# Safety Data Sheet

Copyright,2015,3M Company.

| | | | |
|---|---|---|---|
| **Document Group:** | 11-6904-4 | **Version Number:** | 27.03 |
| **Issue Date:** | 11/06/15 | **Supercedes Date:** | 11/06/15 |

## SECTION 1: Identification

### 1.1. Product identifier

3M™ Diamond Lapping Film, 631X, 638X (PSA), 641X, 651X, 661X, 661XA, 661XU, 661XY, 662XW, 663X, 664X, 666X, 666XW, 668X(PSA)

**Product Identification Numbers**

60-0000-1234-8, 60-0000-1235-5, 60-0000-1236-3, 60-0000-1282-7, 60-0000-1283-5, 60-0000-1284-3, 60-0000-1325-4, 60-0000-1326-2, 60-0000-1327-0, 60-0000-1328-8, 60-0000-1329-6, 60-0000-1330-4, 60-0000-1331-2, 60-0000-1332-0, 60-0000-1390-8, 60-0000-1585-3, 60-0000-1586-1, 60-0000-1600-0, 60-0000-1601-8, 60-0000-1602-6, 60-0000-2374-1, 60-0000-2412-9, 60-0000-2413-7, 60-0000-2414-5, 60-0000-2852-6, 60-0000-2855-9, 60-0000-2856-7, 60-0000-2857-5, 60-0000-2858-3, 60-0000-2859-1, 60-0000-4992-8, 60-0000-4993-6, 60-0000-5898-6, 60-0000-6139-4, 60-0000-6741-7, 60-0000-6742-5, 60-0000-7158-3, 60-0000-7592-3, 60-0000-7616-0, 60-0000-7630-1, 60-0000-7641-8, 60-0000-7642-6, 60-0000-7643-4, 60-0000-7644-2, 60-0000-7645-9, 60-0000-7646-7, 60-0000-7647-5, 60-0000-7648-3, 60-0000-7904-0, 60-0000-7905-7, 60-0000-9437-9, 60-0000-9732-3, 60-0001-2151-1, 60-0001-2152-9, 60-0001-2153-7, 60-0001-2154-5, 60-0001-2155-2, 60-0001-2156-0, 60-0001-2157-8, 60-0001-2255-0, 60-0001-3925-7, 60-0001-3926-5, 60-0001-4846-4, 60-0003-3615-0, 60-0003-3617-6, 60-0003-3618-4, 60-0003-3619-2, 60-0006-0002-7, 60-0006-0003-5, 60-0006-0008-4, 60-0006-0009-2, 60-0006-0022-5, 60-0006-0023-3, 60-0006-0031-6, 60-0006-0083-7, 60-0006-0084-5, 60-0006-0085-2, 60-0006-0086-0, 60-0006-0087-8, 60-0006-0088-6, 60-0006-0089-4, 60-0006-0090-2, 60-0006-0091-0, 60-0006-0092-8, 60-0200-0074-5, 60-0200-0162-8, 60-0200-0372-3, 60-0200-0379-8, 60-0200-0380-6, 60-0200-0382-2, 60-0200-0384-8, 60-0200-0387-1, 60-0200-0388-9, 60-0200-0389-7, 60-0200-0390-5, 60-0200-0392-1, 60-0200-0396-2, 60-0200-0397-0, 60-0200-0398-8, 