

ProtoOne Specialty Adhesive



PRODUCT INFORMATION:

ProtoOne is a multi-purpose, one-part, elastomeric, adhesive sealant formulated from a silane-terminated polymer. This unique adhesive is free from solvents, isocyanates, and other hazardous raw materials. It cures on exposure to atmospheric moisture to form a strong durable bond between two surfaces. Due to its unique properties, it also remains a highly durable flexible seal. It has been formulated to offer outstanding primer-less adhesion to most materials, especially various types of plastics and including other materials such as vinyl, aluminum, steel, concrete, wood, and glass.

FEATURES:

VOC compliant

Ease of use, one-part adhesive, no mixing required

Outstanding bond strength on EXOD[®]₂₂₅ CPVC and other difficult specialty materials

Primer-less adhesion on most damp and non-porous surfaces

Unaffected by sunlight, rain, snow, ozone, and temperature extremes

Non-yellowing, non-staining, non-streaking

Non-corrosive

Low odor

Non-flammable

Free from solvents and isocyanates

Free-thaw stable

Can be applied in all weather conditions



PRIMING:

ProtoOne has been tested under the strictest environment, heat and pressure conditions to ensure its compatibility with all Proto Corporation's PVC products, especially EXOD[®]₂₂₅ CPVC. A test placement prior to general use is always recommended.

APPLICATION:

Step 1- Cut the tip off of the cartridge; screw onto the nozzle, and insert into the caulk gun. Be sure to pierce the membrane at the front of the tube before applying pressure. (Proto Corporation can supply manual caulk guns that feature a superior 18:1 thrust ratio that outperform generic caulk guns supplied by most hardware stores).

Step 2- Apply a 1/8" bead of adhesive for 4" O.D. or less and a 1/4" bead of adhesive for above 4" O.D. along the edge of the product 3/8" from the edge of the overlap. Press evenly on the caulk gun for the length of the part so the adhesive is distributed equally. Allowing the adhesive to seep out slightly from the edge of the overlap is desired and creates a good seal.

Step 3- Using a clean putty knife, scrape off any excess adhesive along the seam.

Step 4- Finally, wipe off the area with a clean rag and mineral spirits to finish off the job. Cleanup must be performed before the adhesive has time to set up. If all the contents in the tube are not used, simply allow a small amount of caulk to dry at the tip of the applicator to form a plug and remove when ready to use again. Shelf life for **ProtoOne** is approximately one year from the date of manufacture.

Due to **ProtoOne's** superior gripping ability, taping is not usually required on pre-curved jacketing, however elbows and other fittings can require taping on some applications. Tooling time allows for about three to five minutes before **ProtoOne** starts to form a skin and set in, however factors including ambient temperature and humidity can affect this. **Additionally, a water misting spray should be used on the caulk bead to accelerate the activation time when applying ProtoOne in low humidity and dry climate environments.** (cont'd.)

Proto Corporation recommends a minimum of twenty-four hours before removing any tape so the adhesive has time set up and create a seal. **ProtoOne** cures approximately 50% within 24 hours and approximately 90% within 48 hours. Optimum strength is achieved in seven days.

STORAGE AND SHELF LIFE:

When stored in the original unopened containers at or below 90° (32C). **ProtoOne** has a shelf life of 12 months from date of shipment. In countries where high heat and humidity are a factor, special precautions must be taken. Store product in a covered, well-ventilated warehouse and avoid excessive heat conditions. Storage in high heat, high humidity conditions may reduce shelf life by up to 30%. Rotation of stock is an absolute necessity. Cartons should always be stacked upright with the nozzle tip pointed upwards. DO NOT store within 1 meter of the roofline of the warehouse or storage building.

PACKAGING:

ProtoOne is supplied in a 300 ml (10.1 oz) plastic cartridge. It is supplied in cartons of 12 each.

CLEAN UP:

Immediately clean any adhesive from unwanted areas using mineral spirits.

