Material Safety Data Sheet

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PRODUCT NAME: 3M(TM) Scotch-Weld(TM) Low Odor Acrylic Adhesive DP-810
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes

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

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

Issue Date: 01/12/2004
Supercedes Date: 01/08/2003

Document Group: 08-6267-2

ID Number(s):
62-3298-1430-5, 62-3298-1435-4, 62-3298-3530-0, 62-3298-3830-4, 62-3298-6830-1

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:

08-6252-4, 08-6239-1

Revision Changes:
Copyright was modified.
Page Heading: Product name was modified.
Kit: Product name was modified.
Kit: Division name was modified.
Kit: ID number(s) was modified.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Scotch-Weld™ Low Odor Acrylic Adhesive 810 B/A (Part B)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
International Operations
ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 05/04/12
Supercedes Date: 01/04/12

Document Group: 08-6239-1

Product Use:
Specific Use: Activator for 2-Part Acrylic Adhesive
Intended Use: Structural adhesive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
2-HYDROXYPROPYL METHACRYLATE	923-26-2	10 - 30
PHENOXYETHYL METHACRYLATE	10595-06-9	10 - 30
ACRYLATE OLIGOMER	41637-38-1	10 - 30
2-HYDROXYETHYL METHACRYLATE	868-77-9	10 - 30
METHYL METHACRYLATE-BUTADIENE-STYRENE POLYMER	25053-09-2	5 - 10
ACRYLONITRILE-BUTADIENE POLYMER	9003-18-3	5 - 10
PARAFFIN WAX	8002-74-2	1 - 5
HEMA ACID PHOSPHATE	52628-03-2	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: slight fragrance, green
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Hazardous polymerization may occur. May cause allergic skin

reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

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

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

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

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.
Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.
Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	> 200 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*

5.2 EXTINGUISHING MEDIA
Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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.

6.2. Environmental precautions
Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Dispose of collected material as soon as possible.

Clean-up methods
Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. 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. Collect as much of the spilled material as possible. 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 MSDS.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors created during cure cycle. For industrial or professional use only. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE
Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use in an enclosed process area is recommended. Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

The following eye protection(s) are recommended: Indirect Vented Goggles
.

8.2.2 Skin Protection

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA)
.

8.2.3 Respiratory Protection
Avoid breathing of vapors created during cure cycle.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full facepiece air-purifying respirator suitable for organic vapors
. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
PARAFFIN WAX	ACGIH	TWA, as fume	2 mg/m3	

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	slight fragrance, green
General Physical Form:	Liquid
Autoignition temperature	*No Data Available*
Flash Point	> 200 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Boiling Point	> 93 ºC
Density	1.07 g/ml
Vapor Density	*No Data Available*
Vapor Pressure	<=0.1 mmHg
Specific Gravity	1.07 [*Ref Std:* WATER=1]
pH	*Not Applicable*
Melting point	*Not Applicable*
Solubility in Water	Slight (less than 10%)
Evaporation rate	*No Data Available*
Hazardous Air Pollutants	< 30 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	319 g/l [*Test Method:* tested per EPA method 24]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	< 55 % weight [*Test Method:* Estimated]

VOC Less H2O & Exempt Solvents	319 g/l [*Test Method:* tested per EPA method 24]
VOC Less H2O & Exempt Solvents	23 g/l [*Test Method:* tested per EPA method 24] [*Details:* when used as intended with Part A]
Viscosity	20000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat
Sparks and/or flames
Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exothem) with production of intense heat and smoke.

10.2 Materials to avoid
Amines
Reducing agents
Reactive metals

Hazardous Polymerization: Hazardous polymerization may occur.

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

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill.

Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

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

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):

Ingredient	C.A.S. No	% by Wt
PHENOXYETHYL METHACRYLATE (GLYCOL ETHERS)	10595-06-9	10 - 30

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
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. Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS 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 **Reactivity:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 4: First aid for eye contact - decontamination - was modified.
Section 4: First aid for eye contact - medical assistance - was modified.
Section 3: Immediate skin hazard(s) was modified.
Section 3: Potential effects from eye contact was modified.
Section 3: Potential effects from skin contact information was modified.
Section 13: Waste disposal method information was modified.
Section 8: Eye/face protection information was modified.
Section 8: Respiratory protection - recommended respirators information was modified.
Section 9: Property description for optional properties was modified.
Section 2: Ingredient table was modified.
Section 6: Environmental procedures information was modified.
Section 3: Immediate eye hazard(s) was deleted.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Scotch-Weld™ Low Odor Acrylic Adhesive 810 B/A (Part A)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
International Operations
ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 05/04/12
Supercedes Date: 03/18/11

Document Group: 08-6252-4

Product Use:
Specific Use: Base of 2-Part Acrylic Adhesive
Intended Use: Structural adhesive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
PHENOXYETHYL METHACRYLATE	10595-06-9	10 - 30
2-HYDROXYPROPYL METHACRYLATE	923-26-2	10 - 30
ACRYLATE OLIGOMER	41637-38-1	10 - 30
2-HYDROXYETHYL METHACRYLATE	868-77-9	10 - 30
ACRYLONITRILE-BUTADIENE POLYMER	9003-18-3	5 - 10
METHYL METHACRYLATE-BUTADIENE-STYRENE POLYMER	25053-09-2	5 - 10
CUMENE HYDROPEROXIDE	80-15-9	3 - 7
PARAFFIN WAX	8002-74-2	1 - 5
P-BENZOQUINONE	106-51-4	0 - 0.1

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: white, low odor
General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Hazardous polymerization may occur. May cause chemical eye burns. May cause severe skin irritation. May cause allergic skin reaction. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

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.

Skin Contact:
Severe 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.

Inhalation:
May be harmful if inhaled.

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

Prolonged or repeated exposure may cause:
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.

May be absorbed following inhalation and cause target organ effects.

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

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:
Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.
Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.
Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	216 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*

5.2 EXTINGUISHING MEDIA
Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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.

6.2. Environmental precautions
For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods
Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. 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. Collect as much of the spilled material as possible. 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 MSDS.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors. Avoid breathing of vapors created during cure cycle. For industrial or professional use only. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE
Store away from heat. Store out of direct sunlight. Store away from areas where product may come into contact with food or pharmaceuticals.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Do not use in a confined area or areas with little or no air movement.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

The following eye protection(s) are recommended: Indirect Vented Goggles
.

8.2.2 Skin Protection
Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA)
.

8.2.3 Respiratory Protection
Avoid breathing of vapors. Avoid breathing of vapors created during cure cycle.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full facepiece air-purifying respirator suitable for organic vapors
. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
CUMENE HYDROPEROXIDE	AIHA	TWA	6 mg/m3	Skin Notation*
P-BENZOQUINONE	ACGIH	TWA	0.1 ppm	
P-BENZOQUINONE	OSHA	TWA	0.4 mg/m3	
PARAFFIN WAX	ACGIH	TWA, as fume	2 mg/m3	

* Substance(s) 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
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	white, low odor
General Physical Form:	Liquid
Autoignition temperature	*No Data Available*
Flash Point	216 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Boiling Point	>=217 ºF
Density	1.07 g/ml
Vapor Density	*Not Applicable*
Vapor Pressure	<=0.1 mmHg
Specific Gravity	1.07 [*Ref Std:* WATER=1]
pH	*Not Applicable*
Melting point	*Not Applicable*
Solubility in Water	Slight (less than 10%)
Evaporation rate	*No Data Available*
Hazardous Air Pollutants	< 30 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	349 g/l [*Test Method:* tested per EPA method 24]
Volatile Organic Compounds	349 g/l [*Test Method:* tested per EPA method 24] [*Details:* EU VOC content]
Percent volatile	<= 55 % weight
VOC Less H2O & Exempt Solvents	349 g/l [*Test Method:* tested per EPA method 24]
VOC Less H2O & Exempt Solvents	23 g/l [*Test Method:* tested per EPA method 24] [*Details:* when used as intended with Part B]
Viscosity	20000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat
Sparks and/or flames
Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exothem) with production of intense heat and smoke.

