Safety Data Sheet

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Document Group:	18-0246-1	**Version Number:**	7.01
Issue Date:	07/05/23	**Supercedes Date:**	07/25/19

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

ID Number(s):

62-2645-5030-2, 62-2645-5031-0, 62-2645-5035-1, 62-2645-5037-7

7000046373, 7010330184, 7100148737, 7100148739

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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Safety Data Sheet

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Document Group:	18-0364-2	**Version Number:**	18.04
Issue Date:	06/07/22	**Supercedes Date:**	11/23/21

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A

Product Identification Numbers

ID Number	UPC	ID Number	UPC
62-2745-8530-6		62-2745-8531-4	
62-2745-9531-3			

7010329537, 7010301034

1.2. Recommended use and restrictions on use

Recommended use
Two-part urethane adhesive/sealant., Structural adhesive

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

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 DYNAMix™ Sheet Metal Bonding Adhesive 6188-1.

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
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	30 - 60 Trade Secret *
4,4'-Diisocyanatodiphenylmethane polymer	25686-28-6	15 - 40 Trade Secret *
Diphenylmethanediisocyanate prepolymer	68424-09-9	15 - 40 Trade Secret *
Silane ester derivative	24801-88-5	<= 1 Trade Secret *
Carbon Black	1333-86-4	<= 0.5 Trade Secret *
Chromium Compound 1	71701-12-7	< 0.3 Trade Secret *
Chromium Compound 2	74421-71-9	< 0.1 Trade Secret *
Chromium Compound 3	71839-90-2	< 0.1 Trade Secret *
Chromium	7440-47-3	< 0.02 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	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

Oxides of Chromium	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	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
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	
P,P'-Methylenebis(phenyl	101-68-8	OSHA	CEIL:0.2 mg/m3(0.02 ppm)	

isocyanate)				
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
CHROMIUM (III) COMPOUNDS	71701-12-7	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m3;TWA(as Cr):0.5 mg/m3	A4: Not class. as human carcin
CHROMIUM (III) COMPOUNDS	71701-12-7	OSHA	TWA(as Cr):0.5 mg/m3	
CHROMIUM (III) COMPOUNDS	71839-90-2	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m3;TWA(as Cr):0.5 mg/m3	A4: Not class. as human carcin
CHROMIUM (III) COMPOUNDS	71839-90-2	OSHA	TWA(as Cr):0.5 mg/m3	
Chromium	7440-47-3	ACGIH	TWA(as Cr(0), inhalable fraction):0.5 mg/m3	
Chromium	7440-47-3	OSHA	TWA(as Cr):1 mg/m3	
CHROMIUM (III) COMPOUNDS	74421-71-9	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m3;TWA(as Cr):0.5 mg/m3	A4: Not class. as human carcin
CHROMIUM (III) COMPOUNDS	74421-71-9	OSHA	TWA(as Cr):0.5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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

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	Black
Specific Physical Form:	Viscous
Odor	Low Odor
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	>=400 ºF
Flash Point	>=290 ºF [*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 ºF]
Vapor Density	>=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	2,400 - 3,700 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 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:
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.

Carcinogenicity:

Ingredient	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	Ingestion		No data available; calculated ATE >5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
P,P'-Methylenebis(phenyl isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
4,4'-Diisocyanatodiphenylmethane polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-Diisocyanatodiphenylmethane polymer	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-Diisocyanatodiphenylmethane polymer	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
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
P,P'-Methylenebis(phenyl isocyanate)	official classification	Irritant
4,4'-Diisocyanatodiphenylmethane polymer	official classification	Irritant
Silane ester derivative	Rabbit	Corrosive
Carbon Black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	official classification	Severe irritant
4,4'-Diisocyanatodiphenylmethane polymer	official classification	Severe irritant
Silane ester derivative	Rabbit	Corrosive
Carbon Black	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	official classifica	Sensitizing

	tion	
4,4'-Diisocyanatodiphenylmethane polymer	official classification	Sensitizing
Silane ester derivative	similar compounds	Sensitizing

Respiratory Sensitization

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Human	Sensitizing
4,4'-Diisocyanatodiphenylmethane polymer	Human	Sensitizing
Silane ester derivative	similar compounds	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value
P,P'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-Diisocyanatodiphenylmethane polymer	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
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
4,4'-Diisocyanatodiphenylmethane polymer	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
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
4,4'-Diisocyanatodiphenylmethane polymer	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
4,4'-Diisocyanatodiphenylmethane polymer	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
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
4,4'-Diisocyanatodiphenylmethane polymer	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Carbon Black	Inhalation	pneumoconiosis	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.