60-0200-0399-6, 60-0200-0400-2, 60-0200-0401-0, 60-0200-0402-8, 60-0200-0403-6, 60-0200-0404-4, 60-0200-0405-1, 60-0200-0406-9, 60-0200-0407-7, 60-0200-0409-3, 60-0200-0413-5, 60-0200-0414-3, 60-0200-0415-0, 60-0200-0416-8, 60-0200-0418-4, 60-0200-0419-2, 60-0200-0420-0, 60-0200-0421-8, 60-0200-0422-6, 60-0200-0424-2, 60-0200-0425-9, 60-0200-0426-7, 60-0200-0427-5, 60-0200-0428-3, 60-0200-0432-5, 60-0200-0435-8, 60-0200-0436-6, 60-0200-0437-4, 60-0200-0438-2, 60-0200-0439-0, 60-0200-0440-8, 60-0200-0441-6, 60-0200-0501-7, 60-0200-0515-7, 60-0200-0517-3, 60-0200-0518-1, 60-0200-0519-9, 60-0200-0520-7, 60-0200-0521-5, 60-0200-0522-3, 60-0200-0523-1, 60-0200-0524-9, 60-0200-0525-6, 60-0200-0526-4, 60-0200-0528-0, 60-0200-0529-8, 60-0200-0530-6, 60-0200-0531-4, 60-0200-0532-2, 60-0200-0533-0, 60-0200-0534-8, 60-0200-0536-3, 60-0200-0537-1, 60-0200-0538-9, 60-0200-0540-5, 60-0200-0541-3, 60-0200-0543-9, 60-0200-0544-7, 60-0200-0545-4, 60-0200-0548-8, 60-0200-0549-6, 60-0200-0550-4, 60-0200-0551-2, 60-0200-0552-0, 60-0200-0553-8, 60-0200-0554-6, 60-0200-0586-8, 60-0200-0587-6, 60-0200-0588-4, 60-0200-0589-2, 60-0200-0591-8, 60-0200-0592-6, 60-0200-0593-4, 60-0200-0594-2, 60-0200-0598-3, 60-0200-0599-1, 60-0200-0600-7, 60-0200-0601-5, 60-0200-0604-9, 60-0200-0605-6, 60-0200-0606-4, 60-0200-0607-2, 60-0200-0608-0, 60-0200-0610-6, 60-0200-0611-4, 60-0200-0612-2, 60-0200-0613-0, 60-0200-0753-4, 60-0200-0757-5, 60-0200-0758-3, 60-0200-0761-7, 60-0200-0762-5, 60-0200-0763-3, 60-0200-0765-8, 60-0200-0766-6, 60-0200-0767-4, 60-0200-0768-2, 60-0200-0777-3, 60-0200-0920-9, 60-0200-0926-6, 60-0200-0933-2, 60-0200-0935-7, 60-0200-0938-1, 60-0200-0942-3, 60-0200-0943-1, 60-0200-0948-0, 60-0200-0950-6, 60-0200-0954-8, 60-0200-0956-3, 60-0200-0957-1, 60-0200-0958-9, 60-0200-0959-7, 60-0200-0960-5, 60-0200-0961-3, 60-0200-0963-9, 60-0200-0964-7, 60-0200-0967-0, 60-0200-0975-3, 60-0200-0978-7, 60-0200-0979-5, 60-0200-0989-4, 60-0200-0990-2, 60-0200-1004-1, 60-0200-1007-4, 60-0200-1008-2, 60-

