



## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Electrically Conductive Adhesive Transfer Tape 9703

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Bonding, Industrial use

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Electronics Materials Solutions Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

##### Pictograms



##### Hazard Statements

May cause an allergic skin reaction.

**Precautionary Statements****Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wear protective gloves.  
Contaminated work clothing must not be allowed out of the workplace.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.

**Disposal:**

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

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
acrylate adhesive	Trade Secret*	50 - 80
nickel	7440-02-0	15 - 40 Trade Secret *
silver	7440-22-4	3 - 15

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

**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:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

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.

### 5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

### 7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
nickel	7440-02-0	ACGIH	TWA(inhalable fraction):1.5 mg/m3	A5: Not suspected human carcin
nickel	7440-02-0	OSHA	TWA(as Ni):1 mg/m3	
silver	7440-22-4	ACGIH	TWA(as dust and fume):0.1 mg/m3	
silver	7440-22-4	OSHA	TWA(as Ag):0.01 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Not applicable.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

None required.

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

#### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

##### Physical state

Solid

##### Color

Colorless

#### Specific Physical Form:

Roll of Tape

#### Odor

Slight Acrylate

#### Odor threshold

*Not Applicable*

#### pH

*Not Applicable*

#### Melting point

*Not Applicable*

#### Boiling Point

*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

*Not Applicable*

#### Density

*Not Applicable*

#### Specific Gravity

*Not Applicable*

#### Solubility in Water

Nil

#### Solubility- non-water

*Not Applicable*

#### Partition coefficient: n-octanol/ water

*No Data Available*

#### Autoignition temperature

*Not Applicable*

#### Decomposition temperature

*Not Applicable*

#### Viscosity

*Not Applicable*

#### Volatile Organic Compounds

*Not Applicable*

#### Percent volatile

0 %

#### VOC Less H<sub>2</sub>O & Exempt Solvents

*Not Applicable*

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

**10.2. Chemical stability**

Stable.

**10.3. Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

Strong acids

Strong bases

Strong oxidizing agents

**10.6. Hazardous decomposition products****Substance****Condition**

None known.

**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 known health effects.

**Skin Contact:**

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

**Ingestion:**

Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

**Carcinogenicity:**

<b>Ingredient</b>	<b>CAS No.</b>	<b>Class Description</b>	<b>Regulation</b>
NICKEL (METALLIC)	7440-02-0	Anticipated human carcinogen	National Toxicology Program Carcinogens
NICKEL, METALLIC AND ALLOYS	7440-02-0	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or

the data are not sufficient for classification.

### Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
nickel	Dermal		LD50 estimated to be > 5,000 mg/kg
nickel	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.55 mg/l
nickel	Ingestion	Rat	LD50 > 9,000 mg/kg
silver	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
silver	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
nickel	Rabbit	Minimal irritation

### Serious Eye Damage/Irritation

Name	Species	Value
nickel	Rabbit	Mild irritant

### Skin Sensitization

Name	Species	Value
nickel	Human	Sensitizing

### 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

Name	Route	Species	Value
nickel	Inhalation	similar compounds	Carcinogenic

### 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

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
nickel	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.001 mg/l	13 weeks

### Aspiration Hazard

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

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

## SECTION 12: Ecological information

### Ecotoxicological information

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

### Chemical fate information

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

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility.

**EPA Hazardous Waste Number (RCRA):** D011 (Silver)

## SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### EPCRA 311/312 Hazard Classifications:

##### Physical Hazards

Not applicable

##### Health Hazards

Not applicable

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>

nickel  
silver

7440-02-0  
7440-22-4

Trade Secret 15 - 40  
3 - 15

### 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## SECTION 16: Other information

### NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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