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):

Ingredient	C.A.S. No	% by Wt
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Trade Secret 30 - 60
P,P'-Methylenebis(phenyl isocyanate) (Benzene, 1,1'-methylenebis[4-isocyanato-)	101-68-8	Trade Secret 30 - 60
P,P'-Methylenebis(phenyl isocyanate) (DIISOCYANATES (CERTAIN CHEMICALS ONLY))	101-68-8	Trade Secret 30 - 60

Additional TSCA Information
This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

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.

Document Group:	18-0364-2	**Version Number:**	18.04
Issue Date:	06/07/22	**Supercedes Date:**	11/23/21

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Document Group:	18-0391-5	**Version Number:**	15.06
Issue Date:	09/01/26	**Supersedes Date:**	07/05/23

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part B

Product Identification Numbers
62-2645-8530-8, 62-2645-8531-6, 62-2645-9530-7, 62-2645-9531-5
7010367262, 7010309744

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 DYNAMix™ Sheet Metal Bonding Adhesive 6188-1.

SECTION 2: Hazard identification

2.1. Hazard classification
Skin Corrosion/Irritation: Category 1C.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Corrosion |Exclamation mark |

Pictograms



Hazard Statements

Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Precautionary statements

Prevention:
Do not breathe fumes.
Wash exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye protection, and face protection.

Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES OR ON SKIN (or hair): Immediately call a POISON CENTER or doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.

Storage:
Store locked up.

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

2.3. Hazards not otherwise classified
May cause chemical gastrointestinal burns.

Supplemental Information:
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.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polyether Polyol	9082-00-2	20 - 50 Trade Secret *
Polyol (NJTSRN 04499600-7463)	Trade Secret*	15 - 40 Trade Secret *
1,4-Cyclohexanedimethanol	105-08-8	1 - 10 Trade Secret *
Amorphous Silica	7631-86-9	1 - 10 Trade Secret *
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	1 - 7 Trade Secret *
Aluminum Oxide	1344-28-1	0.1 - 5 Trade Secret *
Isophorone Diamine	2855-13-2	0.1 - 5 Trade Secret *

Potassium Oxide	12136-45-7	< 3 Trade Secret *
Calcium Oxide	1305-78-8	< 3 Trade Secret *
Sodium Oxide	1313-59-3	<= 1.5 Trade Secret *
m-xylene-.alpha.alpha'.-diamine	1477-55-0	<= 0.5 Trade Secret *
BHT	128-37-0	< 0.5 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

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. Do not induce vomiting. Get immediate medical attention.

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

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

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
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	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
Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. 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.

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 in accordance with applicable local/regional/national/international regulations.

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. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store away from 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
BHT	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m3	A4: Not class. as human carcin
Calcium Oxide	1305-78-8	ACGIH	TWA:2 mg/m3	
Calcium Oxide	1305-78-8	OSHA	TWA:5 mg/m3	
Aluminum metal and insoluble compounds, respirable fraction	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	

Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	1344-28-1	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	1344-28-1	ACGIH	TWA(respirable particles):3 mg/m3	
m-xylene-.alpha.alpha'.-diamine	1477-55-0	ACGIH	CEIL:0.018 ppm	Danger of cutaneous absorption
Silica: Amorphous, including natural diatomaceous earth	67762-90-7	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3	
Inert or Nuisance Dust, Respirable fraction	7631-86-9	OSHA	TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m3);TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m3)	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	7631-86-9	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	7631-86-9	ACGIH	TWA(respirable particles):3 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

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

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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

