

設計驗證
工程課
2023.12.04
發行
廷鑽科技開發股份有限公司

FOR YOU APPROVAL

承　　認　　書

•客戶名稱：鈺緯科技開發股份有限公司

•品名/產品描述：

(N0041)3N12S127014/RETARDANT TAPE(3M 1350FY-1,W12.7*t0.06*L66m)

•規格/材質：　12.7mm*66M　/單面膠帶

•公　　差：裁切+/- 0.3mm

•日　　期：2023.11.27

•版　　本：　A

•客戶承認簽章

APPROVED BY	CHECK BY	PREPARED BY
設計驗證 工程課 2023.12.04 發行 鈺緯科技開發股份有限公司		

原料廠商：台灣明尼蘇達礦業製造股份有限公司

經 銷 商：台灣樺島貿易有限公司

廣東東莞廠：樺 豐 貿 易 有 限 公 司

無錫廠：無錫樺仁電子有限公司

臺 北 市 建 國 北 路 二 段 258 巷 29 號

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台灣樺島貿易有限公司

承認書目錄(3M#1350FY-1 TAPE)

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1350F-1, 1350F-2 Tape

Flame-Retardant Tape with Polyester Film and Acrylic Pressure-Sensitive Adhesive

Data Sheet

Product Description

3M™ 1350F Tape is an electrical insulating polyester film tape which meets the flame retardancy requirements of UL 510. It consists of materials that are represented in many UL Recognized Insulation Systems and has a UL 130˚C temperature rating. It also offers excellent flagging and solvent resistance; good wet grab; smooth, even unwind and is suitable for use on automated equipment.

- UL Recognized Flame Retardant
- UL Recognized Class 130°C
- Decabromo Diphenyl Oxide (DBDPO) Free
- Printable
- Solvent resistant without thermosetting
- Excellent Shelf Life
- Excellent Flagging Resistance

Colors

3M 1350F Tape is available in yellow, white and black

Applications

3M 1350F Tape is especially suited for applications such as wrapping coils, capacitors, wire harnesses, transformers, shaded pole motors and fractional horsepower motors.

UL Component Recognition

UL Recognized for use at temperatures not exceeding 130˚C, flame retardant per UL Standard 510, UL File Number E17385, Product Category OANZ2. Underwriters Laboratories (UL) Recognized products are evaluated for use as components of end-product equipment that is Listed or Classified by UL.

To achieve UL Recognition, component construction must meet UL specifications and conditions of acceptabilty for proper and safe use of the component products.

Typical Properties	1-mil Film	2-mil Film
Adhesive	Acrylic	Acrylic
Backing	Polyester Film	Polyester Film
Backing Thickness[1]	One mil (25 micron)	Two mils (50 micron)
Total Thickness[1]	2.5 mils / 0,063 mm	3.5 mils / 0,088 mm
Colors	Yellow, White, Black	Yellow, White, Black
Temperature Class	130˚C (266˚F)	130˚C (266˚F)
Dielectric Breakdown[1]	5500 Volts	7,000 Volts
Insulation Resistance[1] (megohms)	>1 x 10^6	>1 x 10^6
Breaking Strength[1]	25 lbs. / in (44N/10mm)	50 lbs. / in(88N/10mm)
Elongation[1] (% at break)	100	110
Electrolytic Corrosion Factor[3]	1.0	1.0
Adhesion to Steel[1]	30 oz/in (3,3N/10mm)	30 oz/in (3,3N/10mm)
UL 510 Flame Retardant[2]	Yes	Yes
Printable	Yes	Yes

Note: Typical properties are not recommended for specification purposes. Product specifications will be provided upon request.

Footnote: 1 Test Method ASTM D 1000
2 UL-recognized for flame retardancy per UL510, Product Category OANZ2, File E17385
3 3M Test Method-Available on request

3M is a trademark of 3M

IMPORTANT NOTICE

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability. This product will be free from defects in material and manufacture as of the date of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.**

3M

Electrical Products Division

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Austin, TX 78726-9000
http://www.3M.com/elpd/oem

Litho in USA.
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Test Report

No.: ETR23A02166 Date: 19-Oct-2023

3M TAIWAN LTD.
NO. 66, LANE 800, CHUNG-SHAN S. RD., YANG-MEI DISTRICT, TAOYUAN CITY 326, TAIWAN (R. O. C.)

