive data exist, but the data are not sufficient for classification
Formaldehyde	In Vitro	Some positive data exist, but the data are not sufficient for classification
Formaldehyde	In vivo	Mutagenic

Carcinogenicity

Name	Route	Species	Value
Acetone	Not specified.	Multiple animal species	Not carcinogenic
Phenol	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Phenol	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Formaldehyde	Not specified.	Human and animal	Carcinogenic.

Reproductive Toxicity
Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Acetone	Ingestion	Not toxic to female reproduction	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Acetone	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 5.2 mg/l	during organogenesis
Salicylic acid	Ingestion	Toxic to development	Rat	NOAEL 75 mg/kg/day	during organogenesis
Zinc oxide	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
Phenol	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 321 mg/kg/day	2 generation
Phenol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 321 mg/kg/day	2 generation
Phenol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 120 mg/kg/day	during organogenesis
Formaldehyde	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg	not applicable
Formaldehyde	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 10 ppm	during gestation

Target Organ(s)
Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Phenol	Dermal	hematoppoitic system	Causes damage to organs	Rat	LOAEL 108 mg/kg	not available
Phenol	Dermal	heart | nervous system | kidney and/or bladder	Causes damage to organs	Rat	LOAEL 107 mg/kg	24 hours
Phenol	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	not available
Phenol	Inhalation	respiratory irritation	May cause respiratory irritation	Multiple animal species	NOAEL Not available	not available
Phenol	Ingestion	kidney and/or bladder	Causes damage to organs	Rat	NOAEL 120 mg/kg/day	not applicable
Phenol	Ingestion	respiratory system	Causes damage to organs	Human	NOAEL not available	poisoning and/or abuse
Phenol	Ingestion	endocrine system | liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 224 mg/kg	not applicable
Phenol	Ingestion	heart	Some positive data exist, but the data are not sufficient for	Human	NOAEL Not available	poisoning and/or abuse

			classification			
Formaldehyde	Inhalation	respiratory system	Causes damage to organs	Rat	LOAEL 128 ppm	6 hours
Formaldehyde	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acetone	Dermal	eyes	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart | liver	All data are negative	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	All data are negative	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	All data are negative	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	All data are negative	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin | bone, teeth, nails, and/or hair	All data are negative	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Salicylic acid	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	3 days
Zinc oxide	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	10 days
Zinc oxide	Ingestion	endocrine system | hematopoietic system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Other	NOAEL 500 mg/kg/day	6 months
Phenol	Dermal	nervous system	May cause damage to organs though prolonged or repeated exposure	Rabbit	LOAEL 260 mg/kg/day	18 days
Phenol	Inhalation	heart | liver | kidney and/or bladder | respiratory system	Causes damage to organs through prolonged or repeated exposure	Guinea pig	LOAEL 0.1 mg/l	41 days
Phenol	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Multiple animal species	LOAEL 0.1 mg/l	14 days
Phenol	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

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Phenol	Inhalation	immune system	All data are negative	Rat	NOAEL 0.1 mg/l	2 weeks
Phenol	Ingestion	kidney and/or bladder	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 12 mg/kg/day	14 days
Phenol	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Mouse	LOAEL 1.8 mg/kg/day	28 days
Phenol	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 308 mg/kg/day	13 weeks
Phenol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 40 mg/kg/day	14 days
Phenol	Ingestion	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 40 mg/kg/day	14 days
Phenol	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.8 mg/kg/day	28 days
Phenol	Ingestion	endocrine system	All data are negative	Rat	NOAEL 120 mg/kg/day	14 days
Phenol	Ingestion	skin | bone, teeth, nails, and/or hair	All data are negative	Multiple animal species	NOAEL 1,204 mg/kg/day	103 weeks
Formaldehyde	Dermal	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 80 mg/kg/day	60 weeks
Formaldehyde	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3 ppm	28 months
Formaldehyde	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 20 ppm	13 weeks
Formaldehyde	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 15 ppm	3 weeks
Formaldehyde	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 10 ppm	13 weeks
Formaldehyde	Inhalation	endocrine system | immune system | muscles | kidney and/or bladder	All data are negative	Rat	NOAEL 15 ppm	28 months
Formaldehyde	Inhalation	eyes | vascular system	All data are negative	Rat	NOAEL 14.3 ppm	2 years
Formaldehyde	Inhalation	heart	All data are negative	Mouse	NOAEL 14.3 ppm	2 years
Formaldehyde	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 20 mg/kg/day	4 weeks
Formaldehyde	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 15 mg/kg/day	24 months
Formaldehyde	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 109 mg/kg/day	2 years
Formaldehyde	Ingestion	heart | endocrine system | hematopoietic system | respiratory system | vascular system	All data are negative	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	skin | muscles | eyes	All data are negative	Rat	NOAEL 109 mg/kg/day	2 years

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.