CAUTION:

DIRECT CONTACT OF UNCURED ADHESIVE IRRITATES EYES AND MAY IRRITATE SKIN. OVEREXPOSURE TO VAPOR MAY IRRITATE EYES, NOSE AND THROAT. Avoid eye and skin contact. Use with adequate ventilation. Do not handle contact lenses with sealant on hands. IN CASE OF EYE CONTACT, flush eyes with water for 15 minutes. Obtain medical attention. IN CASE OF SKIN CONTACT, remove from skin and flush with water. KEEP OUT OF THE REACH OF CHILDREN.

TYPICAL PROPERTIES:

Appearance:	Smooth
Colors:	White & Gray
Specific Gravity	1.53
Extrusion Rate (g/min)	250
Slump (in)	0
Skin Over Time (min)	5
Tack Free Time (min)	75
Shore "A"	50
Tensile Strength (psi)	300
Elongation (%)	400
Modulus (psi)	150
Solid (%)	98
VOC (g/L)($<4\%$)	10

<u>Adhesion-in-Peel</u>	
ABS Plastic	29
Vinyl	32
Aluminum	31
Brick	15
Certaiteed Vinyl	25
Concrete	15
Fiberglass	30
Glass	25
Pine	28
PVC	29
Steel	25
Tile	30

USERS PLEASE READ:

The information and data contained herein is believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since the supplier cannot know all the uses, or the conditions of use to which these products may be exposed, no warranties concerning the fitness or suitability for a particular use or purpose are made.

It is the user's responsibility to thoroughly test any proposed use of our products and independently conclude satisfactory performance in the application.

Likewise, if the application, product specifications or manner in which our products are used require government approval or clearance, it is the sole responsibility of the user to obtain authorization.

The supplier warrants only that its products will meet its specifications. There is no warranty of merchantability or fitness for use, nor any other express or implied warranty. The user's exclusive remedy and the supplier's sole liability is limited to refund of the purchase price or replacement of any product shown to be otherwise than as warranted. The supplier will not be liable for incidental or consequential damages of any kind.

Suggestions of uses should not be taken as inducements to infringe on any patent.

MATERIAL SAFETY DATA SHEET

Product Name: **ProtoOne**

Date Issued: 08/10/09

I. Chemical Product and Company Identification

Product Name: **ProtoOne**

Chemical Name: Moisture Curing Sealant

Molecular Formula: Mixture

Proper DOT Shipping: Caulking & Glaziers, NOI

DOT Hazard Classification: None

Manufacture: PROTO Corp.

10500 47th St., North

Clearwater, FL 33762

Manufacturer's Phone Number: (727) 573-4665

Chemtrec Number: (800) 424-9300 (24 hours)

II. Hazardous Ingredients

Name: Limestone

CAS Number: 1317-65-3

Percent by Weight: 25 – 55

ACGIH TWA: 10 mg/m³

OSHA TWA: 10 mg/m³

Name: Polymer

CAS Number: Proprietary, non-hazardous

Percent by Weight: 10 – 30

Name: Plasticizer

CAS Number: Proprietary, non-hazardous

Percent by Weight 10 – 30

Name: N-beta-(aminoethyl)-gamma-aminopropyltrimethoxysilane

CAS Number: 1760-24-3

Percent by Weight: 0 – 3

Name: Vinyltrimethoxysilane

CAS Number: 2768-02-7

Percent by Weight: 0 – 3

III. Hazards Identification

HMIS Hazard Rating: Health 1 Flammability 1 Reactivity 0

Note: The HMIS rating involves data interpretation that varies from company to company. This information is intended for general identification to specific hazards. To safely handle this material, all of the information in this MSDS should be considered.

IV. First Aid Measures

Primary Routes of Entry: Skin and Inhalation.

Inhalation: Inhalation of vapor may irritate the respiratory tract and nasal passage.

Prolonged inhalation of vapors may cause adverse effects on the central nervous system, including dizziness, nausea, and vomiting.

Skin: A single short exposure may cause irritation. Repeated prolonged exposure may cause mild irritation.

Eyes: Direct contact irritates slightly with redness and swelling.

Ingestion: There are no known symptoms of ingestion.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Immediately flush eyes with copious amounts of water.