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By	:	3M TAIWAN LTD.
Sample Name	:	TAPE
Style/Item No.	:	1350F-1/-2 YELLOW

==========

Sample Receiving Date	:	12-Oct-2023
Testing Period	:	12-Oct-2023 to 19-Oct-2023

Test Requested :
(1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).
(2) As specified by client, to test Halogen-Fluorine, Chlorine, Bromine, Iodine in the submitted sample.

Test Results : Please refer to following pages.

Conclusion :
(1) Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

CHECK REPORT
PIN CODE: FE74B29A

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Test Part Description

No.1 : YELLOW TAPE

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Cadmium (Cd)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	100
Lead (Pb)		mg/kg	2	9.51	1000
Mercury (Hg)	With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Hexavalent Chromium Cr(VI)	With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.	mg/kg	8	n.d.	1000
Monobromobiphenyl	With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Dibromobiphenyl		mg/kg	5	n.d.	-
Tribromobiphenyl		mg/kg	5	n.d.	-
Tetrabromobiphenyl		mg/kg	5	n.d.	-
Pentabromobiphenyl		mg/kg	5	n.d.	-
Hexabromobiphenyl		mg/kg	5	n.d.	-
Heptabromobiphenyl		mg/kg	5	n.d.	-
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	-
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs		mg/kg	-	n.d.	1000
Monobromodiphenyl ether	With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether		mg/kg	5	n.d.	-
Hexabromodiphenyl ether		mg/kg	5	n.d.	-
Heptabromodiphenyl ether		mg/kg	5	n.d.	-
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether		mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs		mg/kg	-	n.d.	1000

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Test Item(s)	Method	Unit	MDL	Result No.1	Limit
Butyl benzyl phthalate (BBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP)		mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)		mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)		mg/kg	50	n.d.	1000
Fluorine (F) (CAS No.: 14762-94-8)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Bromine (Br) (CAS No.: 10097-32-2)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	65000	-
Iodine (I) (CAS No.: 14362-44-8)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-

Note :

1. mg/kg = ppm ; 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected (Less than MDL)
4. "-" = Not Regulated
5. Unless otherwise stated , the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.

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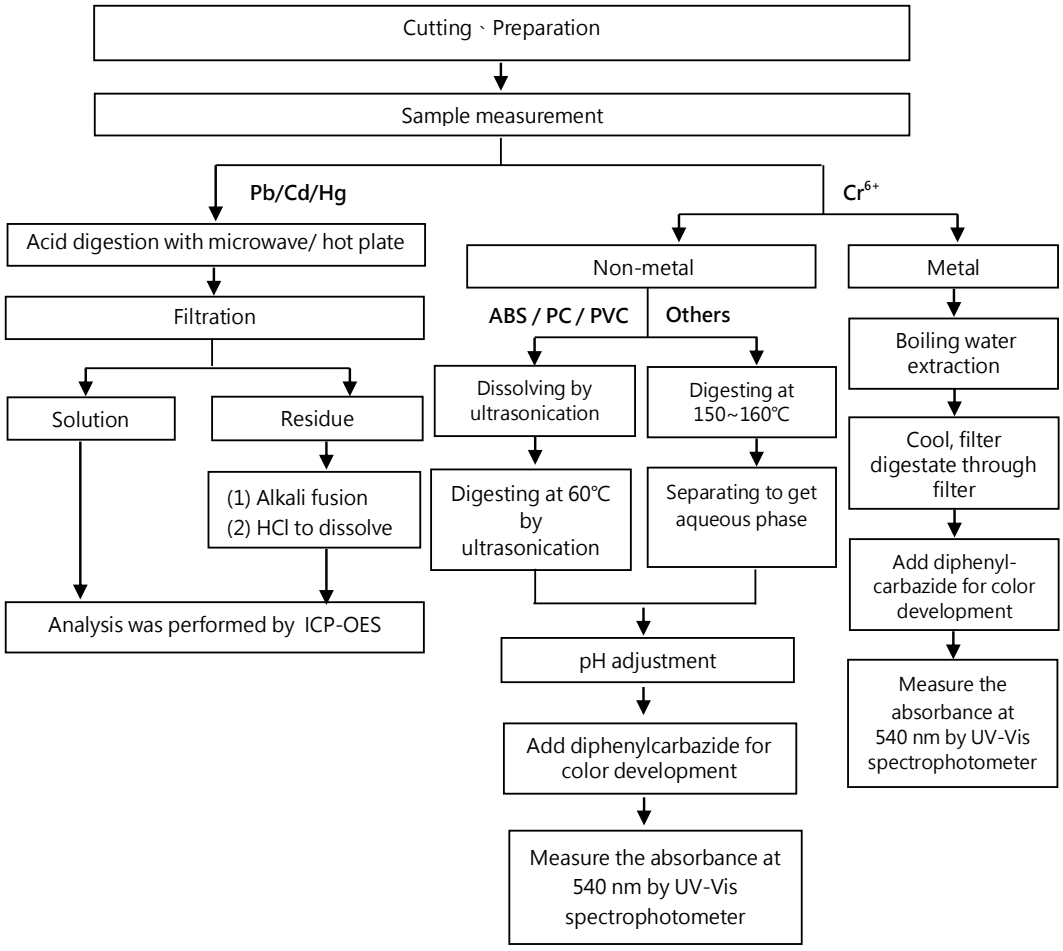
Analytical flow chart of heavy metal

