MATERIAL SAFETY
DATA SHEET

3M

3M Center

St. Paul, Minnesota

55144-1000

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

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DIVISION: ENGINEERED ADHESIVES

TRADE NAME:

Scotch-Weld(TM) Urethane Adhesive DP-605NS Off-White

ID NUMBER/U.P.C.:

ISSUED: May 29, 2001

SUPERSEDES: December 12, 2000

DOCUMENT: 11-2406-4

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

11-2404-9 11-2405-6

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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DIVISION: ENGINEERED ADHESIVES

TRADE NAME:

Scotch-Weld(TM) Urethane Adhesive DP-605NS Off-White (Part B)

ISSUED: May 29, 2001

SUPERSEDES: December 12, 2000

DOCUMENT: 11-2404-9

1. INGREDIENT	C.A.S. NO.	P	PERCENT		
CASTOR OIL POLYESTER RESIN - N.J. TRADE SECRET	8001-79-4	40.0	- 70.0		
(T.S.) REGISTRY NO. 3176530002-5392P++	TradeSecret	10.0	- 30.0		
POLYPROPYLENE GLYCOL	25322-69-4	10.0	- 30.0		
AMORPHOUS SILICA	7631-86-9	5.0	- 10.0		
TITANIUM DIOXIDE	13463-67-7	1.0	- 5.0		
POLYOXYPROPYLENE TRIOL	25723-16-4	1.0	- 5.0		
WATER	7732-18-5	1.0	- 5.0		

The components of this product are in compliance with the chemical notification requirements of TSCA. All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Polyester Resin (Trade Secret) is a 3M Supplier Trade Secret. Exact composition is unknown to 3M.

2. PHYSICAL DATA

VISCOSITY:..... Thixotropic paste

MSDS: Scotch-Weld(TM) Urethane Adhesive DP-605NS Off-White (Part B) May 29, 2001 PAGE 2
2. PHYSICAL DATA (continued)
MELTING POINT:
APPEARANCE AND ODOR: heavy paste, white, no odor
3. FIRE AND EXPLOSION HAZARD DATA
FLASH POINT:
EXTINGUISHING MEDIA: Water spray, Carbon dioxide, Dry chemical, Foam
SPECIAL FIRE FIGHTING PROCEDURES: 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.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.
NFPA HAZARD CODES: HEALTH: 1 FIRE: 0 REACTIVITY: 1 UNUSUAL REACTION HAZARD: none
4. REACTIVITY DATA
STABILITY: Stable
INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID: Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke.
HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide and Carbon Dioxide, Oxides of Nitrogen, Toxic Vapors, Gases or Particulates.

MSDS: Scotch-Weld(TM) Urethane Adhesive DP-605NS Off-White (Part B) May 29, 2001

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5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Cover with absorbent material. Collect spilled material. Place in a U.S. DOT-approved container.

RECOMMENDED DISPOSAL:

Cure product according to product instructions. Incinerate in an industrial or commercial facility in the presence of a combustible material. Dispose of completely cured (or polymerized) material in a sanitary landfill. Dispose of waste product in a facility permitted to accept chemical waste.

ENVIRONMENTAL DATA:

Not applicable.

REGULATORY INFORMATION:

Volatile Organic Compounds: 17 gms/liter. VOC Less H2O & Exempt Solvents: 17 gms/liter.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

EPCRA HAZARD CLASS:

FIRE HAZARD: NO PRESSURE: NO REACTIVITY: NO ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

Flush skin with large amounts of water. If irritation persists, get medical attention.

INHALATION:

If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:

Do not induce vomiting. Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact. Wear vented goggles. Wear safety glasses with side shields.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: polyethylene/ethylene vinyl alcohol, polyvinyl alcohol, polytetrafluoroethylene (Teflon), fluoroelastomer (Viton).

RECOMMENDED VENTILATION:

Use in a well-ventilated area. Provide sufficient ventilation to maintain emissions below recommended exposure limits. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:

Avoid breathing of vapors created during the cure cycle. Avoid breathing of dust created by cutting, sanding or grinding. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: half-mask dust respirator.

PREVENTION OF ACCIDENTAL INGESTION:

Do not ingest.

RECOMMENDED STORAGE:

Store at temperatures below 120 degrees F (49 degrees C). Keep container closed when not in use. Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:

Keep container tightly closed.