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SECTION 12 ECOLOGICAL INFORMATION

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Phenolic Resin	Trade Secret		Data not available or insufficient for classification			
Acrylonitrile - butadiene polymer	9003-18-3		Data not available or insufficient for classification			
Phenolic polymer	Trade Secret		Data not available or insufficient for classification			
Salicylic acid	69-72-7	Water flea	Experimental	48 hours	EC50	870 mg/l
Acetone	67-64-1	Green Algae	Experimental	96 hours	EC50	2,574 mg/l
Acetone	67-64-1	Rainbow trout	Experimental	96 hours	LC50	5,540 mg/l
Acetone	67-64-1	Water flea	Experimental	48 hours	EC50	13,500 mg/l
O-Cresol	95-48-7	Water flea	Experimental	48 hours	EC50	9.5 mg/l
O-Cresol	95-48-7	Rainbow trout	Experimental	96 hours	LC50	8.4 mg/l
O-Cresol	95-48-7	Green Algae	Experimental	96 hours	EC50	65 mg/l
O-Cresol	95-48-7	Green Algae	Experimental	48 hours	NOEC	36 mg/l
Zinc oxide	1314-13-2	Chinook Salmon	Experimental	96 hours	LC50	0.23 mg/l
Zinc oxide	1314-13-2	Water flea	Experimental	48 hours	EC50	3.2 mg/l
Zinc oxide	1314-13-2	Green Algae	Experimental	72 hours	EC50	0.046 mg/l
Zinc oxide	1314-13-2	Green Algae	Experimental	72 hours	NOEC	0.021 mg/l
Phenol	108-95-2	Green algae	Experimental	96 hours	EC50	61.1 mg/l
Phenol	108-95-2	Water flea	Experimental	48 hours	EC50	4.2 mg/l
Phenol	108-95-2	Rainbow trout	Experimental	96 hours	LC50	5.02 mg/l
Phenol	108-95-2	Rainbow trout	Experimental	30 days	NOEC	2 g/l
Phenol	108-95-2	Water flea	Experimental	11 days	NOEC	0.5 mg/l
Formaldehyde	50-00-0	Rainbow trout	Experimental	96 hours	LC50	1.41 mg/l
Formaldehyde	50-00-0	Water flea	Experimental	48 hours	EC50	5.8 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenolic Resin	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acrylonitrile - butadiene polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Phenolic polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Salicylic acid	69-72-7	Experimental Biodegradation	14 days	BOD	88.1 % weight	OECD 301C - MITI test (I)
Acetone	67-64-1	Experimental Biodegradation	28 days	BOD	96 % weight	OECD 301C - MITI test (I)
O-Cresol	95-48-7	Experimental Biodegradation	20 days	BOD	86 % weight	OECD 301D - Closed bottle test
Zinc oxide	1314-13-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Phenol	108-95-2	Experimental Photolysis		Photolytic half-life (in air)	1.11 days (t 1/2)	Other methods
Phenol	108-95-2	Experimental Biodegradation	14 days	BOD	85 % weight	OECD 301C - MITI test (I)
Formaldehyde	50-00-0	Experimental Photolysis		Photolytic half-life(in water)	1-2 hours (t 1/2)	Other methods
Formaldehyde	50-00-0	Experimental Photolysis		Photolytic half-life (in air)	3.21 days (t 1/2)	Other methods
Formaldehyde	50-00-0	Experimental Biodegradation	28 days	BOD	90 % weight	OECD 301D - Closed bottle test

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenolic Resin	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acrylonitrile - butadiene polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Phenolic polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Salicylic acid	69-72-7	Experimental Bioconcentration		Log Kow	2.26	Other methods
Acetone	67-64-1	Experimental BCF - Other		Bioaccumulation factor	0.65	Other methods
O-Cresol	95-48-7	Experimental BCF - Other		Bioaccumulation factor	10.7	OECD 305E - Bioaccumulation flow-through fish test

Zinc oxide	1314-13-2	Experimental BCF - Other	56 days	Bioaccumulation factor	<217	OECD 305E - Bioaccumulation flow-through fish test
Phenol	108-95-2	Experimental Bioconcentration		Log Kow	1.46	Other methods
Formaldehyde	50-00-0	Experimental Bioconcentration		Log Kow	0.35	Other methods

12.4. Mobility in soil
Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment
No information available at this time, contact manufacturer for more details

12.6. Other adverse effects
No information available.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
See Section 11.1 Information on toxicological effects

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.
The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)
08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14 TRANSPORT INFORMATION

FS-9100-0586-7

ADR/RID: UN1133, ADHESIVES, 3., II , (D/E), ENVIRONMENTALLY HAZARDOUS, ADR Classification Code: F1.
IMDG-CODE: UN1133, ADHESIVES, (ZINC OXIDE), 3, II , IMDG-Code segregation code: NONE, Marine Pollutant,
(ZINC OXIDE), EMS: FE,SD.
ICAO/IATA: FORBIDDEN: PACKAGE SIZE EXCEEDS IATA QUANTITY LIMITATIONS
FS-9100-0589-1