These samples were dissolved totally by pre-conditioning method according to below flow chart.

(Cr^{6+} test method excluded)



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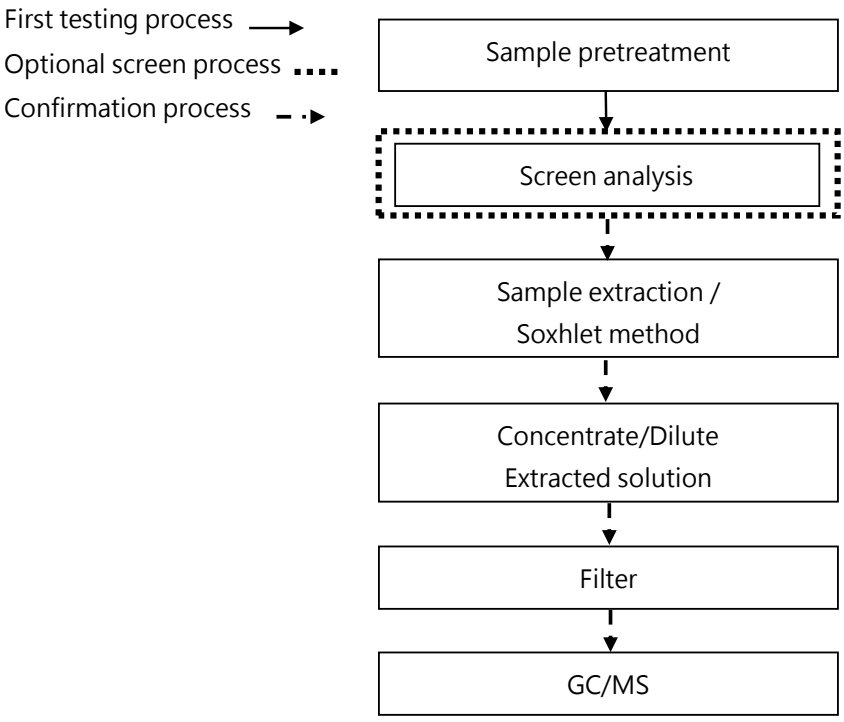
Analytical flow chart – PBBs / PBDEs



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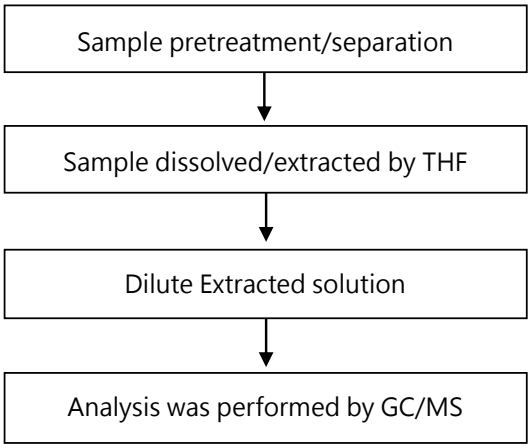
NO. 66, LANE 800, CHUNG-SHAN S. RD., YANG-MEI DISTRICT, TAOYUAN CITY 326, TAIWAN (R. O. C.)