OTHER PRECAUTIONARY INFORMATION:

When this PART B is used in combination with PART A (DP-605 NS) follow the precautions outlined in the PART A (DP-605 NS) Material Safety Data Sheet. When grinding or sanding the cured material follow the recommended precautions for ventilation and respiratory protection for dusts given above.

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
CASTOR OIL	10 AS M	MG/M3	TWA	OSHA	
POLYESTER RESIN - N.J. TRADE SECRET (T.S.) REGISTRY NO.					
3176530002-5392P++	NONE	NONE	NONE	NONE	
POLYPROPYLENE GLYCOL	10	MG/M3	TWA	AIHA	

MSDS: Scotch-Weld(TM) Urethane Adhesive DP-605NS Off-White (Part B) May 29, 2001

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EXPOSURE LIMITS (continued)

INGREDIENT	VALUE UNIT	TYPE	AUTH SKIN*
	AS PARTICULATE]	
AMORPHOUS SILICA	3 MG/M3	TWA	CMRG
	AS RESPIRABLE	DUST	
TITANIUM DIOXIDE	10 MG/M3	TWA	ACGIH
TITANIUM DIOXIDE	10 MG/M3	TWA	OSHAV
	AS DUST		
	OSHA VACATED I	EL	
TITANIUM DIOXIDE	15 MG/M3	TWA	OSHA
	AS TOTAL DUST		
TITANIUM DIOXIDE	5 MG/M3	TWA	CMRG
	AS RESPIRABLE	DUST	
POLYOXYPROPYLENE TRIOL	NONE NONE	NONE	NONE
WATER	NONE NONE	NONE	NONE

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- AIHA: American Industrial Hygiene Assoc. Workplace Environmental Exposure Level Guideline
- CMRG: Chemical Manufacturer Recommended Exposure Guidelines
- OSHA: Occupational Safety and Health Administration
- OSHAV: Occupational Safety and Health Administration Vacated PEL. Vacated Permissible Exposure Limits (PEL) are enforced as the OSHA PEL in some states. Check with your local regulatory authority.
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.

SKIN CONTACT:

Mild Skin Irritation (after prolonged or repeated contact): signs/symptoms can include redness, swelling, and itching.

INHALATION:

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Vapors of heated material may cause respiratory system irritation.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

MSDS:	Sc	cotch-Weld(TM)	Urethane	Adhesive	DP-605NS	Off-White	(Part	В
May 2	9.	2001						

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8. HEALTH HAZARD DATA (continued)

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system.

IF SWALLOWED:

Ingestion may cause:

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

SECTION CHANGE DATES

HEADING

SECTION CHANGED SINCE December 12, 2000 ISSUE

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DIVISION: ENGINEERED ADHESIVES

TRADE NAME:

Scotch-Weld(TM) Urethane Adhesive DP-605NS Off-White, (Part A)

ISSUED: May 29, 2001

SUPERSEDES: December 12, 2000

DOCUMENT: 11-2405-6

1. INGREDIENT C.A.S. NO. PERCENT

DIPHENYLMETHANE DIISOCYANATE (MDI). 26447-40-5 15.0 - 40.0 HIGHER OLIGOMERS OF (MDI). 9016-87-9 15.0 - 40.0 GLYCOLS, POLYPROPYLENE. 25322-69-4 10.0 - 30.0 AMORPHOUS SILICA. 7631-86-9 5.0 - 10.0

The components of this product are in compliance with the chemical notification requirements of TSCA. All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

This product contains the following toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR Part 372: HIGHER OLIGOMERS OF (MDI)

2. PHYSTCAL DATA

BOILING POINT: N/A
VAPOR PRESSURE: N/A
VAPOR DENSITY: N/A
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: neglig.
SPECIFIC GRAVITY: 1.170 Water=1
PERCENT VOLATILE: 0.7 % by wt
ph: N/A

VISCOSITY:..... Thixotropic paste

MSDS:	Scot	cch-Weld(TM)	Urethane	Adhesive	DP-605NS	Off-White,	(Part	A)		
May 29	9, 20	001							PAGE	2

2. PHYSICAL DATA (continued)

APPEARANCE AND ODOR:

heavy paste, brown, isocyanate odor

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:.... > 200.00 C

FLAMMABLE LIMITS - LEL:...... N/A
FLAMMABLE LIMITS - UEL:...... N/A
AUTOIGNITION TEMPERATURE:..... N/D

EXTINGUISHING MEDIA:

Water spray, Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:

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.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

NFPA HAZARD CODES: HEALTH: 2 FIRE: 0 REACTIVITY: 1 UNUSUAL REACTION HAZARD: none

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:

Amines, Alcohols, Water. Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke. Reaction with water, alcohols and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide and Carbon Dioxide, Oxides of Nitrogen, Hydrogen Cyanide, Isocyanates, Toxic Vapors, Gases or Particulates.