Skin: Wash skin with soap and water. Get medical attention if irritation or ill effects develop or persist.

Inhalation: Remove subject to fresh air. Get medical attention if ill effects persist.

Oral: If this product is swallowed, call physician or poison control center for most current information. **DO NOT INDUCE VOMITING**, unless directed by medical personnel.

Comments: Treat according symptoms and eliminate overexposure.

V. Fire Fighting Measures

Flash Point: 200°C

Flammability Limits in Air: Not determined.

Autoignition Temperature: Not determined.

Extinguishing Media: On large fires use dry chemical, foam, or water spray. On small fires use carbon dioxide, dry chemical, or water spray. Water can be utilized to cool containers exposed to fire.

Unusual Fire and Explosion Hazards: When involved in a fire, this material may decompose and produce the following toxic gases: carbon monoxide, carbon dioxide, nitrogen oxides, aldehydes, silicon dioxide, and various polymer compounds. Contact with water will release small quantities of flammable methanol.

Special Fire-Fighting Procedures: Fire responders must wear self-contained breathing apparatus and full protective equipment. Move fire-exposed containers if it can be done without risk to firefighters. If possible, control water run-off to prevent environmental contamination.

VI. Accidental Release Measures

Containment/Clean Up: Observe all personal protective equipment recommendations as described in section eight. Scrape all spilled materials for disposal. This material is not classified as a hazardous waste per 40 CFR 261. State and local laws may impose regulatory restrictions.

VII. Handling and Storage

Personal Precautionary Measures: Avoid breathing vapors in top of shipping container. Keep container closed. Use with adequate ventilation. Avoid contact with skin and clothing. Wash thoroughly after handling. Observe all PPE suggestions in section 8.
Storage: Keep container closed and store in a cool well-ventilated area. Avoid contact with water or moisture.

VIII. Exposure Controls and Personal Protection

Ventilation: Local and general ventilation is recommended.

Respiratory Protection: If engineering controls do not maintain airborne concentrations of hazardous ingredients below limits in Section II of this MSDS, then a NIOSH/NSHA approved organic vapor respirator should be used.

Eye Protection: Wear safety glasses with side shields as a minimum.

Skin Protection: Impervious gloves are suggested. Wash at mealtimes and end of shift.

IX. Physical and Chemical Properties

Boiling Point: not determined.

Vapor Pressure (mmHg): not determined.

Vapor Density (AIR=1): not determined.

Solubility in Water: Dilutable in wet stage.

Appearance: Colored paste.

Odor: Slight odor.

Specific Gravity (H₂O=1): 1.42.

Freeze Point: not determined.

Evaporation Rate (BuAc=1): not determined.

Volatile Organic Content: 10 grams/liter.

X. Stability and Reactivity

Stability: Stable.

Decomposition Products: Thermal decomposition products include carbon monoxide, carbon dioxide, nitrogen oxides, aldehydes, silicon dioxide, and various polymer compounds.

Incompatibility: Oxidizing acids, amines, strong caustics and water.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Contact with incompatible materials and exposure to extreme temperatures.

XI. Disposal Considerations

This material is not classified as a hazardous waste per 40 CFR 261. State and local laws may impose regulatory restrictions. Observe all federal, state, and local laws regarding waste disposal.

XII. Transport Considerations

Marine pollutant components: None.

DOT (USA): Caulking & Glaziers, NOI.

DOT Hazard Classification: None.

UN/NA Number: Not applicable.

Label Required: None.

XIII. Regulatory Information

TSCA: All chemical substances found in this product comply with the Toxic Substances Control Act inventory reporting requirements.

SARA 302: No components subject to 40 CFR 370.

SARA 304: None.

SARA 313: None present or none present in regulated quantities.

DSL: All ingredients are listed on the DSL.

XIV. Other Information

Disclaimer: The opinions expressed herein are those of qualified experts within the company. We believe the information contained herein is current as of date of this MSDS. Since the use of the product is not within the control of company, the user's obligation to determine the conditions of safe use.