Analytical flow chart - Phthalate

【Test method: IEC 62321-8】



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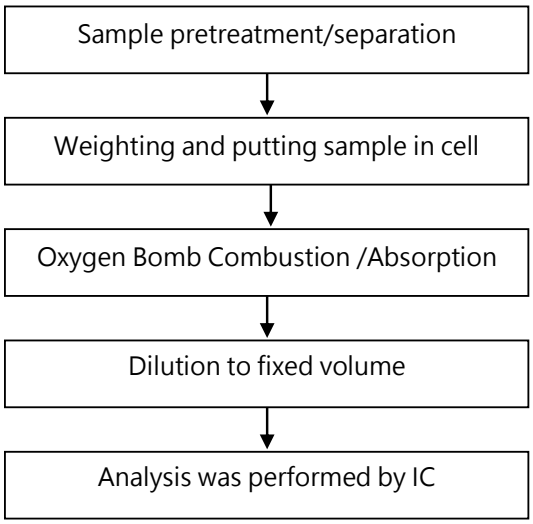
Analytical flow chart of Halogen



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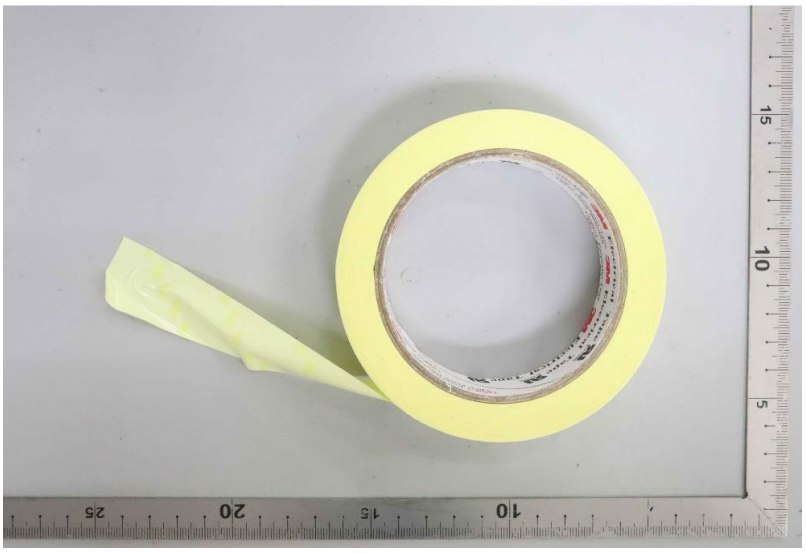
*** The tested sample / part is marked by an arrow if it's shown on the photo. ***

ETR23A02166



** End of Report **

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Regulatory Data Sheet

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This Regulatory Data Sheet is provided as a courtesy in response to a customer request.

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Issue Date:	06/23/23	**Supercedes Date:**	03/22/23

3M ELECTRICAL TAPE 1298, 1350, 1350F, 1350T, LRT-S/Y

3M
Electrical Markets Division
3M Center, St. Paul, MN 55144-1000, USA
1-888-3M HELPS (1-888-364-3577)

RDSs are available at www.3M.com

Regulations and Industry Standards

California Proposition 65
To the best of the manufacturer's knowledge, this product is in compliance with Proposition 65, and reasonably anticipated use of this product will not result in exposure to any Proposition 65 chemicals that would require a Proposition 65 warning.
China RoHS
This product or part does not exceed the maximum concentration values (MCVs) in China RoHS GB/T 26572-2011 (Requirements of Concentration limits for certain restricted substances in electrical and electronic products), which means that each of the homogeneous materials within this product is below the following MCVs: (a) 0.1% (by weight) for lead and its compounds, mercury and its compounds, hexavalent chromium and its compounds, polybrominated biphenyls or polybrominated diphenyl ethers; and (b) 0.01% (by weight) for cadmium and its compounds.
Conflict Minerals
Conflict Minerals, which the U.S. Securities and Exchange Commission ("SEC") has defined as gold, columbite-tantalite (coltan), cassiterite, wolframite, or their derivatives (tin, tantalum, or tungsten), are not contained in or are not "necessary to the functionality or necessary to the production" of the above-listed product, as the term "necessary to the functionality or the production" is defined under the SEC's Conflict Minerals Rule. 77 Fed. Reg. 56274 (Sept. 12, 2012).
EU REACH
This product, including any article that the product is composed of, does not contain at greater than 0.1% by weight a Substance of Very High Concern (SVHC) substance identified according to Article 59 of REACH. This declaration reflects the substances on the candidate SVHC list, effective June 2023.
EU RoHS
This product does not exceed the maximum concentration values (MCVs) set under EU Directive 2011/65/EU (RoHS recast/RoHS 2), as stated in Annex II to that directive. This means that each of the homogenous materials within this product does not exceed the following MCVs: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; and (b) 0.01% (by weight) for cadmium.
EU RoHS Phthalates
This product does not exceed the maximum concentration values (MCVs) for phthalates set under EU Directive 2011/65/EU

