



## Safety Data Sheet

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|------------------------|-----------|-------------------------|---------------|
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### SECTION 1: Identification

#### 1.1. Product identifier

3M (TM) 1137 High Temp Sealant

#### Product Identification Numbers

62-1137-5530-0

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

##### Recommended use

High temperature manifold sealant

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Industrial Adhesives and Tapes 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

Serious Eye Damage/Irritation: Category 2B.

Specific Target Organ Toxicity (single exposure): Category 3.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

##### Pictograms

**Hazard Statements**

Causes eye irritation.  
May cause respiratory irritation.

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

Avoid breathing dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Wash thoroughly after handling.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage:**

Keep container tightly closed.  
Store locked up in a well-ventilated place.

**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                |
|-----------------|------------|------------------------|
| Water           | 7732-18-5  | 40 - 50 Trade Secret * |
| Stainless Steel | 65997-19-5 | 10 - 30 Trade Secret * |
| Sodium silicate | 1344-09-8  | 15 - 25 Trade Secret * |
| Copper powder   | 7440-50-8  | 5 - 10 Trade Secret *  |
| Zinc oxide      | 1314-13-2  | 1 - 3 Trade Secret *   |

\*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:**

Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**

Wash with soap and water. 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**

See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures**

**5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

**Hazardous Decomposition or By-Products**

Substance

Oxides of Zinc

Condition

During Combustion

**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. Ventilate the area with fresh air. 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 skin contact with hot material. For industrial or professional use only. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

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

Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from strong bases.

**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 |
|---------------|------------|--------|---|---------------------|
| Zinc oxide    | 1314-13-2  | ACGIH  | TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3               |                     |
| Zinc oxide    | 1314-13-2  | OSHA   | TWA(as fume):5 mg/m3;TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 |                     |
| Copper powder | 7440-50-8  | OSHA   | TWA(as Cu dust or mist):1 mg/m3;TWA(as Cu, fume):0.1 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

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

#### Skin/hand protection

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

Gloves made from the following material(s) are recommended: Butyl Rubber

Neoprene

Nitrile Rubber

#### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

**Thermal hazards**

Wear heat insulating gloves when handling hot material to prevent thermal burns.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|  |   |
|--|---|
| <b>General Physical Form:</b>                  | Solid   |
| <b>Specific Physical Form:</b>                 | Paste   |
| <b>Odor, Color, Grade:</b>                     | silver gray   |
| <b>Odor threshold</b>                          | <i>No Data Available</i>                              |
| <b>pH</b>                                      | 9 - 12  |
| <b>Melting point</b>                           | <i>No Data Available</i>                              |
| <b>Boiling Point</b>                           | 212.00 °F   |
| <b>Flash Point</b>                             | No flash point  |
| <b>Evaporation rate</b>                        | 1 [Ref Std: WATER=1]                                  |
| <b>Flammability (solid, gas)</b>               | Not Classified  |
| <b>Flammable Limits(LEL)</b>                   | <i>Not Applicable</i>                                 |
| <b>Flammable Limits(UEL)</b>                   | <i>Not Applicable</i>                                 |
| <b>Vapor Pressure</b>                          | 25.0000 mmHg  |
| <b>Vapor Density</b>                           | <=1.00 [Ref Std: AIR=1]                               |
| <b>Density</b>                                 | 2 g/ml  |
| <b>Specific Gravity</b>                        | 2 [Ref Std: WATER=1]                                  |
| <b>Solubility In Water</b>                     | 10  |
| <b>Solubility in Water</b>                     | Moderate  |
| <b>Solubility- non-water</b>                   | <i>No Data Available</i>                              |
| <b>Partition coefficient: n-octanol/ water</b> | <i>No Data Available</i>                              |
| <b>Autoignition temperature</b>                | <i>No Data Available</i>                              |
| <b>Decomposition temperature</b>               | <i>No Data Available</i>                              |
| <b>Viscosity</b>                               | >=10,000 centipoise [@ 73.4 °F ] [Details: MITS data] |
| <b>Hazardous Air Pollutants</b>                | 0 % weight [Test Method: Calculated]                  |
| <b>Volatile Organic Compounds</b>              | 0 g/l [Details: EU VOC content]                       |
| <b>Percent volatile</b>                        | 47.5 % weight   |
| <b>VOC Less H2O &amp; Exempt Solvents</b>      | 0 g/l [Test Method: calculated SCAQMD rule 443.1]     |

**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

Sparks and/or flames

**10.5. Incompatible materials**

Strong bases

**10.6. Hazardous decomposition products**

| <b>Substance</b> | <b>Condition</b> |
|------------------|------------------|
| None known.      |                  |

Refer to section 5.2 for hazardous decomposition products during combustion.

