

Safety Data Sheet

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 18-0246-1
 Version Number:
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 Issue Date:
 04/16/15
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 09/26/06

Product identifier

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black

ID Number(s):

62-2645-5030-2, 62-2645-5035-1

Recommended use

Structural adhesive

Supplier's details

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA

Telephone: 1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

18-0364-2, 18-0391-5

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3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black 04/16/15

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 Document Group:
 18-0391-5
 Version Number:
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 Issue Date:
 04/16/15
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 07/01/11

SECTION 1: Identification

1.1. Product identifier

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part B

Product Identification Numbers

62-2645-8530-8, 62-2645-9530-7

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive

1.3. Supplier's details

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes 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)

Formerly known as DYNAMixTM Sheet Metal Bonding Adhesive 6188-1.

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 1. Skin Corrosion/Irritation: Category 2. Skin Sensitizer: Category 1A.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark |

Pictograms

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Hazard Statements

Causes serious eye damage.

Causes skin irritation.

May cause an allergic skin reaction.

Precautionary Statements

Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves and eye/face protection.

Wash thoroughly after handling.

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

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

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

Immediately call a POISON CENTER or doctor/physician.

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

Take off contaminated clothing and wash it before reuse.

Disposal:

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

2.3. Hazards not otherwise classified

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

2% of the mixture consists of ingredients of unknown acute oral toxicity.

14% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
polyether polyol	9082-00-2	20 - 50 Trade Secret *
propoxylated trimethylolpropane	25723-16-4	15 - 40 Trade Secret *
amorphous silica	7631-86-9	1 - 10 Trade Secret *
1-4-cyclohexanedimethanol	105-08-8	1 - 10 Trade Secret *
aluminum oxide	1344-28-1	0.1 - 5 Trade Secret *
calcium oxide	1305-78-8	0.1 - 5 Trade Secret *
isophorone diamine	2855-13-2	0.1 - 5 Trade Secret *
potassium oxide	12136-45-7	0.1 - 5 Trade Secret *
sodium oxide	1313-59-3	<= 1 Trade Secret *
m-xylenealpha.alpha'diamine	1477-55-0	<= 0.5 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 for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

SubstanceConditionCarbon monoxideDuring CombustionCarbon dioxideDuring CombustionOxides of NitrogenDuring 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. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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. 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 closed container approved for transportation by appropriate authorities. 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. Seal the container. Dispose of collected material as soon as possible.

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. 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 acids. 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
calcium oxide	1305-78-8	ACGIH	TWA:2 mg/m3	
calcium oxide	1305-78-8	OSHA	TWA:5 mg/m3	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
aluminum oxide	1344-28-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
aluminum oxide	1344-28-1	CMRG	TWA:1 fiber/cc	
m-xylenealpha.alpha'diamine	1477-55-0	ACGIH	CEIL:0.1 mg/m3	Skin Notation
amorphous silica	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m3	
SILICA, AMORPHOUS	7631-86-9	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

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

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3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part B 04/16/15

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:

Full Face Shield

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

Fluoroelastomer Polyvinyl Chloride

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 – Butyl 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:

Specific Physical Form:

Viscous

Odor, Color, Grade: Slight ammonia like odor, milky white.

Odor thresholdNo Data AvailablepHNot ApplicableMelting pointNo Data Available

Boiling Point >=390 °F

Flash Point >=290 °F [Test Method: Tagliabue Closed Cup]

Evaporation rate <=1 [*Ref Std:* WATER=1]

Flammability (solid, gas)

Flammable Limits(LEL)

Flammable Limits(UEL)

Vapor Pressure

Vapor Density

Not Applicable

Not Applicable

Not Applicable

Not Applicable

Not Applicable

Density 1.054 g/ml

Specific Gravity 1.0 - 1.2 [Ref Std: WATER=1]

Solubility in WaterNegligibleSolubility- non-waterNo Data AvailablePartition coefficient: n-octanol/ waterNo Data AvailableAutoignition temperatureNot ApplicableDecomposition temperatureNo Data AvailableViscosity4,000 - 5,000 centipoise

Hazardous Air Pollutants 0 % weight [Test Method: Calculated]

VOC Less H2O & Exempt Solvents 0 g/l [Test Method: calculated SCAQMD rule 443.1] [Details:

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when used as intended with Part A]

VOC Less H2O & Exempt Solvents 32 g/l [*Test Method:* calculated SCAQMD rule 443.1] [*Details:*

as supplied]

VOC Less H2O & Exempt Solvents 0 % [*Test Method:* calculated SCAQMD rule 443.1] [*Details:*

when used as intended with Part A]

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

None known.

10.5. Incompatible materials

Strong acids Strong oxidizing agents

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:

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

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:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

May be harmful if swallowed.