(RoHS recast/RoHS 2), as amended by EU 2015/863, which applies to finished EEE after July 22, 2019 for Category 1-7, 10-11 products and after July 22, 2021 for Category 8 and 9 products. This means that each of the homogeneous materials within this product does not exceed the MCV of 0.1% (by weight) for each of the following phthalates: DEHP, BBP, DBP, and DIBP.
TSCA Section 6
This product is not known to contain 2,4,6-Tri-tert-butylphenol (CAS 732-26-3).
TSCA Section 6
This product is not known to contain Decabromodiphenyl Ether (Deca-BDE) (CAS 1163-19-5).
TSCA Section 6
This product is not known to contain Hexachlorobutadiene (HCBD) (CAS 87-68-3).
TSCA Section 6
This product is not known to contain Pentachlorothiophenol (PCTP) (CAS 133-49-3).
TSCA Section 6
This product is not known to contain Phenol, isopropylated phosphate (3:1) (PIP (3:1)) (CAS 68937-41-7).

Chemicals and/or Compounds of Interest

Alkylphenol (AP) : Not known to contain.
Alkylphenolethoxylates (APE) : Not known to contain.
Antimony and (Sb) Compounds : Contains.
Asbestos : Not known to contain.
Azocolorants and Azodyes : Not known to contain.
Azocolorants and Azodyes : This product does not contain azo dyes which, by reductive cleavage of one or more azo groups, may release one or more of the aromatic amines listed in the Appendix I, in detectable concentrations above 30 ppm in the finished article or in the dyes parts thereof, according to the testing method established in accordance with Article 2a of this European Commission Directive 2002/61/EC (2004/21/EC).
Bananas : Not known to contain.
Barium and (Ba) Compounds : Not known to contain.
Benzenamine, N-Phenyl-, Reaction Products with Styrene and 2,4,4-Trimethylpentene (BNST) (CAS 68921-45-9) : Not known to contain.
Beryllium and (Be) Compounds : Not known to contain.
Biocides/Preservatives : Biocides/preservatives are not intentionally added for the purpose of protecting the product from the growth of microorganisms.
Bismuth and (Bi) Compounds : Not known to contain.
Bisphenol A (BPA) (CAS 80-05-7) : Not known to contain.
Butyl Benzyl Phthalate (BBP) (CAS 85-68-7) : Not known to contain.
Butylated Hydroxyanisole (BHA) (CAS 25013-16-5) : Not known to contain.
Butylated Hydroxytoluene (BHT) (128-37-0) : Not known to contain.
Cadmium and (Cd) Compounds : Not known to contain.
Chlorinated Paraffins, Short Chain : Not known to contain.
Chlorinated Polyethylene : Not known to contain.
Chlorosulfonated Polyethylene : Not known to contain.
Chromium and (Cr) Compounds : Not known to contain.
Cobalt and (Co) Compounds : Not known to contain.
Copper and (Cu) Compounds : Not known to contain.
Corn and/or corn derivatives : Not known to contain.
Cotton : Not known to contain.
Creosote : Not known to contain.
Crystalline Silica : Not known to contain.
Decabromodiphenyl Ether (Deca-BDE) (CAS 1163-19-5) : Not known to contain.
Di(2-Ethylhexyl) Phthalate (DEHP) (CAS 117-81-7) : Not known to contain.
Di(Methoxyethyl) Phthalate (DMEP) (CAS 117-82-8) : Not known to contain.
Dibutyl Phthalate (DBP) (CAS 84-74-2) : Not known to contain.
Dibutyl Tin Compounds : Not known to contain.
Diisobutyl Phthalate (DIBP) (CAS 84-69-5) : Not known to contain.