0200-1009-0, 60-0200-1010-8, 60-0200-1023-1, 60-0200-1025-6, 60-0200-1033-0, 60-0200-1041-3, 60-0200-1044-7, 60-0200-1046-2, 60-0200-1047-0, 60-0200-1048-8, 60-0200-1050-4, 60-0200-1051-2, 60-0200-1052-0, 60-0200-1058-7, 60-0200-1060-3, 60-0200-1061-1, 60-0200-1065-2, 60-0200-1068-6, 60-0200-1070-2, 60-0200-1071-0, 60-0200-1080-1, 60-0200-1081-9, 60-0200-1082-7, 60-0200-1083-5, 60-0200-1085-0, 60-0200-1086-8, 60-0200-1091-8, 60-0200-1096-7, 60-0200-1102-3, 60-0200-1111-4, 60-0200-1112-2, 60-0200-1117-1, 60-0200-1136-1, 60-0200-1139-5, 60-0200-1140-3, 60-0200-1141-1, 60-0200-1145-2, 60-0200-1148-6, 60-0200-1154-4, 60-0200-1155-1, 60-0200-1156-9, 60-0200-1157-7, 60-0200-1158-5, 60-0200-1160-1, 60-0200-1165-0, 60-0200-1172-6, 60-0200-1179-1, 60-0200-1180-9, 60-0200-1181-7, 60-0200-1186-6, 60-0200-1187-4, 60-0200-1188-2, 60-0200-1189-0, 60-0200-1190-8, 60-0200-1191-6, 60-0200-1192-4, 60-0200-1193-2, 60-0200-1194-0, 60-0200-1201-3, 60-0200-1203-9, 60-0200-1204-7, 60-0200-1205-4, 60-0200-1207-0, 60-0200-1214-6, 60-0200-1215-3, 60-0200-1216-1, 60-0200-1217-9, 60-0200-1222-9, 60-0200-1223-7, 60-0200-1224-5, 60-0200-1225-2, 60-0200-1226-0, 60-0200-1232-8, 60-0200-1235-1, 60-0200-1237-7, 60-0200-1263-3, 60-0200-1271-6, 60-0200-1273-2, 60-0200-1274-0, 60-0200-1275-7, 60-0200-1277-3, 60-0200-1278-1, 60-0200-1279-9, 60-0200-1280-7, 60-0200-1281-5, 60-0200-1282-3, 60-0200-1283-1, 60-0200-1284-9, 60-0200-1285-6, 60-0200-1286-4, 60-0200-1288-0, 60-0200-1289-8, 60-0200-1290-6, 60-0200-1294-8, 60-0200-1329-2, 60-0200-1450-6, 60-0200-1454-8, 60-0200-1489-4, 60-0200-1491-0, 60-0200-1500-8, 60-0200-1509-9, 60-0200-1510-7, 60-0200-1539-6, 60-0200-1545-3, 60-0200-1547-9, 60-0200-1548-7, 60-0200-1646-9, 60-0200-1647-7, 60-0200-1675-8, 60-0200-1676-6, 60-0200-1677-4, 60-0200-1692-3, 60-0200-1693-1, 60-0200-1694-9, 60-0200-1696-4, 60-0200-1708-7, 60-0200-1709-5, 60-0200-1710-3, 60-0200-1711-1, 60-0200-2160-0, 60-0700-0510-7, 60-0700-0514-9, 60-0700-0823-4, 60-0700-0824-2, 60-0700-0825-9, 60-0700-0826-7, 60-0700-0830-9, 60-0700-0831-7, 60-0700-0833-3, 60-0700-0834-1, 60-0700-0835-8, 60-0700-0837-4, 60-0700-0838-2, 60-0700-0842-4, 60-0700-0843-2, 60-0700-0844-0, 60-0700-0845-7, 60-0700-0846-5, 60-0700-0847-3, 60-0700-0848-1, 60-0700-0851-5, 60-0700-0852-3, 60-0700-0853-1, 60-0700-0855-6, 60-0700-0856-4, 60-0700-0857-2, 60-0700-0858-0, 60-0700-0862-2, 60-0700-0863-0, 60-0700-0920-8, 60-0700-0921-6, 60-0700-0922-4, 60-0700-0923-2, 60-0700-0924-0, 60-0700-0926-5, 60-0700-0927-3, 60-0700-0929-9, 60-0700-0930-7, 60-0700-0931-5, 60-0700-0932-3, 60-0700-0933-1, 60-0700-0934-9, 60-0700-0935-6, 60-0700-0936-4, 60-0700-0938-0, 60-0700-0940-6, 60-0700-0941-4, 60-0700-0942-2, 60-0700-0951-3, 60-0700-0973-7, 60-0700-0974-5, 60-0700-1023-0, 60-0700-1024-8, 60-0700-1025-5, 60-0700-1028-9, 60-0700-1029-7, 60-6500-2568-1, 60-6500-2569-9, 60-6500-2571-5, 60-6500-2572-3, 60-6500-2573-1, 60-6500-2574-9, XC-0047-0314-3, XC-0315-1394-5, XC-0315-1706-0