10.2 Materials to avoid
Amines
Reducing agents
Reactive metals

Hazardous Polymerization: Hazardous polymerization may occur.

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

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill.
Incinerate in a permitted hazardous waste incinerator in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
LA-DAHW-3298-A, 62-3398-8530-3, 62-3398-8730-9

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

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
CUMENE HYDROPEROXIDE	80-15-9	3 - 7

PHENOXYETHYL METHACRYLATE (GLYCOL ETHERS)	10595-06-9	10 - 30

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
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. Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS 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 **Reactivity:** 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.

Revision Changes:
Section 1: Product use information was modified.
Section 16: Disclaimer (second paragraph) was modified.
Section 3: Immediate skin hazard(s) was modified.
Section 3: Immediate eye hazard(s) was modified.
Section 3: Potential effects from eye contact was modified.
Section 3: Potential effects from skin contact information was modified.
Section 3: Potential effects from inhalation information was modified.
Section 5: Unusual fire and explosion hazard information was modified.
Section 7: Handling information was modified.
Section 7: Storage information was modified.
Section 8: Engineering controls information was modified.
Section 8: Respiratory protection information was modified.
Section 10: Hazardous decomposition or by-products table was modified.
Section 13: Waste disposal method information was modified.
Section 8: Eye/face protection information was modified.
Section 8: Respiratory protection - recommended respirators information was modified.
Section 3: Other health effects information was modified.
Section 9: Density information was modified.
Section 9: Vapor density value was modified.
Section 9: Vapor pressure value was modified.
Section 9: Boiling point information was modified.
Section 5: Flammable limits (UE) information was modified.
Section 5: Flammable limits (LEL) information was modified.
Section 5: Autoignition temperature information was modified.
Section 5: Flash point information was modified.

Section 9: Property description for optional properties was modified.
Section 9: Specific gravity information was modified.
Section 9: pH information was modified.
Section 9: Melting point information was modified.
Section 9: Solubility in water text was modified.
Section 1: Secondary Division name was modified.
Section 8: Respiratory protection - recommended respirators guide was modified.
Section 9: Flash point information was modified.
Section 9: Flammable limits (LEL) information was modified.
Section 9: Flammable limits (UEL) information was modified.
Section 9: Autoignition temperature information was modified.
Section 2: Ingredient table was modified.
Section 15: EPCRA 313 information was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 6: Environmental procedures information was modified.
Section 16: Web address was added.
Section 1: Address was added.
Copyright was added.
Company logo was added.
Telephone header was added.
Company Telephone was added.
Section 1: Emergency phone information was added.
Section 1: Emergency phone information was deleted.
Company Logo was deleted.
Copyright was deleted.
Section 16: Web address heading was deleted.
Section 1: Address line 1 was deleted.
Section 1: Address line 2 was deleted.

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3M USA MSDSs are available at www.3M.com

3M Scotch-Weld™ Low-Odor Acrylic Adhesives

DP810 • DP810 Black • DP810 NS

Technical Data **April, 2011**

Product Description

3M™ Scotch-Weld™ Low-Odor Acrylic Adhesives are two-part, 1:1 mix ratio, toughened structural adhesives with less odor than most acrylic adhesives. These adhesives have excellent shear and peel strength along with good impact resistance and durability. They can quickly bond to most metals, ceramics, rubbers, plastics and wood with minimal surface preparation.

Features

- Tough, durable bonds
- Minimal surface prep
- 10 minute time to handling strength
- Bonds stainless steel
- Low-odor acrylic adhesive
- 10 minute worklife
- 1:1 mix ratio
- Excellent shear and peel strength