Diisodecyl Phthalate (DIDP) : Not known to contain.
Diisononyl Phthalate (DINP) : Not known to contain.
Dimethyl Fumarate (DMF) (CAS 624-49-7) : Not known to contain.
Dimethylacetamide (CAS 127-19-5) : Not known to contain.
Di-n-Octyl Phthalate (DNOP) (CAS 117-84-0) : Not known to contain.
Dioxins and Furans : Not known to contain.
Dyes : Not known to contain.
Epoxy Compounds : Not known to contain.
Fiberglass : Not known to contain.
Flame Retardants (not PBB or PBDE) : Contains.
Flavorings : Not known to contain.
Formaldehyde (CAS 50-00-0) : Not known to contain.
Genetically Modified Organisms (GMOs) : Not known to contain.
Gluten : Not known to contain.
Gold and (Au) Compounds : Not known to contain.
Graphite (CAS 7782-42-5) : Not known to contain.
Halogenated Compounds : Contains.
Halogenated Flame Retardants : Contains.
Hexabromo Cyclo-Dodecane (HBCD) : Not known to contain.
Hexavalent Chromium and (Cr+6) Compounds : Not known to contain.
Iridium and (Ir) Compounds : Not known to contain.
Iron and (Fe) Compounds : Not known to contain.
Lead and (Pb) Compounds : Not known to contain.
Lithium and (Li) Compounds : Not known to contain.
Materials of Human or Animal Origin : Not known to contain.
Melamine (CAS 108-78-1) : Not known to contain.
Mercury and (Hg) Compounds : Not known to contain.
Methylene Chloride (CAS 75-09-2) : Not known to contain.
Mica : Not known to contain.
Molybdenum and (Mo) Compounds : Not known to contain.
Naphthalene (CAS 91-20-3) : Not known to contain.
Natural Rubber Latex : Not known to contain.
Nickel and (Ni) Compounds : Not known to contain.
N-Nitrosamines : Not known to contain.
Nonylphenol (NP) : Not known to contain.
Nonylphenol Ethoxylates (NPE) : Not known to contain.
Nuts : Not known to contain.
Organochlorine Pesticides : Not known to contain.
Organophosphate Pesticides : Not known to contain.
Organotin Compounds : Not known to contain.
Osmium and (Os) Compounds : Not known to contain.
Ozone Depleting Chemicals (ODCs) : Not known to contain.
Palladium and (Pd) Compounds : Not known to contain.
Pentachlorophenol (87-86-5) : Not known to contain.
Perchloroethylene (CAS 127-18-4) : Not known to contain.
Pesticides/Antimicrobials (FIFRA) : This chemical or chemical compound is not intentionally added or it does not have a pesticidal/antimicrobial purpose (i.e., a claim) pursuant to the US EPA's Federal Insecticide Fungicide Rodenticide Act (FIFRA) regulation.
Petrochemical Fertilizers : Not known to contain.
Phenol (CAS 108-95-2) : Not known to contain.
Phenylalanine (CAS 150-30-1) : Not known to contain.
Phosphorus and (P) Compounds : Not known to contain.
Phthalates : Not known to contain.
Platinum and (Pt) Compounds : Not known to contain.
Polybrominated Biphenyls (PBB) : Not known to contain.

Polybrominated Diphenylethers (PBDE) : Not known to contain.
Polychlorinated Biphenyls (PCBs) : Not known to contain.
Polychlorinated Naphthalenes (PCNs) (>3 Chlorine Atoms) : Not known to contain.
Polycyclic Aromatic Hydrocarbons (PAHs) : Not known to contain.
Polyvinyl Chloride (PVC) : Not known to contain.
Potassium and (K) Compounds : Not known to contain.
Radioactive Substance : Not known to contain.
Residual Organic Solvents : Organic solvents were used in the processing of this product. This product undergoes further processing that should remove any residual solvents. This product is not tested for residual organic solvents.
Rhodium and (Rh) Compounds : Not known to contain.
Ruthenium and (Ru) Compounds : Not known to contain.
Selenium and (Se) Compounds : Not known to contain.
Silicone : Not known to contain.
Silver and (Ag) Compounds : Not known to contain.
Sodium Benzoate (CAS 532-32-1) : Not known to contain.
Sodium Nitrate (CAS 7631-99-4) : Not known to contain.
Sugar, monosaccharides or disaccharides : Not known to contain.
Sulfite : Not known to contain.
Sulfur and (S) Compounds : Not known to contain.
Tartrazine (CAS 1934-21-0) : Not known to contain.
Tetrabromobisphenol A (TBBA) (CAS 79-94-7) : Not known to contain.
Thallium and (Tl) Compounds : Not known to contain.
Tin and (Sn) Compounds : Not known to contain.
Tributyl Tin Compounds : Not known to contain.
Triphenyl Tin Compounds : Not known to contain.
Urea-Formaldehyde (UF) : Not known to contain.
Vanadium and (V) Compounds : Not known to contain.
Yeast : Not known to contain.
Zinc and (Zn) Compounds : Not known to contain.

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS refers to a broad range of thousands of materials with varying properties and characteristics, which may include high resistance to oil, water, temperature, chemicals, and fire, which makes certain PFAS critical to the functioning of many modern products.