Physical state	Liquid
Specific Physical Form:	Viscous
Color	Milky White
Odor	Slight Ammoniacal
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	>=390 ºF
Flash Point	>=290 ºF [*Test Method:*Tagliabue Closed Cup]
Evaporation rate	<=1 [*Ref Std:*WATER=1]
Flammability	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Relative Vapor Density	>=1 [*Ref Std:*AIR=1]
Density	1.054 g/ml
Relative Density	1 - 1.2 [*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*
Kinematic Viscosity	4,269 mm2/sec
Hazardous Air Pollutants	0 % 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 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]
Particle Characteristics	*Not Applicable*

SECTION 10: Stability and reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
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:
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction. 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 Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

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	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Polyether Polyol	Dermal	similar compounds	LD50 > 2,000 mg/kg
Polyether Polyol	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 3.2 mg/l
Polyether Polyol	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Polyol (NJTSRN 04499600-7463)	Dermal	Rat	LD50 > 2,000 mg/kg
Polyol (NJTSRN 04499600-7463)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Polyol (NJTSRN 04499600-7463)	Ingestion	Rat	LD50 4,600 mg/kg
1,4-Cyclohexanedimethanol	Dermal	Rat	LD50 > 2,000 mg/kg
1,4-Cyclohexanedimethanol	Ingestion	Rat	LD50 > 2,000 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
Aluminum Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminum Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Isophorone Diamine	Dermal	Rat	LD50 > 2,000 mg/kg
Isophorone Diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 estimated to be 1 - 5 mg/l
Isophorone Diamine	Ingestion	Rat	LD50 1,030 mg/kg
Sodium Oxide	Ingestion	Professional judgement	LD50 estimated to be 50 - 300 mg/kg
Calcium Oxide	Ingestion	Rat	LD50 > 2,500 mg/kg
Calcium Oxide	Dermal	similar compounds	LD50 > 2,500 mg/kg
m-xylene-.alpha.alpha'.-diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-xylene-.alpha.alpha'.-diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.2 mg/l
m-xylene-.alpha.alpha'.-diamine	Ingestion	Rat	LD50 980 mg/kg
BHT	Dermal	Rat	LD50 > 2,000 mg/kg
BHT	Ingestion	Rat	LD50 > 2,930 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polyether Polyol	similar compounds	Minimal irritation
Polyol (NJTSRN 04499600-7463)	Rabbit	No significant irritation

1,4-Cyclohexanedimethanol	Rabbit	No significant irritation
Amorphous Silica	Rabbit	No significant irritation
Aluminum Oxide	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Isophorone Diamine	official classification	Corrosive
Potassium Oxide	official classification	Corrosive
Calcium Oxide	Human	Corrosive
Sodium Oxide	similar compounds	Corrosive
m-xylene-.alpha.alpha'.-diamine	Rat	Corrosive
BHT	Human and animal	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polyether Polyol	similar compounds	Mild irritant
Polyol (NJTSRN 04499600-7463)	Rabbit	Mild irritant
1,4-Cyclohexanedimethanol	Rabbit	Corrosive
Amorphous Silica	Rabbit	No significant irritation
Aluminum Oxide	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Isophorone Diamine	Rabbit	Corrosive
Potassium Oxide	similar health hazards	Corrosive
Calcium Oxide	Rabbit	Corrosive
Sodium Oxide	similar compounds	Corrosive
m-xylene-.alpha.alpha'.-diamine	Rabbit	Corrosive
BHT	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Polyether Polyol	similar compounds	Not classified
1,4-Cyclohexanedimethanol	Guinea pig	Not classified
Amorphous Silica	Human and animal	Not classified
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
Isophorone Diamine	Guinea pig	Sensitizing
m-xylene-.alpha.alpha'.-diamine	Guinea pig	Sensitizing
BHT	Human	Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Polyether Polyol	In Vitro	Not mutagenic
1,4-Cyclohexanedimethanol	In Vitro	Not mutagenic
1,4-Cyclohexanedimethanol	In vivo	Not mutagenic
Amorphous Silica	In Vitro	Not mutagenic
Aluminum Oxide	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Isophorone Diamine	In Vitro	Not mutagenic
Calcium Oxide	In Vitro	Not mutagenic
m-xylene-.alpha.alpha'.-diamine	In Vitro	Not mutagenic
m-xylene-.alpha.alpha'.-diamine	In vivo	Not mutagenic
BHT	In Vitro	Not mutagenic
BHT	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Amorphous Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Aluminum Oxide	Inhalation	Rat	Not carcinogenic
Siloxanes and Silicones, di-Me, reaction products with silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
BHT	Ingestion	Multiple animal species	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
1,4-Cyclohexanedimethanol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,360 mg/kg/day	premating into lactation
1,4-Cyclohexanedimethanol	Ingestion	Not classified for male reproduction	Rat	NOAEL 479 mg/kg/day	91 days
1,4-Cyclohexanedimethanol	Ingestion	Not classified for development	Rat	NOAEL 854 mg/kg/day	premating into lactation
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
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Isophorone Diamine	Ingestion	Not classified for development	Rat	NOAEL 250 mg/kg/day	during gestation
m-xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
m-xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	48 days
m-xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	premating into lactation
BHT	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
BHT	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
BHT	Ingestion	Not classified for development	Rat	NOAEL 100	2 generation