Typical Uncured Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Property		3M™ Scotch-Weld™ Low-Odor Acrylic Adhesive		
		DP810	DP810 Black	DP810 NS
Color	Base (B) Accelerator (A)	Green White	Black White	Blue/Green White
Lbs./gal.	Base (B) Accelerator (A)	8.7 - 9.1 8.7 - 9.1	8.7 - 9.1 8.7 - 9.1	8.7 - 9.1 8.7 - 9.1
Viscosity (cps)[1]	Base (B) Accelerator (A)	18,000 - 22,000 18,000 - 22,000	18,000 - 22,000 17,000 - 21,000	90,000 - 95,000 95,000 - 100,000
Base Resin	Base (B) Accelerator (A)	Acrylic Acrylic	Acrylic Acrylic	Acrylic Acrylic
Mix Ratio	(Volume) (Weight)	1:1 1:1	1:1 1:1	1:1 1:1
Time to Handling Strength (50 psi)		10 minutes	10 minutes	10 minutes
Full Cure @ 73°F (23°C)		8 - 24 hours	8 - 24 hours	8 - 24 hours
Worklife @ 73°F (23°C)		10 minutes	10 minutes	10 minutes

For footnotes, see Test Methods and Footnotes on Page 4.

3M™ Scotch-Weld™
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Typical Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Overlap Shear Strength[2], tested @ 73°F (23°C)

	3M™ Scotch-Weld™ Low-Odor Acrylic Adhesive		
	DP810	DP810 Black	DP810 NS
Substrate	OLS (psi)	OLS (psi)	OLS (psi)
Etched Aluminum	4200 CF	4200 CF	4200 CF
Abraded Aluminum	3900 CF	3750 CF	3850 CF
Bare Aluminum	3800 CF	3850 CF	4100 CF
CRS	3100 CF	3600 CF	3500 CF
Oily CRS	3450 CF	3450 CF	3500 CF
Stainless Steel	3400 CF	3500 CF	3400 CF
Green FRP	3800 CF	3000 CF	1900 CF
Acrylic	1100 SF	550 MM	800 SF
PVC	1000 SF	1000 SF	1000 SF
Polycarbonate	850 MM	500 MM	500 MM
ABS	600 MM	700 MM	650 MM

Overlap Shear Strength psi, tested @ Temperature

	3M Scotch-Weld Low-Odor Acrylic Adhesive		
Temperature	DP810	DP810 Black	DP810 NS
-20°F (-29°C)	1750 AF/MM	2000 AF/MM	1600 AF
75°F (24°C)	3650 CF	3550 CF	4000 CF
120°F (49°C)	2000 CF	2000 CF	2350 CF
180°F (82°C)	550 CF	500 CF	500 CF

T-Peel Strength (piw)[3], tested @ 73°F (23°C)

	3M Scotch-Weld Low-Odor Acrylic Adhesive		
Substrate	DP810	DP810 Black	DP810 NS
Etched Al	30	20	23

SF = Substrate Failure/Break
CF = Cohesive Failure
AF = Adhesive Failure
MM = Mixed (Mode of AF and CF)

For footnotes, see Test Methods and Footnotes on Page 4.

Environmental Resistance[4]

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Overlap Shear Strength (psi), tested @ 73°F (23°C)

Condition	Time	3M™ Scotch-Weld™ Low-Odor Acrylic Adhesive		
		DP810	DP810 Black	DP810 NS
Control	14 Days	3750 CF	3750 CF	3800 CF
160°F (71°C)/100% RH	14 Days	1500 MM	1500 MM	1250 AF
160°F (71°C)/Soak	14 Days	1750 MM	1650 MM	1450 AF
20% Bleach	14 Days	3450 CF	3250 CF	3750 CF
IPA	14 Days	3150 CF	3050 CF	3450 CF
50% Antifreeze	14 Days	3850 CF	3900 CF	4000 CF
Gasoline	14 Days	2550 CF	2550 CF	3150 CF
Diesel Fuel	14 Days	4000 CF	3950 CF	4050 CF
Toluene	14 Days	2650 CF	2600 CF	3400 CF
MEK	14 Days	50 CF	75 CF	2100 CF
Acetone	14 Days	75 CF	50 CF	900 CF

CF = Cohesive Failure
MM = Mixed (Mode of AF and CF)
AF = Adhesive Failure

Typical Rate of Strength Build-Up

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Overlap Shear Strength (psi), tested @ 73°F (23°C) at various times after bonding.