Chlorofluorocarbons (CFCs) : Not intentionally added.
Hydrochlorofluorocarbons (HCFCs) : Not intentionally added.
Per- and polyfluoroalkyl substances (PFAS) : Not intentionally added.
Perfluorooctanesulfonic Acid (PFOS) (CAS 1763-23-1) : Not intentionally added.
Perfluorooctanoic Acid (PFOA) (CAS 335-67-1) : Not intentionally added.

Definitions

Note: all Definitions take Disclaimers into account and apply to the "Chemicals and/or Compounds of Interest" and/or "Per and poly-fluoroalkyl Substances (PFAS)" sections only

Terms	Definitions
Contains*	Present based on composition information disclosed by 3M suppliers, analytical testing, or both.
Not known to contain*	1. Analytical measurement for presence is not currently available; 2. If measurement is possible, a) The material has not been identified or disclosed to 3M and b) The material has not been specifically quantified or detected; OR c) Based on information from raw material suppliers, possible presence as an impurity or by-product at or below regulatory thresholds (e.g., 0.1 or 0.01 %)

Intentionally added**	Desired in the final product to provide a specific characteristic, appearance, or quality and/or to perform a specific function.
Not intentionally added**	By-product(s), impurity(ies) and/or unintended artifact(s) resulting from the formulation and/or manufacture of a material.
By-product***	A chemical substance produced without a separate commercial intent during the manufacture, processing, use, or disposal of another chemical substance or mixture.
Impurity***	A chemical substance which is unintentionally present with another chemical substance (e.g., residuals, catalysts, process solvents).

**Terms apply to the Chemicals and/or Compounds of Interest Section only (if section is present)*
***Terms apply to the PFAS Section only (if section is present)*
****Terms apply to both the Chemicals and/or Compounds of Interest and PFAS Sections (if section(s) are present)*

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Safety Data Sheet

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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 Regulation of Labelling and Hazard Communication of Hazardous Chemicals promulgated by Ministry of Labor 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.

Document Group:	07-7791-2	**Version Number:**	5.00
Issue Date:	2023/04/10	**Supercedes Date:**	2019/04/22

This Safety Data Sheet has been prepared in accordance with the 'Regulation of Labelling and Hazard Communication of Hazardous Chemicals'

SECTION 1: Identification

1.1. Chemicals Name
3M ELECTRICAL TAPE 1298, 1350, 1350F, 1350T, LRT-S/Y

Other Names: None

Product Identification Numbers

LH-A100-2959-8	80-6107-4864-4	80-6108-8530-5	80-6109-8229-2	80-6109-8230-0
80-6109-8324-1	80-6109-8325-8	80-6109-8326-6	80-6109-8327-4	80-6112-0391-2
80-6112-4099-7	80-6112-4101-1	80-6112-4102-9	80-6112-4103-7	80-6112-4127-6
80-6112-4128-4	80-6112-4129-2	80-6112-4130-0	80-6112-4136-7	80-6112-4138-3
80-6112-4146-6	80-6112-4147-4	80-6112-6873-3	80-6114-2011-0	80-6114-3324-6
80-6114-3728-8	80-6114-3753-6	80-6114-3754-4	80-6114-4075-3	FE-5100-9063-5
XE-0021-8753-4	XE-0021-9422-5	XE-0042-1630-7	XE-0042-1773-5	

1.2. Recommended use and restrictions on use

Recommended use
ELECTRICAL INSULATION

1.3. Details of the supplier of the safety data sheet
Name: 3M Taiwan LTD
ADDRESS: 3F., No. 198, Jingmao 2nd Rd., Nangang Dist., Taipei City 115018, Taiwan
Telephone: (02) 2785-9338
Website: www.3m.com.tw

1.4. Emergency telephone number
Emergency Telephone:886-3-4783600

Fax number:(03) 475-0924, 475-0904

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
This product is considered to be an article and is exempt from GHS classification.

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

Pure Material: Not Applicable

This material is a mixture.

Chemical Properties: Refer to Section 9 of this SDS

Hazardous Ingredients: Not Applicable

Other Ingredient Names*	C.A.S. No.	% by Wt
POLYESTER FILM	None	40 - 50
FLAME RETARDANT ADHESIVE	Trade Secret	40 - 50

*The ingredients in this table are either: 1) not classified as hazardous, or 2) do not contribute to hazard classification according to CNS15030 based on defined classification thresholds.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. Get medical attention.

Skin Contact:
No need for first aid is anticipated.

Eye Contact:
No need for first aid is anticipated. If signs/symptoms persist, get medical attention.

