



Safety Data Sheet

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

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This safety data sheet (SDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a SDS is not required for this product by the SS586 Specification for Hazard communication for hazardous chemicals and dangerous goods because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

SECTION 1: Identification

1.1. Product identifier

Scotch® Super 33+™ Vinyl Electrical Tape and Scotch® Premium Vinyl Electrical Tape Super 88

1.2. Recommended use and restrictions on use

Recommended use

Electrical

1.3. Supplier's details

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

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

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Mixture	90 - 100
Antimony trioxide	1309-64-4	1 - 1.5
Natural rubber	9006-04-6	0.13 - 0.17
Zinc oxide	1314-13-2	0.091 - 0.093

Any remaining components do not contribute to the hazards of this material.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

No need for first aid is anticipated.

Skin contact

No need for first aid is anticipated.

Eye contact

No need for first aid is anticipated.

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

Substance

- Carbon monoxide.
- Carbon dioxide.
- Hydrogen Chloride
- Irritant vapours or gases.
- Oxides of antimony.
- Oxides of zinc.

Condition

- During combustion.
- During combustion.
- During combustion.
- During combustion.
- During combustion.
- During combustion.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Not applicable. Observe precautions from other sections.

6.2. Environmental precautions

Not applicable. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Not applicable. Collect as much of the spilled material as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities

Not applicable.

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
Antimony trioxide	1309-64-4	ACGIH	TWA(inhalable fraction):0.02 mg/m3	A2: Suspected human carcin.
Antimony trioxide	1309-64-4	Singapore PELs	TWA(as Sb)(8 hours):0.5 mg/m3	
Zinc oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	
Zinc oxide	1314-13-2	Singapore PELs	TWA(as fume)(8 hours):5 mg/m3;TWA(as dust)(8 hours):10 mg/m3;STEL(as fume)(15 minutes):10 mg/m3	
Natural rubber	9006-04-6	ACGIH	TWA(as allergenic protein, inhalable fraction):0.0001 mg/m3	Dermal/Respiratory Sensitizer
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Mixture	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection

No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Roll of Tape.
Color	Black
Odor	Slight Odor
Odour threshold	<i>Not applicable.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	<i>Not applicable.</i>
Evaporation rate	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>Not applicable.</i>
Vapor Density and/or Relative Vapor Density	<i>Not applicable.</i>
Density	1.22 g/cm3
Relative density	1.22 [Details:Ref Std: Water = 1]
Water solubility	Nil
Solubility- non-water	<i>Not applicable.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>Not applicable.</i>
Viscosity/Kinematic Viscosity	<i>Not applicable.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	<i>Not applicable.</i>
VOC less H2O & exempt solvents	<i>No data available.</i>
Average particle size	<i>No data available.</i>
Bulk density	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

Softening point

No data available.

Nanoparticles

This material contains nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons.	At elevated temperatures.

Refer to section 5.2 for hazardous decomposition products during combustion.

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

No health effects are expected.

Skin contact

No health effects are expected. Contact with the skin during product use is not expected to result in significant irritation.

Eye contact

No health effects are expected. Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion

No health effects are expected.

Additional information:

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

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
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Dermal		LD50 estimated to be > 5,000 mg/kg
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Ingestion		LD50 estimated to be > 5,000 mg/kg
Antimony trioxide	Dermal	Rabbit	LD50 > 6,685 mg/kg
Antimony trioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.76 mg/l
Antimony trioxide	Ingestion	Rat	LD50 > 34,600 mg/kg
Natural rubber	Dermal		LD50 estimated to be > 5,000 mg/kg
Natural rubber	Ingestion		LD50 estimated to be > 5,000 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

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Professional judgement	No significant irritation
Antimony trioxide	Human and animal	Minimal irritation
Natural rubber	Human	Mild irritant
Zinc oxide	Human and animal	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Antimony trioxide	Rabbit	Mild irritant
Natural rubber	Rabbit	No significant irritation
Zinc oxide	Rabbit	Mild irritant

Sensitization:

Skin Sensitisation

Name	Species	Value
Antimony trioxide	Human	Not classified
Natural rubber	Human	Sensitising

Zinc oxide	Guinea pig	Not classified
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Respiratory Sensitisation