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

Additional Information:

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

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	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000
			mg/kg
polyether polyol	Dermal	Rabbit	LD50 > 5,000 mg/kg
polyether polyol	Ingestion	Rat	LD50 > 10,000 mg/kg
propoxylated trimethylolpropane	Dermal	Rat	LD50 > 2,000 mg/kg
propoxylated trimethylolpropane	Ingestion	Rat	LD50 > 2,500 mg/kg
amorphous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
amorphous silica	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
amorphous silica	Ingestion	Rat	LD50 > 5,110 mg/kg
aluminum oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
aluminum oxide	Inhalation-	Rat	LC50 > 2.3 mg/l
	Dust/Mist		
	(4 hours)		
aluminum oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
isophorone diamine	Dermal	Rat	LD50 > 2,000 mg/kg
isophorone diamine	Inhalation-	Rat	LC50 estimated to be 1 - 5 mg/l
	Dust/Mist		
	(4 hours)		
isophorone diamine	Ingestion	Rat	LD50 1,030 mg/kg
sodium oxide	Ingestion		LD50 estimated to be 50 - 300 mg/kg
calcium oxide	Ingestion	Rat	LD50 > 2,500 mg/kg
m-xylenealpha.alpha'diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-xylenealpha.alpha'diamine	Inhalation-	Rat	LC50 1.2 mg/l
	Dust/Mist	1	
	(4 hours)		
m-xylenealpha.alpha'diamine	Ingestion	Rat	LD50 980 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
propoxylated trimethylolpropane	Rabbit	No significant irritation
amorphous silica	Rabbit	No significant irritation
aluminum oxide	Rabbit	No significant irritation
isophorone diamine	official	Corrosive
	classifica	
	tion	
calcium oxide	Human	Corrosive
m-xylenealpha.alpha'diamine	Rat	Corrosive

Serious Eve Damage/Irritation

20110 di 2 2 di 11 di 10 di		
Name	Species	Value

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part B 04/16/15

propoxylated trimethylolpropane	Rabbit	Mild irritant
amorphous silica	Rabbit	No significant irritation
aluminum oxide	Rabbit	No significant irritation
isophorone diamine	Rabbit	Corrosive
calcium oxide	Rabbit	Corrosive
m-xylenealpha.alpha'diamine	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
amorphous silica	Human	Not sensitizing
	and	
	animal	
isophorone diamine	Guinea	Sensitizing
	pig	
m-xylenealpha.alpha'diamine	Guinea	Sensitizing
	pig	

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
amorphous silica	In Vitro	Not mutagenic
aluminum oxide	In Vitro	Not mutagenic
isophorone diamine	In Vitro	Not mutagenic
isophorone diamine	In vivo	Not mutagenic
calcium oxide	In Vitro	Not mutagenic
m-xylenealpha.alpha'diamine	In Vitro	Not mutagenic
m-xylenealpha.alpha'diamine	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
amorphous silica	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
aluminum oxide	Inhalation	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
amorphous silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
amorphous silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
amorphous silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
isophorone diamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 160 mg/kg/day	90 days
isophorone diamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 160 mg/kg/day	90 days
isophorone diamine	Ingestion	Not toxic to development	Rat	NOAEL 250 mg/kg/day	during gestation
m-xylenealpha.alpha'diamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 450 mg/kg/day	1 generation
m-xylenealpha.alpha'diamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 450 mg/kg	1 generation
m-xylenealpha.alpha'diamine	Ingestion	Not toxic to development	Rat	NOAEL 450 mg/kg/day	1 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
isophorone diamine	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	LOAEL 0.002 mg/l	2 weeks
calcium oxide	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	occupational exposure
m-xylenealpha.alpha' diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not avaliable	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
amorphous silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
aluminum oxide	Inhalation	pneumoconiosis pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
isophorone diamine	Ingestion	hematopoietic system liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 160 mg/kg/day	13 weeks
m-xylenealpha.alpha' diamine	Ingestion	endocrine system blood bone marrow	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	28 days

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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. 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

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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.

311/312 Hazard Categories:

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

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>	% by Wt
aluminum oxide	1344-28-1	0.1 - 5
aluminum oxide (ALUMINUM OXIDE	1344-28-1	0.1 - 5
(FIBROUS FORMS ONLY))		

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.

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: 3 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.

Document Group: 18-0391-5 **Version Number:** 11.00 **Issue Date:** 04/16/15 07/01/11 **Supercedes Date:**

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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.

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18-0364-2 **Version Number: Document Group:** 13.00 **Issue Date:** 11/11/15 **Supercedes Date:** 10/27/15

SECTION 1: Identification

1.1. Product identifier

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A

Product Identification Numbers

62-2745-8530-6

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive

1.3. Supplier's details

MANUFACTURER:

DIVISION: Industrial Adhesives and Tapes 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)

Formerly known as DYNAMixTM Sheet Metal Bonding Adhesive 6188-1.

SECTION 2: Hazard identification

2.1. Hazard classification

Acute Toxicity (inhalation): Category 4. Serious Eye Damage/Irritation: Category 2A. Skin Corrosion/Irritation: Category 2. Respiratory Sensitizer: Category 1. Skin Sensitizer: Category 1.

Specific Target Organ Toxicity (respiratory irritation): 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.

Harmful if inhaled.

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.