				mg/kg/day	

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1,4-Cyclohexanedimethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Isophorone Diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	
Potassium Oxide	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Calcium Oxide	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	occupational exposure
Sodium Oxide	Inhalation	respiratory irritation	May cause respiratory irritation	Professional judgement	NOAEL Not available	
m-xylene-.alpha.alpha'.-diamine	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not avaliable	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1,4-Cyclohexanedimethanol	Ingestion	heart	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
1,4-Cyclohexanedimethanol	Ingestion	immune system	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
1,4-Cyclohexanedimethanol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
1,4-Cyclohexanedimethanol	Ingestion	endocrine system	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
1,4-Cyclohexanedimethanol	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
1,4-Cyclohexanedimethanol	Ingestion	liver	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
1,4-Cyclohexanedimethanol	Ingestion	nervous system	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
1,4-Cyclohexanedimethanol	Ingestion	eyes	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
Amorphous Silica	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Amorphous Silica	Inhalation	silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Aluminum Oxide	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminum Oxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Isophorone Diamine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 160 mg/kg/day	13 weeks
Isophorone Diamine	Ingestion	liver	Not classified	Rat	NOAEL 160 mg/kg/day	13 weeks
Isophorone Diamine	Ingestion	kidney and/or	Not classified	Rat	NOAEL 160	13 weeks

		bladder			mg/kg/day	
m-xylene-.alpha.alpha'.-diamine	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.005 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	heart	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	skin	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	liver	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	immune system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	muscles	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	nervous system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	eyes	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Inhalation	vascular system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-xylene-.alpha.alpha'.-diamine	Ingestion	endocrine system	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-xylene-.alpha.alpha'.-diamine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-xylene-.alpha.alpha'.-diamine	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 150 mg/kg/day	28 days
m-xylene-.alpha.alpha'.-diamine	Ingestion	heart	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-xylene-.alpha.alpha'.-diamine	Ingestion	liver	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-xylene-.alpha.alpha'.-diamine	Ingestion	immune system	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-xylene-.alpha.alpha'.-diamine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
BHT	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	28 days
BHT	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 500 mg/kg/day	2 generation
BHT	Ingestion	blood	Not classified	Rat	LOAEL 420 mg/kg/day	40 days
BHT	Ingestion	endocrine system	Not classified	Rat	NOAEL 25 mg/kg/day	2 generation
BHT	Ingestion	heart	Not classified	Mouse	NOAEL 3,480 mg/kg/day	10 weeks

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

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

SECTION 12: Ecological information

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

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

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
Hazard Not Otherwise Classified (HNOC)
Respiratory or Skin Sensitization
Serious eye damage or eye irritation
Skin Corrosion or Irritation

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
Aluminum Oxide	1344-28-1	Trade Secret 0.1 - 5

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: 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:**	15.06
Issue Date:	09/01/26	**Supersedes Date:**	07/05/23

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