Name	Species	Value
Natural rubber	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	In Vitro	Not mutagenic
Antimony trioxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Antimony trioxide	In vivo	Some positive data exist, but the data are not sufficient for classification
Natural rubber	In Vitro	Some positive data exist, but the data are not sufficient for classification
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

Carcinogenicity

Name	Route	Species	Value
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Not specified.	Rat	Some positive data exist, but the data are not sufficient for classification
Antimony trioxide	Inhalation	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Not specified.	Not classified for development	Mouse	NOAEL Not available	during gestation
Antimony trioxide	Inhalation	Not classified for female reproduction	Rat	LOAEL 0.25 mg/l	premating & during gestation
Zinc oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Antimony trioxide	Inhalation	respiratory irritation	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
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 0.013 mg/l	22 months
Antimony trioxide	Dermal	skin	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Antimony trioxide	Inhalation	pulmonary fibrosis	May cause damage to organs	Rat	NOAEL	1 years

			though prolonged or repeated exposure		0.002 mg/l	
Antimony trioxide	Inhalation	liver	Not classified	Rat	NOAEL 0.043 mg/l	1 years
Antimony trioxide	Inhalation	blood	Not classified	Rat	NOAEL 0.004 mg/l	not available
Antimony trioxide	Inhalation	pneumoconiosis	Not classified	Human	LOAEL 0.01 mg/l	occupational exposure
Antimony trioxide	Inhalation	heart	Not classified	Rat	NOAEL 0.02 mg/l	1 years
Antimony trioxide	Ingestion	blood liver	Not classified	Rat	NOAEL 418 mg/kg/day	not available
Antimony trioxide	Ingestion	heart	Not classified	Rat	NOAEL Not available	not available
Zinc oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
Zinc oxide	Ingestion	endocrine system hematopoietic system kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Mixture		Data not available or insufficient for classification			N/A
Antimony trioxide	1309-64-4	Green Algae	Endpoint not reached	72 hours	EC50	>100 mg/l
Antimony trioxide	1309-64-4		Estimated	96 hours	EC50	2.12 mg/l
Antimony trioxide	1309-64-4	Fathead minnow	Estimated	96 hours	LC50	17.2 mg/l
Antimony	1309-64-4	Fish other	Estimated	96 hours	LC50	8.3 mg/l

trioxide						
Antimony trioxide	1309-64-4	Activated sludge	Experimental	4 hours	NOEC	6.1 mg/l
Antimony trioxide	1309-64-4	Rainbow trout	Estimated	28 days	LC10	0.188 mg/l
Antimony trioxide	1309-64-4	Water flea	Estimated	21 days	NOEC	2.08 mg/l
Antimony trioxide	1309-64-4	Green Algae	Experimental	72	NOEC	2.53 mg/l
Natural rubber	9006-04-6		Data not available or insufficient for classification			N/A
Zinc oxide	1314-13-2	Activated sludge	Estimated	3 hours	EC50	6.5 mg/l
Zinc oxide	1314-13-2	Green Algae	Estimated	72 hours	EC50	0.052 mg/l
Zinc oxide	1314-13-2	Rainbow trout	Estimated	96 hours	LC50	0.21 mg/l
Zinc oxide	1314-13-2	Water flea	Estimated	48 hours	EC50	0.07 mg/l
Zinc oxide	1314-13-2	Green Algae	Estimated	72 hours	NOEC	0.006 mg/l
Zinc oxide	1314-13-2	Water flea	Estimated	7 days	NOEC	0.02 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Mixture	Data not available-insufficient			N/A	
Antimony trioxide	1309-64-4	Data not available-insufficient			N/A	
Natural rubber	9006-04-6	Data not available-insufficient			N/A	
Zinc oxide	1314-13-2	Data not available-insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Poly(Vinyl Chloride) Tape with Rubber-Based Adhesive	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Antimony trioxide	1309-64-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Natural rubber	9006-04-6	Data not available or insufficient for	N/A	N/A	N/A	N/A

		classification				
Zinc oxide	1314-13-2	Experimental BCF-Carp	56 days	Bioaccumulation factor	≤217	OECD 305E - Bioaccumulation flow-through fish test

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials.

SECTION 14: Transport Information

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information.

SECTION 16: Other information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

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