


設計驗證
工程課
2023.12.04
發行
虹曄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：

(N0042)3N12S190014/RETARDANT TAPE(3M 1350FY-1,W19*t0.06*L66m)

•規格/材質：　19mm*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

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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

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

### 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**
- **Non-Diphenyl Oxide Based Flame Retardant**
- **Printable**
- **Solvent Resistant Without Thermosetting**
- **Excellent Shelf Life**
- **Excellent Flagging Resistance**

### Colors

3M 1350F Tape is available in Yellow, White, Black, Red, Green and Blue.

### 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 and flame retardant per UL Standard 510, UL File Number E17385, Product Catagory 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 Underwriters Laboratories Recognition, component construction must meet UL specifications and conditions of acceptibility for proper and safe use of the component products.

## 1350F Flame Retardant Tape with Polyester Film and Acrylic Pressure Sensitive Adhesive

| 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 | 2.5 mils / 0,063 mm | 3.3 mils / 0,083 mm |
| Colors - Designation | Y,W,BLK,R,G,Blu | Y,W,BLK,R,G,Blu |
| Temperature Class | 130°C (266°F) | 130°C (266°F) |
| Dielectric Breakdown[1] | 5500 Volts | 7,000 Volts |
| Insulation Resistance[1] (megohms) | $>1 \times 10^6$ | $>1 \times 10^6$ |
| Breaking Strength[1] | 25 lbs/in (44N/10mm) | 50 lbs/in (88N/10mm) |
| Elongation[1] (% at break) | 75 | 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 0ANZ2, File E17385.
[3]3M Test Method-Available on request.

## Important Notice

All statements, technical information, and recommendations related to Seller's products are based on information believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before utilizing the product, the user should determine the suitability of the product for its intended use. The user assumes all risks and liability whatsoever in connection with such use.

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3M

**Electrical Specialties Division**

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Austin, TX 78726-9000
800/328-1368

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*10% Post-consumer waste paper*

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

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

| 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.

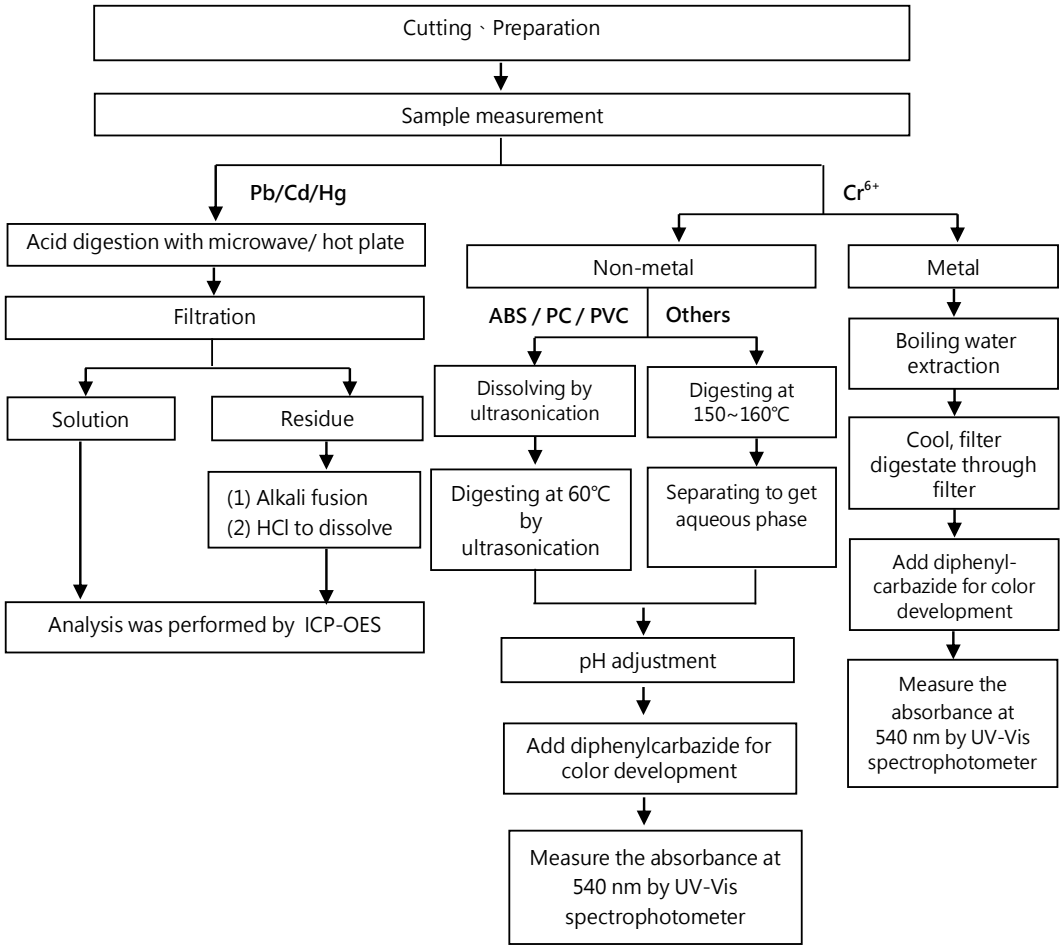
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## Analytical flow chart of heavy metal