**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:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Skin Contact:**

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

**Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**

May be harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Carcinogenicity:**

| <b>Ingredient</b> | <b>CAS No.</b> | <b>Class Description</b>      | <b>Regulation</b>                           |
|-------------------|----------------|-------------------------------|---|
| NICKEL ALLOYS     | 65997-19-5     | 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**

| <b>Name</b>     | <b>Route</b>                   | <b>Species</b> | <b>Value</b>   |
|-----------------|--------------------------------|----------------|--|
| Overall product | Ingestion                      |                | No data available; calculated ATE2,000 - 5,000 mg/kg |
| Sodium silicate | Dermal                         | Rabbit         | LD50 > 4,640 mg/kg                                   |
| Sodium silicate | Ingestion                      | Rat            | LD50 500 mg/kg                                       |
| Copper powder   | Dermal                         | Rat            | LD50 > 2,000 mg/kg                                   |
| Copper powder   | Inhalation-Dust/Mist (4 hours) | Rat            | LC50 > 5.11 mg/l                                     |
| Copper powder   | Ingestion                      | Rat            | LD50 > 2,000 mg/kg                                   |
| Zinc oxide      | Dermal                         |                | LD50 estimated to be > 5,000 mg/kg                   |
| Zinc oxide      | Inhalation-Dust/Mist           | Rat            | LC50 > 5.7 mg/l                                      |

|            |           |     |                    |
|------------|-----------|-----|--------------------|
|            | (4 hours) |     |                    |
| Zinc oxide | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name            | Species          | Value                     |
|-----------------|------------------|---------------------------|
| Sodium silicate | Rabbit           | Corrosive                 |
| Copper powder   | Rabbit           | No significant irritation |
| Zinc oxide      | Human and animal | No significant irritation |

**Serious Eye Damage/Irritation**

| Name            | Species | Value         |
|-----------------|---------|---------------|
| Sodium silicate | Rabbit  | Corrosive     |
| Copper powder   | Rabbit  | Mild irritant |
| Zinc oxide      | Rabbit  | Mild irritant |

**Skin Sensitization**

| Name            | Species    | Value          |
|-----------------|------------|----------------|
| Sodium silicate | Mouse      | Not classified |
| Zinc oxide      | Guinea pig | Not classified |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name            | Route    | Value  |
|-----------------|----------|--|
| Sodium silicate | In Vitro | Not mutagenic  |
| Sodium silicate | In vivo  | Not mutagenic  |
| Zinc oxide      | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Zinc oxide      | In vivo  | Some positive data exist, but the data are not sufficient for classification |

**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**

| Name            | Route     | Value  | Species                 | Test Result         | Exposure Duration              |
|-----------------|-----------|--|-------------------------|---------------------|--------------------------------|
| Sodium silicate | Ingestion | Not classified for development                     | Mouse                   | NOAEL 200 mg/kg/day | during gestation               |
| Zinc oxide      | Ingestion | Not classified for reproduction and/or development | Multiple animal species | NOAEL 125 mg/kg/day | prematuring & during gestation |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

| Name            | Route      | Target Organ(s)        | Value                            | Species             | Test Result         | Exposure Duration |
|-----------------|------------|------------------------|----------------------------------|---------------------|---------------------|-------------------|
| Sodium silicate | Inhalation | respiratory irritation | May cause respiratory irritation | official classifica | NOAEL Not available |                   |

|  |  |  |  |      |  |  |
|--|--|--|--|------|--|--|
|  |  |  |  | tion |  |  |
|--|--|--|--|------|--|--|

**Specific Target Organ Toxicity - repeated exposure**

| Name            | Route     | Target Organ(s)   | Value  | Species | Test Result           | Exposure Duration |
|-----------------|-----------|---|--|---------|-----------------------|-------------------|
| Sodium silicate | Ingestion | kidney and/or bladder   | Some positive data exist, but the data are not sufficient for classification | Dog     | LOAEL 2,400 mg/kg/day | 4 weeks           |
| Sodium silicate | Ingestion | endocrine system   blood  | Not classified   | Rat     | NOAEL 804 mg/kg/day   | 3 months          |
| Sodium silicate | Ingestion | heart   liver   | Not classified   | Rat     | NOAEL 1,259 mg/kg/day | 8 weeks           |
| Zinc oxide      | Ingestion | nervous system  | Not classified   | Rat     | NOAEL 600 mg/kg/day   | 10 days           |
| Zinc oxide      | Ingestion | endocrine system   hematopoietic system   kidney and/or bladder | Not classified   | Other   | NOAEL 500 mg/kg/day   | 6 months          |

**Aspiration Hazard**

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

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

**SECTION 12: Ecological information**

**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 uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

**EPA Hazardous Waste Number (RCRA):** Not regulated

**SECTION 14: Transport Information**

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information**



**15.1. US Federal Regulations**

Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:**

|                         |
|-------------------------|
| <b>Physical Hazards</b> |
| Not applicable          |

|  |
|--|
| <b>Health Hazards</b>  |
| Serious eye damage or eye irritation                         |
| Specific target organ toxicity (single or repeated exposure) |

**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>      |
|--------------------------------------|------------------|---------------------|
| Copper powder                        | 7440-50-8        | Trade Secret 5 - 10 |
| Copper powder (Copper)               | 7440-50-8        | 5 - 10              |
| Stainless Steel (VANADIUM COMPOUNDS) | 65997-19-5       | 10 - 30             |
| Zinc oxide (ZINC COMPOUNDS)          | 1314-13-2        | 1 - 3               |

**15.2. State Regulations**

Contact 3M for more information.

**15.3. Chemical Inventories**

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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:** 1 **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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