## 1.2. Recommended use and restrictions on use

**Recommended use**
Abrasive Product

## 1.3. Supplier's details
| | |
|---|---|
| **MANUFACTURER:** | 3M |
| **DIVISION:** | Electronics Materials Solutions Division |
| **ADDRESS:** | 3M Center, St. Paul, MN  55144-1000, USA |
| **Telephone:** | 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.
 Specific treatment (see Notes to Physician on this label).

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

**2.3. Hazards not otherwise classified**
None.

40% of the mixture consists of ingredients of unknown acute oral toxicity.

## SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | 24650-42-8 | Trade Secret * |
| 2-ETHYLHEXYL ACRYLATE | 103-11-7 | Trade Secret * |
| ACRYLIC ACID | 79-10-7 | Trade Secret * |
| DIAMOND | 7782-40-3 | Trade Secret * |
| ETHYLENE-VINYL ACETATE POLYMER | 24937-78-8 | Trade Secret * |
| POLYESTER FILM BACKING | 25038-59-9 | Trade Secret * |
| PSA | 25134-51-4 | Trade Secret * |
| TITANIUM DIOXIDE | 13463-67-7 | Trade Secret * |
| DYE (SOME PRODUCTS SUPPLIED WITHOUT DYES) | None | Trade Secret * |
| POLYMERIC RESIN (CURED) | None | 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:**
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**
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 | Condition |
|---|---|
| Carbon monoxide | During Combustion |
| Carbon dioxide | 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**
Not applicable.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
For industrial or professional use only.  Avoid breathing of dust created by sanding, grinding or machining.  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.

### 7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

## 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 |
|---|---|---|---|---|
| 2-ETHYLHEXYL ACRYLATE | 103-11-7 | Manufacturer determined | CEIL:5 ppm | Skin Notation |
| TITANIUM DIOXIDE | 13463-67-7 | ACGIH | TWA:10 mg/m3 | A4: Not class. as human carcin |
| TITANIUM DIOXIDE | 13463-67-7 | CMRG | TWA(as respirable dust):5 mg/m3 | |
| TITANIUM DIOXIDE | 13463-67-7 | OSHA | TWA(as total dust):15 mg/m3 | |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | 24650-42-8 | CMRG | TWA:10 mg/m3 | |
| POLYESTER FILM BACKING | 25038-59-9 | CMRG | TWA(as respirable dust):5 mg/m3;TWA(as total dust):10 mg/m3 | |
| ACRYLIC ACID | 79-10-7 | Manufacturer determined | STEL:5 ppm(15 mg/m3) | |
| ACRYLIC ACID | 79-10-7 | ACGIH | TWA:2 ppm | A4: Not class. as human carcin,  Skin Notation |

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**

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations.  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:
Safety Glasses with side shields

**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:  Nitrile Rubber

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 – Nitrile

**Respiratory protection**

Assess exposure concentrations of all materials involved in the work process.  Consider material being abraded when determining the appropriate respiratory protection.  Select and use appropriate respirators to prevent inhalation overexposure. 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 particulates

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

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| **General Physical Form:** | Solid |
| **Odor, Color, Grade:** | Thin film backed abrasive, color varies by grade, no odor |
| **Odor threshold** | *Not Applicable* |
| **pH** | *Not Applicable* |
| **Melting point** | *Not Applicable* |
| **Boiling Point** | *Not Applicable* |
| **Flash Point** | *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* |
| **Specific Gravity** | *No Data Available* |
| **Solubility In Water** | *Not Applicable* |
| **Solubility- non-water** | *Not Applicable* |
| **Partition coefficient: n-octanol/ water** | *Not Applicable* |
| **Autoignition temperature** | *Not Applicable* |
| **Decomposition temperature** | *Not Applicable* |
| **Percent volatile** | *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.

## 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:**
Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Skin Contact:**
Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

  Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

  Photosensitization: Signs/symptoms may include a sunburn-like reaction such as blistering, redness, swelling, and itching from minor exposure to sunlight.