2.3. Hazards not otherwise classified

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

SECTION 3: Composition/information on ingredients

D A 6 11

Ingredient	C.A.S. No.	% by Wt
4,4'-diphenylmethane diisocyanate	101-68-8	30 - 60 Trade Secret *
diphenylmethanediisocyanate prepolymer	68424-09-9	15 - 40 Trade Secret *
poly(diphenylmethane-4,4'-diisocyanate)	25686-28-6	15 - 40 Trade Secret *
silane ester derivative	24801-88-5	<= 1 Trade Secret *
carbon black	1333-86-4	<= 0.5 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

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
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

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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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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. 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
FREE ISOCYANATES	101-68-8	Manufacturer	TWA:0.005 ppm;STEL:0.02	
		determined	ppm	
4,4'-diphenylmethane	101-68-8	ACGIH	TWA:0.005 ppm	
diisocyanate				
4,4'-diphenylmethane	101-68-8	OSHA	CEIL:0.2 mg/m3(0.02 ppm)	
diisocyanate				
carbon black	1333-86-4	OSHA	TWA:3.5 mg/m3	
carbon black	1333-86-4	CMRG	TWA:0.5 mg/m3	
carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3	A3: Confirmed animal
			mg/m3	carcin.

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

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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

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

Nitrile Rubber

Natural 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form: Specific Physical Form: Viscous

Low or no detectable odor, black. Odor, Color, Grade:

Odor threshold No Data Available pН Not Applicable No Data Available **Melting point**

Boiling Point $>=400 \, {}^{\circ}F$

Flash Point >=290 °F [Test Method: Tagliabue Closed Cup] **Evaporation rate** <=1 [Details: Gels with exposure to humidity.]

Flammability (solid, gas) Not Applicable Flammable Limits(LEL) Not Applicable Flammable Limits(UEL) Not Applicable

Vapor Pressure <=0.000004 mmHg [@ 68 °F]

Vapor Density >=1 [*Ref Std:* AIR=1]

Density 1.11 g/ml

Specific Gravity 1.11 [*Ref Std:* WATER=1]

Solubility in Water Negligible

No Data Available Solubility- non-water No Data Available Partition coefficient: n-octanol/ water

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A 11/11/15

Autoignition temperatureNot ApplicableDecomposition temperatureNo Data AvailableViscosity2,400 - 3,700 centipoise

Hazardous Air Pollutants <= 60 % weight [*Test Method*: Calculated]

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 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: as

supplied]

VOC Less H2O & Exempt Solvents 0 % [*Test Method:* calculated SCAQMD rule 443.1] [*Details:*

when used as intended with Part B]

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

None known.

10.5. Incompatible materials

Water

Strong acids

Strong bases

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:

Harmful if inhaled.

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

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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.

Carcinogenicity:

<u>Ingredient</u>	CAS No.	Class Description	Regulation
carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

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	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation- Vapor(4 hr)		No data available; calculated ATE 10 - 20 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
4,4'-diphenylmethane diisocyanate	Inhalation- Vapor		LC50 estimated to be 10 - 20 mg/l
4,4'-diphenylmethane diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-diphenylmethane diisocyanate	Inhalation- Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l
4,4'-diphenylmethane diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation- Vapor		LC50 estimated to be 10 - 20 mg/l
poly(diphenylmethane-4,4'-diisocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation- Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l
poly(diphenylmethane-4,4'-diisocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
silane ester derivative	Dermal	Rabbit	LD50 1,259 mg/kg
silane ester derivative	Inhalation- Vapor (4 hours)	Rat	LC50 0.36 mg/l

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A 11/11/15

silane ester derivative	Ingestion	Rat	LD50 706 mg/kg
carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official	Irritant
	classifica	
	tion	
poly(diphenylmethane-4,4'-diisocyanate)	official	Irritant
	classifica	
	tion	
silane ester derivative	Rabbit	Corrosive
carbon black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official classifica tion	Severe irritant
poly(diphenylmethane-4,4'-diisocyanate)	official classifica tion	Severe irritant
silane ester derivative	Rabbit	Corrosive
carbon black	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official	Sensitizing
	classifica	
	tion	
poly(diphenylmethane-4,4'-diisocyanate)	official	Sensitizing
	classifica	
	tion	
silane ester derivative	similar	Sensitizing
	compoun	
	ds	

Respiratory Sensitization

Name	Species	Value
4,4'-diphenylmethane diisocyanate	Human	Sensitizing
poly(diphenylmethane-4,4'-diisocyanate)	Human	Sensitizing
silane ester derivative	similar	Sensitizing
	compoun	
	ds	

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
carbon black	In Vitro	Not mutagenic
carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name Route Species Value

3M(TM) Scotch-Weld(TM) Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A 11/11/15

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
carbon black	Dermal	Mouse	Not carcinogenic
carbon black	Ingestion	Mouse	Not carcinogenic
carbon black	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
4,4'-diphenylmethane diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesi s
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesi s

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

specific ranger organ		epeatea 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
carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	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

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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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. 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.

311/312 Hazard Categories:

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

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

Ingredient C.A.S. No % by Wt 4,4'-diphenylmethane diisocyanate 101-68-8 (DIISOCYANATES (CERTAIN CHEMICALS ONLY))

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.

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

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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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