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

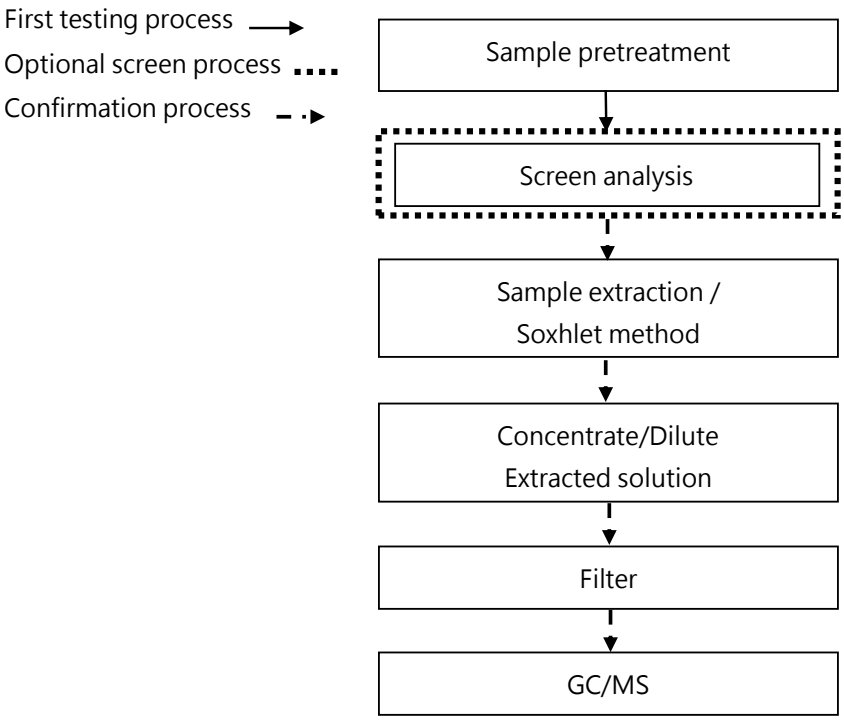
( $Cr^{6+}$ test method excluded )




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**Analytical flow chart – PBBs / PBDEs**

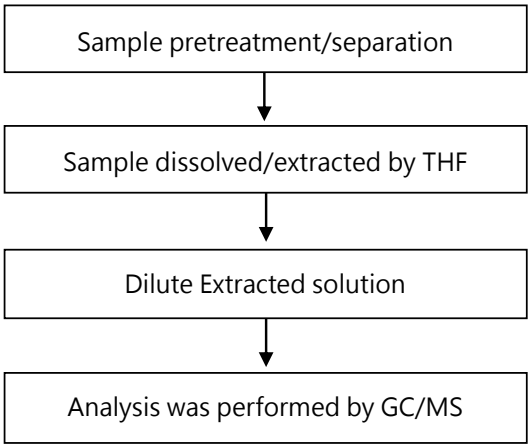



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**Analytical flow chart - Phthalate**

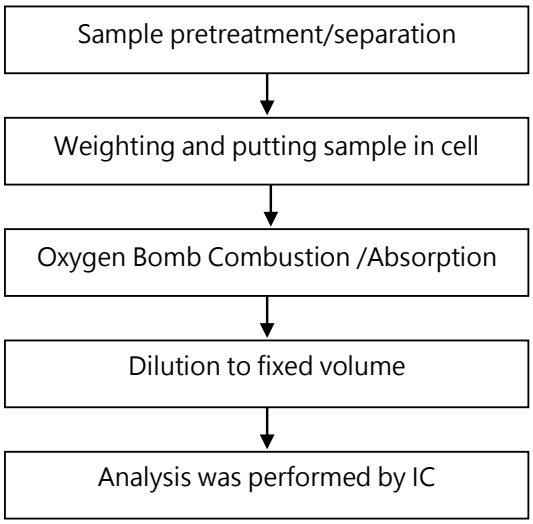
**【Test method: IEC 62321-8】**




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**Analytical flow chart of Halogen**

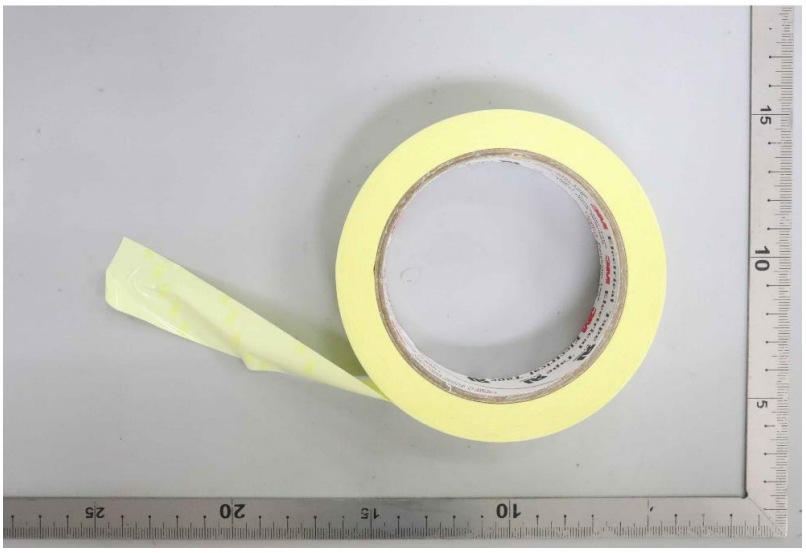



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*** The tested sample / part is marked by an arrow if it's shown on the photo. ***

**ETR23A02166**



** End of Report **

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## Regulatory Data Sheet

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| | | | |
|---|---|---|---|
| **Document Group:** | 07-7791-2 | **Version Number:** | 11.00 |
| **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;<br>2. If measurement is possible,<br>a) The material has not been identified or disclosed to 3M and<br>b) The material has not been specifically quantified or detected; OR<br>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**