Condition	3M Scotch-Weld Low-Odor Acrylic Adhesive		
	DP810	DP810 Black	DP810 NS
10 minutes	50	30	500
20 minutes	1500	1150	1750
1 hour	2250	2200	2850
2 hours	2750	2700	3350
4 hours	2950	2900	3700
8 hours	3350	3200	3850
24 hours	3600	3550	4000

For footnotes, see Test Methods and Footnotes on Page 4.

Test Methods and Footnotes

1) Viscosity obtained by Brookfield, DV-II, #7 Spindle, 20 rpm at 75°F (24°C).

2) Overlap Shear Test Method: overlap shear test for adhesion determined in accordance to ASTM D1002-72, sample dimensions were 1" x 4" x 1/8", with a 1/2 square inch area of overlap, bonded to themselves unless otherwise noted, allowed to cure for at least 6 hours at 75°F (24°C) before testing. Data were collected using a Sintech 5GL Mechanical Tester with a 2000# or 5000# load cell. Test rate was 0.1"/minute. Strength determined at 75°F (24°C) unless otherwise noted.

3) Peel tests (ASTM D1876-61T) on FPL etched, 0.032" gauge aluminum, with a .017" bondline thickness. Jaw separation rate 20"/min. All bonds were allowed to cure for at least 6 hours at 75°F (24°C) before testing.

4) Environmental tests were conducted by immersing bonded coupons prepared in accordance to description in footnote 2.

Handling/Curing Information

Directions for use:

Apply adhesive to clean, dry substrates, which are free of paint, oxide films, oils, dust, mold release agents and all other surface contaminants. See the Surface Preparation section for specific substrate preparation method.

50 ml cartridge:.

Place Duo-Pak cartridge in 3M™ EPX™ Applicator. Remove cap. Dispense and discard a small amount of adhesive to assure even ratio and free flow. Clear orifice if necessary. Attach mixing nozzle. Apply adhesive to clean surfaces, join parts, secure until adhesive sets.

200/400 ml cartridge

While holding Duo-Pak cartridge in an upright position, remove and discard the insert from the cartridge by unscrewing plastic nut and removing metal washer. Place cartridge in a 1:1 200/400 ml EPX applicator. Dispense and discard a small amount of adhesive to ensure even ratio and free flow. Attach mixing and nozzle and secure with plastic retaining nut. Apply adhesive to clean surfaces, join parts, secure until adhesive sets.

Clean-up:

Excess adhesive can be removed with solvent such as MEK.* Edge tack on a finished part or bond line can be removed with isopropyl alcohol.*

***Note:** When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use.

Heat Cure:

Full cure can be attained by raising the bondline temperature to 120°F (49°C) for 30 minutes or to 150°F (66°C) for 10 minutes.

Surface Preparation

3M™ Scotch-Weld™ Low-Odor Acrylic Adhesives can bond oily metal, plastic and other substrates with very little surface preparation. However, for the most consistent results and environmental resistance, all substrates should be clean, dry and free of paint, oxide films, dust, mold release agents and all other surface contaminants. The amount of surface preparation directly depends on the bond strength and environmental resistance desired by the user.

The following cleaning methods are suggested for common surfaces.

Steel and Aluminum

1) Wipe free of dust with oil-free solvent such as acetone or isopropyl alcohol.
2) Sandblast or abrade using clean fine grit abrasives (180 grit or finer).
3) Wipe again with solvent to remove loose particles.
4) If a primer is used, it should be applied within 4 hours after surface preparation (or see instructions pertinent to a specific primer).

Note: Aluminum may also be acid etched. Follow the manufacturer's precautions and directions for this procedure.

Plastic/Rubber

1) Wipe with isopropyl alcohol.*
2) Abrade using fine grit abrasives (180 grit or finer).
3) Remove residue by wiping again with isopropyl alcohol.*

***Note:** When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use.

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Storage

For maximum shelf life, store Duo-Pak cartridges and bulk containers at 32°F (0°C) to 40°F (4°C). **Do not freeze.**

Shelf Life

When stored at the recommended temperatures in the original unopened containers, this product has a shelf life of twelve months from date of shipment from 3M.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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