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

  Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**
No health effects are expected.

**Carcinogenicity:**

| Ingredient | CAS No. | Class Description | Regulation |
| --- | --- | --- | --- |
| TITANIUM DIOXIDE | 13463-67-7 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

**Additional Information:**
This document covers only the 3M product.  For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

This product contains titanium dioxide. Cancer of the lungs has been observed in rats that inhaled high levels of titanium dioxide.  No exposure to inhaled titanium dioxide is expected during the normal handling and use of this product.  Titanium dioxide was not detected when air sampling was conducted during simulated use of similar products containing titanium dioxide. Therefore, the health effects associated with titanium dioxide are not expected during the normal use of this product.

**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 |
| POLYESTER FILM BACKING | Dermal | | LD50 estimated to be >  5,000 mg/kg |
| POLYESTER FILM BACKING | Ingestion | Rat | LD50 > 5,000 mg/kg |
| PSA | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| ETHYLENE-VINYL ACETATE POLYMER | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| ETHYLENE-VINYL ACETATE POLYMER | Ingestion | Rat | LD50 > 1,000 mg/kg |
| 2-ETHYLHEXYL ACRYLATE | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| 2-ETHYLHEXYL ACRYLATE | Ingestion | Rat | LD50  4,430 mg/kg |
| ACRYLIC ACID | Dermal | Rabbit | LD50  295 mg/kg |
| ACRYLIC ACID | Inhalation-Dust/Mist (4 hours) | Rat | LC50  3.8 mg/l |
| ACRYLIC ACID | Ingestion | Rat | LD50  1,250 mg/kg |
| TITANIUM DIOXIDE | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| TITANIUM DIOXIDE | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 6.82 mg/l |
| TITANIUM DIOXIDE | Ingestion | Rat | LD50 > 10,000 mg/kg |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Dermal | Rat | LD50 > 7,100 mg/kg |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Ingestion | Rat | LD50 > 6,000 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|------|---------|-------|
| POLYESTER FILM BACKING | Human | No significant irritation |
| ETHYLENE-VINYL ACETATE POLYMER | Professional judgement | No significant irritation |
| 2-ETHYLHEXYL ACRYLATE | Rabbit | Irritant |
| ACRYLIC ACID | Rabbit | Corrosive |
| TITANIUM DIOXIDE | Rabbit | No significant irritation |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Rabbit | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|------|---------|-------|
| POLYESTER FILM BACKING | Human | No significant irritation |
| ETHYLENE-VINYL ACETATE POLYMER | Professional judgement | No significant irritation |
| 2-ETHYLHEXYL ACRYLATE | Rabbit | No significant irritation |
| ACRYLIC ACID | Rabbit | Corrosive |
| TITANIUM DIOXIDE | Rabbit | No significant irritation |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Rabbit | No significant irritation |

**Skin Sensitization**

| Name | Species | Value |
|------|---------|-------|
| POLYESTER FILM BACKING | Human | Not sensitizing |
| 2-ETHYLHEXYL ACRYLATE | Human and animal | Sensitizing |
| ACRYLIC ACID | Guinea pig | Some positive data exist, but the data are not sufficient for classification |
| TITANIUM DIOXIDE | Human and animal | Not sensitizing |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Guinea pig | Not sensitizing |

## Photosensitization

| Name | Species | Value |
|------|---------|-------|
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Guinea pig | Sensitizing |

## 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 |
|------|-------|-------|
| POLYESTER FILM BACKING | In Vitro | Not mutagenic |
| 2-ETHYLHEXYL ACRYLATE | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| ACRYLIC ACID | In vivo | Not mutagenic |
| ACRYLIC ACID | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| TITANIUM DIOXIDE | In Vitro | Not mutagenic |
| TITANIUM DIOXIDE | In vivo | Not mutagenic |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | In Vitro | Not mutagenic |