ADR/RID: UN1133, ADHESIVES, LIMITED QUANTITY, 3., II , (E), ADR Classification Code: F1.
IMDG-CODE: UN1133, ADHESIVES, (ZINC OXIDE), 3, II , IMDG-Code segregation code: NONE, LIMITED

QUANTITY, Marine Pollutant, (ZINC OXIDE), EMS: FE,SD.
ICAO/IATA: FORBIDDEN: PACKAGE TYPE NOT ALLOWED BY IATA

FS-9100-0634-5

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ADR/RID: UN1133, ADHESIVES, LIMITED QUANTITY, 3., II , (E), ADR Classification Code: F1.
IMDG-CODE: UN1133, ADHESIVES, (ZINC OXIDE), 3, II , IMDG-Code segregation code: NONE, LIMITED QUANTITY, Marine Pollutant, (ZINC OXIDE), EMS: FE,SD.
ICAO/IATA: FORBIDDEN: PACKAGE SIZE EXCEEDS IATA QUANTITY LIMITATIONS

FS-9100-2535-2

ADR/RID: UN1133, ADHESIVES, LIMITED QUANTITY, 3., II , (E), ADR Classification Code: F1.
IMDG-CODE: UN1133, ADHESIVES, (ZINC OXIDE), 3, II , IMDG-Code segregation code: NONE, LIMITED QUANTITY, Marine Pollutant, (ZINC OXIDE), EMS: FE,SD.
ICAO/IATA: UN1133, ADHESIVES, 3., II , LIMITED QUANTITY.

GS-2000-5791-6

GS-2000-5792-4

SECTION 15 REGULATORY INFORMATION

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

Ingredient	CAS Nbr	Classification	Regulation
Formaldehyde	50-00-0	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
Formaldehyde	50-00-0	Carc.Cat.3	Regulation (EC) No. 1272/2008, Table 3.2
Formaldehyde	50-00-0	Grp. 1: Carcinogenic to Humans	International Agency for Research on Cancer
Phenol	108-95-2	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". 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. The components of this product are in compliance with the chemical notification requirements of TSCA.

15.2. Chemical Safety Assessment
Not applicable

SECTION 16 OTHER INFORMATION

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapor.
H301	Toxic if swallowed. H302 Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.

H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

List of relevant R-phrases

R11	Highly flammable.
R22	Harmful if swallowed.
R23	Toxic by inhalation.
R24	Toxic in contact with skin.
R25	Toxic if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitization by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/21	Harmful: Danger of serious damage to health by prolonged exposure in contact with skin.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R52	Harmful to aquatic organisms.
R63	Possible risk of harm to the unborn child.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapors may cause drowsiness and dizziness.
R68	Possible risks of irreversible effects.

Revision information:

Revision Changes:
Section 1: Product name information was modified.
Section 8: Eye/face protection information was modified.
Section 8: Skin protection - recommended gloves information was modified.
Section 8: Respiratory protection - recommended respirators information was modified.
Page Heading: Product name information was modified.
Sections 3 and 9: Odor, color, grade information was modified.
Section 1: Product identification numbers heading information was modified.
Section 9: Viscosity information was modified.
Section 15: Carcinogenicity information was modified.
Section 16: List of relevant R phrase information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 9: Boiling point information was modified.
Section 9: Relative density information was modified.
Section 12: Component Eco toxicity information was modified.
Section 12: Persistence and Degradability information was modified.
Section 10: Conditions to avoid physical property information was modified.
Section 12: Bio cumulative potential information was modified.
Copyright information was modified.
Section 9: Flash point information was modified.
Section 9: Flammable limits (LEL) information was modified.
Section 9: Flammable limits (UEL) information was modified.
Section 9: Property description for optional properties information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Section 8: Occupational exposure limit table information was modified.
Telephone header information was modified.
Company Telephone information was modified.

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Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Respiratory Sensitization Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 11: Health Effects - Skin information was modified.
Section 5: Fire - Extinguishing media information was modified.
Section 6: Accidental release clean-up information was modified.
Section 7: Precautions safe handling information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Appropriate Engineering controls information was modified.
Section 8: Personal Protection - Eye information was modified.
Section 8: Personal Protection - Skin/hand information was modified.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. Information was modified.
Section 8: Personal Protection - Skin/body information was added.
Section 8: Skin protection - protective clothing information was added.
Section 9: Specific physical form information was added.
Section 9: Specific physical form heading information was added.
Section 9: Solubility in water value information was added.
Section 9: Density information was added.
Contains statement for sensitizers information was added.
Contains statement for sensitizers information was added.
Contains statement for sensitizers information was added.
Section 11: Disclosed components not in table's text information was added.
Section 12: Classification Warning information was added.
Section 11: Classification disclaimer information was added.
Section 8: 8.1.1 Biological limit values table heading information was added.
Section 8: BLV information was added.
List of sensitizer's information was added.
Section 9: Solubility in water text information was deleted.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Classification disclaimer information was deleted.
Section 12: Classification Warning 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 satisfy themselves as to the suitability of the product for their own intended applications.

3M United Kingdom MSDSs are available at www.3M.com/uk