



## Safety Data Sheet

Copyright, 2022, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

<b>Document Group:</b>	18-5864-6	<b>Version Number:</b>	8.02
<b>Issue Date:</b>	10/07/22	<b>Supersedes Date:</b>	06/15/17

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Scotch-Weld™ Urethane Adhesive DP601 Gray and Urethane Adhesive 601 Gray, Part A

#### Product Identification Numbers

62-2749-8530-8, 62-2749-9530-7  
7010309749

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

##### Recommended use

Structural adhesive

#### 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 2A.

Skin Corrosion/Irritation: Category 2.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1.

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

Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Exclamation mark | Health Hazard |

**Pictograms****Hazard Statements**

Causes serious eye irritation.

Causes skin irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure:  
respiratory system |

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

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

In case of inadequate ventilation wear respiratory protection.

Wear protective gloves and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Get medical advice/attention 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.

**Supplemental Information:**

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

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

Ingredient	C.A.S. No.	% by Wt
4,4'-diphenylmethane diisocyanate	101-68-8	35 - 53 Trade Secret *
diphenylmethanediisocyanate prepolymer	68424-09-9	15 - 40 Trade Secret *
poly(diphenylmethane-4,4'-diisocyanate)	25686-28-6	25 - 40 Trade Secret *

amorphous silica

67762-90-7

1 - 5 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:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

### 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

Carbon monoxide

Carbon dioxide

Hydrogen Cyanide

Oxides of Nitrogen

Toxic Vapor, Gas, Particulate

#### Condition

During Combustion

During Combustion

During Combustion

During Combustion

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.

## SECTION 6: Accidental release measures

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

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

Contain spill. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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

For industrial/occupational use only. Not for consumer sale or use. Do not breathe 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

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. 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
4,4'-diphenylmethane diisocyanate	101-68-8	ACGIH	TWA:0.005 ppm	
4,4'-diphenylmethane diisocyanate	101-68-8	OSHA	CEIL:0.2 mg/m <sup>3</sup> (0.02 ppm)	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m <sup>3</sup>	

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:

Safety Glasses with side shields

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: Neoprene

Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. 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 - Neoprene

Apron - Nitrile

#### 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.

## SECTION 9: Physical and chemical properties

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

#### Appearance

Physical state

Liquid

Color

Milky White

#### Specific Physical Form:

Viscous

Odor

Low Odor

Odor threshold

*No Data Available*

pH

*Not Applicable*

Melting point

*No Data Available*

Boiling Point

$\geq 400$  °F

Flash Point

$\geq 290$  °F [*Test Method: Tagliabue Closed Cup*]

Evaporation rate

$\leq 1$  [*Details: Gels with exposure to humidity.*]

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

*Not Applicable*

Flammable Limits(UEL)

*Not Applicable*

Vapor Pressure

$\leq 0.000004$  mmHg [*@ 68 °F*]

Vapor Density

$\geq 1$  [*Ref Std: AIR=1*]

Density

1.11 g/ml

Specific Gravity	1.11 [Ref Std:WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	Not Applicable
Decomposition temperature	No Data Available
Viscosity	1,250 - 2,750 centipoise
Hazardous Air Pollutants	< 60 % weight [Test Method:Calculated]
Molecular weight	No Data Available
VOC Less H2O & Exempt Solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1] [Details:when used as intended with Part B]
VOC Less H2O & Exempt Solvents	0 % [Test Method:calculated SCAQMD rule 443.1] [Details:when used as intended with Part B]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1] [Details:as supplied]

## 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 is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

### 10.5. Incompatible materials

Water  
Strong acids  
Strong bases

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

May cause additional health effects (see below).

**Skin Contact:**

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

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

**Eye Contact:**

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

**Ingestion:**

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

**Additional Health Effects:****Prolonged or repeated exposure may cause target organ effects:**

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

**Additional Information:**

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

**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	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
4,4'-diphenylmethane diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-diphenylmethane diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-diphenylmethane diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
poly(diphenylmethane-4,4'-diisocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
poly(diphenylmethane-4,4'-diisocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
amorphous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
amorphous silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
amorphous silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official	Irritant

	classification	
poly(diphenylmethane-4,4'-diisocyanate)	official classification	Irritant
amorphous silica	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official classification	Severe irritant
poly(diphenylmethane-4,4'-diisocyanate)	official classification	Severe irritant
amorphous silica	Rabbit	No significant irritation

**Skin Sensitization**

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official classification	Sensitizing
poly(diphenylmethane-4,4'-diisocyanate)	official classification	Sensitizing
amorphous silica	Human and animal	Not classified

**Respiratory Sensitization**

Name	Species	Value
4,4'-diphenylmethane diisocyanate	Human	Sensitizing
poly(diphenylmethane-4,4'-diisocyanate)	Human	Sensitizing

**Germ Cell Mutagenicity**

Name	Route	Value
4,4'-diphenylmethane diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
poly(diphenylmethane-4,4'-diisocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
amorphous silica	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
4,4'-diphenylmethane diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
amorphous silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
4,4'-diphenylmethane diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis



poly(diphenylmethane-4,4'-diisocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
amorphous silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
amorphous silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
amorphous silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-diphenylmethane diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-diphenylmethane diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
amorphous silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure

### 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.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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:

##### Physical Hazards

Not applicable

##### Health Hazards

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Skin Corrosion or 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>
4,4'-diphenylmethane diisocyanate	101-68-8	Trade Secret 35 - 53
4,4'-diphenylmethane diisocyanate (Benzene, 1,1'-methylenebis[4-isocyanato-)	101-68-8	Trade Secret 35 - 53
4,4'-diphenylmethane diisocyanate (DIISOCYANATES (CERTAIN CHEMICALS ONLY))	101-68-8	Trade Secret 35 - 53

### 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:** 2 **Flammability:** 1 **Instability:** 1 **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.

<b>Document Group:</b>	18-5864-6	<b>Version Number:</b>	8.02
<b>Issue Date:</b>	10/07/22	<b>Supersedes Date:</b>	06/15/17

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](http://www.3M.com)**