

**Material Safety Data Sheet
TA4820A**

Revision Date: 12/06/13

chemical-concepts.com
800.220.1966
410 Pike Road • Huntingdon Valley, PA 19006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: TA4820A Telephone: 732-868-1372 or 800-640-7599
Product Type: Structural Acrylic Adhesive Website: www.permabond.com

Company: PERMABOND LLC
 14 Robinson Street
 Pottstown, PA
 USA
 Emergency Telephone:
 Medical: Poison Control Center 866-827-6282
 Transport: CHEMTREC 800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	%	ACGIH TLV	OSHA PEL	OTHER
Methyl methacrylate (MMA) 80-62-6	40 – 75	100 ppm	100 ppm	100 ppm (Canada)
Amine Condensate	1 – 10	None	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Estimated HMIS:

Physical state: Liquid	HEALTH:	2
Color: Off-White	FLAMMABILITY:	3
Odor: Pungent Acrylic	PHYSICAL HAZARD:	2
	Personal Protection:	See Section 8

WARNING:

FLAMMABLE LIQUID AND VAPOR
 CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION
 MAY CAUSE ALLERGIC SKIN REACTION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Moderate respiratory tract irritation.
Skin contact: Allergic skin reaction. Itching. Moderate skin irritation. Redness.
Eye contact: Moderate eye irritation. Redness. Excess tearing.
Ingestion: Toxicity by ingestion is not likely to occur.
Existing conditions aggravated by exposure: Skin disorders. Eye disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

- Inhalation:** Remove person to fresh air or apply artificial respiration if not breathing. Get medical attention if short of breathe or if respiratory symptoms develop.
- Skin contact:** Wash with soap and water. Remove contaminated clothing and discard. Do not use organic solvents. Get medical attention if irritation occurs.
- Eye contact:** Immediately flush with copious amounts of water, preferably, lukewarm water for at least 20 minutes, holding eyelids open all the time. Get immediate medical attention.
- Ingestion:** Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

- Flash point:** 10.5°C (51°F) Tagliabue closed cup
- Autoignition temperature:** Not available
- Flammable/Explosive limits-lower %:** 2.1 for Methyl methacrylate
- Flammable/Explosive limits-upper %:** 12.5 for Methyl methacrylate
- Extinguishing media:** Dry chemical
- Special fire fighting procedures:** Wear self-contained breathing apparatus and full protective clothing
- Unusual fire or explosion hazards:** Uncontrolled polymerization may occur at high temperatures
- Hazardous combustion products:** Oxides of carbon. Oxides of nitrogen. Hydrogen cyanide. Methylene bisphenyl isocyanate Hydrocarbons. Smoke. Cyclopentanone. Butanediol. Tetrahydrofuran.

6. ACCIDENTAL RELEASE MEASURES

- Environmental precautions:** Prevent product from entering drains or open waters. Remove sources of ignition.
- Clean-up methods:** Remove sources of ignition. Use with ventilation. Dike area to prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as chemical waste in accordance with current local, state, and federal regulations. Incineration is recommended. Wash spill area with strong detergent. After proper mixing of resin and activator sides, the material will polymerize into a cured solid state which can be treated as a non hazardous solid. Applicable CERL/RCA was code: 0001 (ignitibility) U162 (MMA)

7. HANDLING AND STORAGE

- Handling:** Prevent contact with eyes, skin and clothing. Avoid prolonged or repeated breathing of vapor. Wash thoroughly after handling. Keep away from heat, spark and flame. Use only with adequate ventilation.
- Storage:** Store away from heat, sparks, flames, or other sources of ignition. Recommended storage in flammable material containing area. Avoid storing above 100°F.
- Incompatible products:** Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering controls:** Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.
- Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s). If this material is handled at elevated temperature or under mist forming conditions, without engineering controls, a NIOSH approved respirator must be used.
- Skin protection:** Use impermeable gloves and protective clothing as necessary to prevent skin contact.
- Eye/face protection:** Safety goggles or safety glasses with side shields.
- See Section 2 for exposure limits.**