## Carcinogenicity

| Name | Route | Species | Value |
|------|-------|---------|-------|
| 2-ETHYLHEXYL ACRYLATE | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| ACRYLIC ACID | Ingestion | Rat | Not carcinogenic |
| ACRYLIC ACID | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| TITANIUM DIOXIDE | Ingestion | Multiple animal species | Not carcinogenic |
| TITANIUM DIOXIDE | Inhalation | Rat | Carcinogenic |

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|------|-------|-------|---------|-------------|-------------------|
| 2-ETHYLHEXYL ACRYLATE | Inhalation | Not toxic to development | Rat | NOAEL 0.75 mg/l | during gestation |
| ACRYLIC ACID | Ingestion | Not toxic to female reproduction | Rat | NOAEL 460 mg/kg/day | 2 generation |
| ACRYLIC ACID | Ingestion | Not toxic to male reproduction | Rat | NOAEL 460 mg/kg/day | 2 generation |
| ACRYLIC ACID | Inhalation | Not toxic to development | Rat | NOAEL 1.1 mg/l | during organogenesis |
| ACRYLIC ACID | Ingestion | Some positive developmental data exist, but the data are not sufficient for | Rat | NOAEL 53 mg/kg/day | 2 generation |

| | | classification | | | |
|---|---|---|---|---|---|

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| 2-ETHYLHEXYL ACRYLATE | Inhalation | respiratory irritation | May cause respiratory irritation | Rat | NOAEL Not available | |
| ACRYLIC ACID | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |

### Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| POLYESTER FILM BACKING | Ingestion | heart \| skin \| endocrine system \| bone, teeth, nails, and/or hair \| hematopoietic system \| liver \| immune system \| muscles \| nervous system \| eyes \| kidney and/or bladder \| respiratory system | All data are negative | Rat | NOAEL Not available | 13 weeks |
| ETHYLENE-VINYL ACETATE POLYMER | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 4,000 mg/kg/day | 90 days |
| 2-ETHYLHEXYL ACRYLATE | Inhalation | endocrine system \| liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 0.75 mg/l | 90 days |
| 2-ETHYLHEXYL ACRYLATE | Inhalation | olfactory system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 0.08 mg/l | 90 days |
| 2-ETHYLHEXYL ACRYLATE | Inhalation | respiratory system | All data are negative | Rat | NOAEL 0.75 mg/l | 90 days |
| TITANIUM DIOXIDE | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 0.01 mg/l | 2 years |
| TITANIUM DIOXIDE | Inhalation | pulmonary fibrosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Dermal | photoirritation | All data are negative | Mouse | NOAEL Not available | not available |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 138 mg/kg/day | 3 months |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Ingestion | hematopoietic system \| kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 581 mg/kg/day | 3 months |
| 2,2-DIMETHOXY-2-PHENYLACETOPHENONE | Ingestion | auditory system \| eyes | All data are negative | Rat | NOAEL 581 mg/kg/day | 3 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.

The substrate that was abraded must be considered as a factor in the disposal method for this product.  Dispose of waste product in a permitted industrial waste facility.  As a disposal alternative, incinerate in a permitted waste incineration facility.

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

# 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.

**311/312 Hazard Categories:**

Fire Hazard - No   Pressure Hazard - No     Reactivity Hazard - No    Immediate Hazard - Yes    Delayed Hazard - Yes

## 15.2. State Regulations
 Contact 3M for more information.

**California Proposition 65**

| Ingredient | C.A.S. No. | Classification |
|---|---|---|
| Toluene | 108-88-3 | Female reproductive toxin |
| Toluene | 108-88-3 | Developmental Toxin |
| TITANIUM DIOXIDE | 13463-67-7 | Carcinogen |

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

## 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.

| Document Group: | 11-6904-4 | Version Number: | 27.03 |
| Issue Date: | 11/06/15 | Supercedes Date: | 11/06/15 |

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued.  3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE.  User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application.  Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers.  Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy.  In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

**3M USA SDSs are available at www.3M.com**