If Swallowed:
Do not induce vomiting. Rinse mouth. If you feel unwell, get medical attention.

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. Advice to protect the rescuer and special warning to doctors
Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation and personal protective equipment.

4.4. 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.

5.4. Special equipment for the protection of fire-fighters
No information is available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

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
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

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
Not applicable.

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.

8.3. Hygiene Measures
See Section 7.1 Precautions for safe handling

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	White, Yellow
Odor	Solvent
Odor threshold	*Not Applicable*
pH	*Not Applicable*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	*Not Applicable*
Flash Point	*Not Applicable*
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density and/or Relative Vapor Density	*Not Applicable*
Density	*No Data Available*
Relative Density	*No Data Available*
Water solubility	*No Data Available*
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*Not Applicable*

Viscosity/Kinematic Viscosity	*Not Applicable*
Volatile Organic Compounds	*Not Applicable*
Percent volatile	*Not Applicable*
VOC Less H2O & Exempt Solvents	*Not Applicable*

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

Substance	**Condition**
None known.	

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 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:
No health effects are expected.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
No health effects are expected.

Chronic toxicity or long term toxicity

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

ATE = acute toxicity estimate

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

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

Sensitization:

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

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

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

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

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

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

12.2. Persistence and degradability
No test data available

12.3. Bioaccumulative potential
No test data available

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available

SECTION 13: Disposal considerations

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

14.1. International Regulations
Not hazardous for transportation.

UN No.: Not applicable
UN Proper shipping name: Not applicable
Transportation Class (IMO): Not applicable
Transportation Class (IATA): Not applicable
Packing Group: Not applicable
Marine pollutant: Not applicable

Specific transport measures and precautionary conditions: Not applicable

SECTION 15: Regulatory information

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

Applicable regulations:
Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste

Occupational Safety and Health Act

15.2. Global Inventory Status:
European Inventory of Existing Commercial Chemical Substances: Yes
Toxic Substances Control Act: Inventory list not applicable

SECTION 16: Other information

16.1. Literature references

Organization that prepared the SDS

Name:	3M Taiwan LTD
Address:	3F., No. 198, Jingmao 2nd Rd., Nangang Dist., Taipei City 115018, Taiwan
Telephone Number:	886 3 478 3600 #388

Person who prepared the SDS

Title:	Senior Product Responsibility Liaison
Name:	Sunny Chang

Date that the SDS was prepared:
2023/04/10

Revision information:
Section 01: Address information was modified.
Section 01: Emergency telephone information was modified.
Section 01: Product identification numbers information was modified.
Section 02: TW GHS Classification information was deleted.
Section 02: TW Pictogram information was deleted.
Section 02: TW Classification Statements information was added.
Section 02: TW Pictogram Not Applicable information was added.
Section 03: Ingredient table information was deleted.
Section 03: Material is a mixture standard phrase information was deleted.
Section 04: First aid for eye contact information information was modified.
Section 04: First aid for ingestion (swallowing) information information was modified.
Section 04: First aid for inhalation information information was modified.
Section 04: Information on toxicological effects information was deleted.
Section 05: Fire - Advice for fire fighters information information was modified.
Section 08: Personal Protection - Skin/hand information information was modified.
Section 09: Color information was added.
Section 09: Odor information was added.
Section 09: Odor, color, grade information information was deleted.
Section 09: Percent Volatile information was added.
Section 09: Property description for optional properties information was deleted.
Section 09: Vapor Density Value information was added.

Section 09: Vapor density value information was deleted.
Section 09: Viscosity information information was deleted.
Section 09: Viscosity information was added.
Section 09: VOC Less H2O & Exempt Solvents information was added.
Section 09: Volatile Organic Compounds information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 12: Component ecotoxicity information information was deleted.
Section 12: No Data text for bioccumulative potential information was added.
Section 12: No Data text for persistence and degradability information was added.
Section 12: Persistence and Degradability information information was deleted.
Section 12:Bioccumulative potential information information was deleted.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Methods and Facilities Standards information was modified.
Section 16: UK disclaimer information was deleted.
Section 2: TW Symbol Text - Not applicable information was modified.
Taiwan Section 03: Hazardous Ingredient - N/A information was added.
Taiwan Section 03: Mixture information was added.
Taiwan Section 03: Not hazardous Ingredient table information was added.
Taiwan Section 03: Not Hazardous Statement information was added.
Taiwan Section 03: Pure Material information was added.

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3M Taiwan SDSs are available at www.3m.com.tw