MSDS:	Scotch-Weld(TM)	Urethane	Adhesive	DP-605NS	Off-White,	(Part A)
May 29	9, 2001					

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Contain spill. Evacuate unprotected personnel from hazard area. Pour isocyanate decontaminant solution (90% water,8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Alternatively, pour water on spill and allow to react for more than 30 minutes. Cover with absorbent. Place in an approved drum, but do not seal the drum for 48 hours to avoid possible pressure buildup. Neutralize spill residue with decontaminant solution.

RECOMMENDED DISPOSAL:

Cure product according to product instructions. Incinerate in an industrial or commercial facility in the presence of a combustible material. Dispose of completely cured (or polymerized) material in a sanitary landfill. Dispose of waste product in a facility permitted to accept chemical waste.

ENVIRONMENTAL DATA:

Not determined.

REGULATORY INFORMATION:

Volatile Organic Compounds: 8 gms/liter. VOC Less H2O & Exempt Solvents: 8 gms/liter.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

EPCRA HAZARD CLASS:

FIRE HAZARD: NO PRESSURE: NO REACTIVITY: NO ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

Immediately wash skin with soap and large amounts of water. Remove contaminated clothing. If signs/symptoms occur, call a physician. Wash contaminated clothing before reuse and dispose of contaminated shoes.

MSDS:	Sc	cotch-Weld(TM)	Urethane	Adhesive	DP-605NS	Off-White,	(Part	A)
May 29	9,	2001						

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6. SUGGESTED FIRST AID (continued)

INHALATION:

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention

IF SWALLOWED:

Do not induce vomiting. Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact. Wear vented goggles. Wear safety glasses with side shields.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: polyethylene/ethylene vinyl alcohol, polyvinyl alcohol, polytetrafluoroethylene (Teflon), fluoroelastomer (Viton). Use one or more of the following personal protection items as necessary to prevent skin contact: apron, coveralls.

RECOMMENDED VENTILATION:

Use in a well-ventilated area. Provide sufficient ventilation to maintain emissions below recommended exposure limits. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:

Avoid breathing of vapors. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: half-mask supplied air respirator.

PREVENTION OF ACCIDENTAL INGESTION:

Do not ingest.

RECOMMENDED STORAGE:

Store at temperatures below 120 degrees F (49 degrees C). Keep container closed when not in use. Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:

Keep container tightly closed.

OTHER PRECAUTIONARY INFORMATION:

When grinding or sanding the cured material follow precautions for dusts given in the PART A (DP-605 NS) Material Safety Data Sheet.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

MSDS: Scotch-Weld(TM) Urethane Adhesive DP-605NS Off-White, (Part A) May 29, 2001

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7. PRECAUTIONARY INFORMATION (continued)

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH SKIN*	
					-
DIPHENYLMETHANE DIISOCYANATE (MDI)	0.005	PPM	TWA	ACGIH	
DIPHENYLMETHANE DIISOCYANATE (MDI)	0.02	PPM	CEIL	OSHA	
HIGHER OLIGOMERS OF (MDI)	NONE	NONE	NONE	NONE	
GLYCOLS, POLYPROPYLENE	10	MG/M3	TWA	AIHA	
	AS F	ARTICULATE			
AMORPHOUS SILICA	3	MG/M3	TWA	CMRG	
	AS R	ESPIRABLE D	UST		

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- AIHA: American Industrial Hygiene Assoc. Workplace Environmental Exposure Level Guideline
- CMRG: Chemical Manufacturer Recommended Exposure Guidelines
- OSHA: Occupational Safety and Health Administration
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.

SKIN CONTACT:

Allergic Skin Reaction: signs/symptoms can include redness, swelling, blistering, and itching.

Mild Skin Irritation: signs/symptoms can include redness, swelling, and itching.

INHALATION:

Allergic Respiratory Reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest, and respiratory failure.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Vapors of the uncured product may cause irritation of the respiratory system.

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8. 1	HEALTH	HAZARD	DAT	'A (co	ontinued)						

IF SWALLOWED:

Ingestion may cause:

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

SECTION CHANGE DATES

HEADING SECTION CHANGED SINCE December 12, 2000 ISSUE

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