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Off white
Odor:	Pungent. Acrylic
Vapor pressure:	29 mm Hg at 20°C (68°F)
pH:	Not Available
Boiling point/range:	101°C (214°F) for MMA
Melting point/range:	Not available
Specific gravity:	0.94 – 1.0
Vapor density:	>1 heavier than air; 3.5 for MMA
Evaporation rate:	Not available
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available
VOC content:	<1.98%, 1.92 grams/liter (adhesive and activator mixed)

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of storage and use.
Hazardous polymerization:	May occur.
Hazardous decomposition products:	None Known
Incompatibility:	Strong oxidizers. Alkalis. Moisture. Acids. Bases. Reducing agents. Ultraviolet radiation. Amines.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Oxygen-free atmosphere. Direct sun light. Polymerization catalysts.

11. TOXICOLOGICAL INFORMATION

Product toxicity Data: Not Available

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Methyl Methacrylate	No	N/A	No
Amine Condensate	No	No	No

Hazardous components	Health Effects/Target Organs
Methyl methacrylate	Allergen. Irritant. Nervous system. Respiratory. Kidney. Liver
Amine condensate	Not Available

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to EPA and local governmental regulations.

EPA hazardous waste number: 0001;U162;D003

14. TRANSPORT INFORMATION

The shipment information in this section is for non-bulk packaging. Shipping classification might be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR 172):

Proper shipping name: Adhesive
Hazard class or division: 3
Identification number: UN1133
Packing group: II
Exceptions: Single unit less than or equal to 1 liter
Proper shipping name: Consumer commodity
Class/Division: ORM-D

International Air Transportation (ICAO/IATA):

Proper shipping name: Adhesive
Hazard class or division: 3
Identification number: UN113
Packing group: II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
CERCLA: NA.
SARA TITLE III: 313 Reportable Ingredients:
Methyl Methacrylate

California Proposition 65: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information All components are listed or exempt from listing on the Canadian Domestic Substance List

16. OTHER INFORMATION

NFPA

Health – 2 Fire – 3 Reactivity – 2 Special – None

This MSDS was reviewed and released with new date 12/06/13

This material safety data sheets contains changes from the previous one in section1: Transport Emergency Number was changed.

ADDITIONAL INFORMATION: The information given and the recommendations made herein apply to our product(s) alone and are not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.

Material Safety Data Sheet
TA4820B

Revision Date: 12/06/13

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	%	ACGIH TLV	OSHA PEL	OTHER
Methyl methacrylate (MMA) 80-62-6	40 – 75	100 ppm	100 ppm	100 ppm (Canada)
Cumene Hydroperoxide 80-15-9	1 – 5	None	None	None
Methacrylic Acid 79-41-4	5 – 10	20ppm (skin)	20ppm (skin)	None
p-toluenesulfonyl chloride 98-59-9	1 – 5	N.A.	N.A.	N.A
Maleic Acid 110-16-7	1 – 5	N.A	N.A.	N.A

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Estimated HMIS:

Physical state: Liquid	HEALTH:	2
Color: Milky white	FLAMMABILITY:	3
Odor: Pungent Acrylic	PHYSICAL HAZARD:	2
	Personal Protection:	See Section 8

WARNING:

FLAMMABLE LIQUID AND VAPOR
 CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION
 MAY CAUSE ALLERGIC SKIN REACTION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	Moderate respiratory tract irritation.
Skin contact:	Allergic skin reaction. Itching. Moderate skin irritation. Redness.
Eye contact:	Moderate eye irritation. Redness. Excess tearing.
Ingestion:	Toxicity by ingestion is not likely to occur.
Existing conditions aggravated by exposure:	Skin disorders. Eye disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:	Remove person to fresh air or apply artificial respiration if not breathing. Get medical attention if short of breathe or if respiratory symptoms develop.
Skin contact:	Wash with soap and water. Remove contaminated clothing and discard. Do not use organic solvents. Get medical attention if irritation occurs.
Eye contact:	Immediately flush with copious amounts of water, preferably, lukewarm water for at least 20 minutes, holding eyelids open all the time. Get immediate medical attention.
Ingestion:	Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point:	10.5°C (51°F) Tagliabue closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits-lower %:	2.1 for Methyl methacrylate
Flammable/Explosive limits-upper %:	12.5 for Methyl methacrylate
Extinguishing media:	Dry chemical
Special fire fighting procedures:	Wear self-contained breathing apparatus and full protective clothing
Unusual fire or explosion hazards:	Uncontrolled polymerization may occur at high temperatures
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Hydrogen cyanide. Methylene bisphenyl isocyanate Hydrocarbons. Smoke. Cyclopentanone. Butanediol. Tetrahydrofuran.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent product from entering drains or open waters. Remove sources of ignition.
Clean-up methods:	Remove sources of ignition. Use with ventilation. Dike area to prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as chemical waste in accordance with current local, state, and federal regulations. Incineration is recommended. Wash spill area with strong detergent. After proper mixing of resin and activator sides, the material will polymerize into a cured solid state which can be treated as a non hazardous solid. Applicable CERL/RCA was code: 0001 (ignitibility) U162 (MMA)

7. HANDLING AND STORAGE

Handling:	Prevent contact with eyes, skin and clothing. Avoid prolonged or repeated breathing of vapor. Wash thoroughly after handling. Keep away from heat, spark and flame. Use only with adequate ventilation.
Storage:	Store away from heat, sparks, flames, or other sources of ignition. Recommended storage in flammable material containing area. Avoid storing above 100°F.
Incompatible products:	Refer to Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s). If this material is handled at elevated temperature or under mist forming conditions, without engineering controls, a NIOSH approved respirator must be used.
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.
Eye/face protection:	Safety goggles or safety glasses with side shields. See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Milky White
Odor:	Pungent. Acrylic
Vapor pressure:	29 mm Hg at 20°C (68°F)
pH:	Not Available
Boiling point/range:	101°C (214°F) for MMA
Melting point/range:	Not available
Specific gravity:	0.94 – 1.0
Vapor density:	>1 heavier than air; 3.5 for MMA
Evaporation rate:	Not available
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available
VOC content:	<1.98%, 1.92 grams/liter (adhesive and activator mixed)

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of storage and use.
Hazardous polymerization:	May occur.
Hazardous decomposition products:	None Known
Incompatibility:	Strong oxidizers. Alkalis. Moisture. Acids. Bases. Reducing agents. Ultraviolet radiation. Amines.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Oxygen-free atmosphere. Direct sun light. Polymerization catalysts.

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Product toxicity Data: Not Available

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Methyl Methacrylate	No	N/A	No
Cumene Peroxide	No	No	No
Methacrylic Acid	No	No	No
p-toluenesulfonyl chloride	No	No	No
Maleic Acid	No	No	No

Hazardous components	Health Effects/Target Organs
Methyl methacrylate	Allergen. Irritant. Nervous system. Respiratory. Kidney. Liver
Cumene Peroxide	Allergen. Corrosive. Irritant. Mutagen. Central Nervous System
Methacrylic Acid	Allergen. Corrosive. Irritant
p-toluenesulfonyl chloride	Allergen. Irritant. Corrosive.
Maleic Acid	Allergen. Corrosive. Irritant. Respiratory Tract

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to EPA and local governmental regulations.

EPA hazardous waste number: 0001;U162;D003

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR 172):

Proper shipping name: Adhesive
Hazard class or division: 3
Identification number: UN1133
Packing group: II
Exceptions: Single unit less than or equal to 1 liter
Proper shipping name: Consumer commodity
Class/Division: ORM-D

International Air Transportation (ICAO/IATA):

Proper shipping name: Adhesive
Hazard class or division: 3
Identification number: UN113
Packing group: II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

CERCLA: NA.

SARA TITLE III: 313 Reportable Ingredients:
Methyl Methacrylate, cumene hydroperoxide, maleic acid, methacrylic acid

California Proposition 65: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information All components are listed or exempt from listing on the Canadian Domestic Substance List

16. OTHER INFORMATION

NFPA

Health – 2

Fire – 3

Reactivity – 2

Special – None

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ADDITIONAL INFORMATION: The information given and the recommendations made herein apply to our product(s) alone and are not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.