

# Technical data

**CODE:**

8900

**PRODUCT:**

MONOLITH® 342-1

**NOTE:**

TECHNICAL DATA

**IMAGE:****LAST UPDATE:**

7/2021

# MONOLITH® 342-1

## Two-part methacrylate adhesive

### Characteristics

Monolith 342-1 is a two-part methacrylate adhesive designed for structural bonding of thermoplastic, metal and composite assemblies. Combined at a 10:1 ratio, it has a working time of 4 to 6 minutes and achieves 75% of ultimate strength in 15 to 18 minutes. Monolith 342-1 is the standard choice for composites bonding applications in the transportation industry, because it requires virtually no surface preparation. In addition, this product provides a unique combination of high strength, excellent fatigue endurance, outstanding impact resistance, and superior toughness. Monolith 342-1 is supplied in blue colour in ready-to-use cartridges and can be dispensed as a non-sagging gel using standard meter-mix equipment.

### Benefits

- > No surface preparation
- > High strength
- > 100% reactive
- > Excellent tolerance to off ratio mixing
- > Non-sagging

### Chemical resistance

EXCELLENT RESISTANCE TO:  
Hydrocarbons, acids and bases (3-10 pH), salt solutions

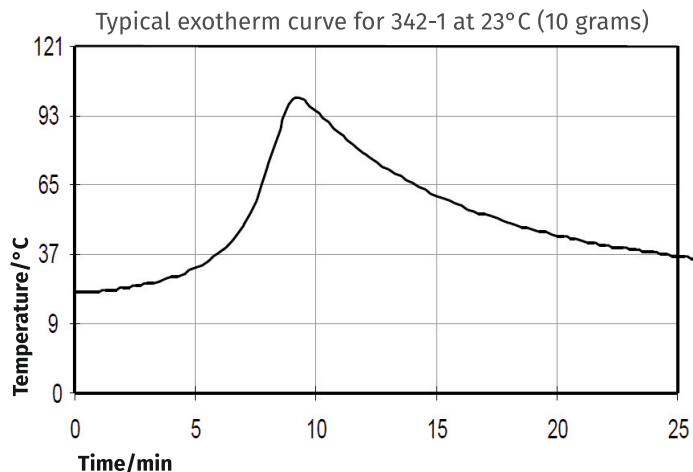
SUSCEPTIBLE TO:  
Polar solvents, strong acids and bases

### Applications

GOOD RESULTS ON FOLLOWING MATERIALS:  
ABS, acrylics, aluminium, fibreglass, gelcoats, PVC, polyesters (including DCPD modified), steel carbon, steel stainless, styrenics, urethanes (general), vinyl esters

\* Primer - suggested

### Temperature



### Physical properties (uncured) - room temperature

Viscosity
Colour
Density g/cm <sup>3</sup>
Mixing ratio by volume
Mixing ratio by weight
Curing in room temperature
Working time
Fixture time (handling strength)
Full cure
Flash point
Working temperature
Gap filling
Density after mixing

### ADHESIVE

100 000 - 125 000 mPa·s
off white
0,96
10
8,9

### ACTIVATOR

25 000 - 35 000 mPa·s
blue
1,09
1
1

### Physical properties (cured) - room temperature

Tensile strength, Mpa
Modulus, Mpa
Enlogation to break (%)
Shear strength (ASTM D1002), MPa

4 - 6 minutes
15 - 18 minutes
6 hours
+ 9°C
-55°C to +120°C
1 to 8 mm
0,97 g/cm <sup>3</sup>
18,6 - 20,6
517 - 689
100 - 125
12 - 15,5

## Handling

Monolith 342-1 adhesive (Part A) is flammable. Contents include Methacrylate Ester. Keep containers closed after use. Avoid skin and eye contact. Wash with soap and water after skin contact. In case of eye contact, flush with water for 15 minutes and get medical attention. Harmful if swallowed. Keep out of reach of children. Keep away from heat, sparks, and open flames.

**Note:** Because of the rapid curing features of this product, large amounts of heat are generated when large masses of material are mixed at one time. The heat generated by the exotherm resulting from the mixing of large masses of adhesive can result in the release of entrapped air, steam, and volatile gases. To prevent this, use only enough material as needed for use within the working time for the product and confine gap thickness to no more than 8 mm. Questions relative to handling and applications should be directed to DENCOP LIGHTING at +420 571 894 000

## Application

Monolith 342-1 may be applied manually or with automated equipment. Automated application may be accomplished with a variety of 1 to 1 meter-mix equipment delivering both components to a static mixer. For information concerning meter-mix equipment, contact Proxima Adhesives Sales Representatives. Pre-measured cartridges are also available, as well as the hand-held guns with which to dispense the adhesive. For more information, contact DENCOP LIGHTING at +420 571 894 000. To assure maximum bond strength, surfaces must be mated within the specified working time. Use sufficient material to ensure the joint is completely filled when parts are mated and clamped. All adhesive application, part positioning, and fixturing should occur before the working time of the mix has expired. After indicated working time, parts must remain undisturbed until the fixture time is reached. Automated equipment should be constructed of stainless steel or aluminum. Avoid contact with copper or copper containing alloys in all fittings, pumps, etc. Seals and gaskets should be made of Teflon, Teflon-coated PVC foam, ethylene/propylene or polyethylene. Avoid the use of Viton, BUNA-N, Neoprene or other elastomers for seals and gaskets. Clean-up is easiest before the adhesive has cured. Citrus terpene or N-methyl pyrrolidone (NMP) containing cleaners and degreasers can be used for best results. If the adhesive is already cured, careful scraping, followed by a solvent wipe may be the most effective method of clean-up.

## EFFECT OF TEMPERATURE

Application of adhesive at temperatures between 18°C and 26°C will ensure proper cure. Temperatures below 18°C will slow cure speed; above 26°C will increase cure speed. The viscosities of Parts A and B of this adhesive are affected by temperature. To ensure consistent dispensing in meter-mix equipment, adhesive and activator temperatures should be held reasonably constant throughout the year.

## Cleaning

For cleaning when uncured use popular solvents water with soap. After curing one can remove adhesive only mechanically.

## Storage

The shelf life of Monolith 342-1 adhesive and activator (Parts A and B) is 6 months from day of shipment from Dencop Lighting. Shelf life is based on continuous storage between 12°C and 23°C. Long term exposure above 23°C will reduce the shelf life of these materials. Prolonged exposure of activators, including cartridges which contain activators, above 37°C quickly diminishes the product's reactivity and should be avoided. Shelf life can be extended by refrigeration (7°C - 12°C). These products should never be frozen.

## Notes

Dencop Lighting strongly recommends all substrates be tested with the selected adhesive in the anticipated service conditions to determine suitability.

- Open Time: The maximum time after application of the adhesive to ensure surface wetting
- Working Time: The time elapsed between the moment Parts A and B of the adhesive system are combined and thoroughly mixed and the time when the adhesive is no longer useable. Times presented were tested at 23°C.
- Fixture Time: The interval of time after which surface being joined will support a 1 kg dead weight on a 12.7 mm overlap joint 25.4 mm wide without movement. Times presented were tested at 23°C.
- Resistance to chemical exposure varies greatly based on several parameters including; temperature, concentration, bondline thickness, and duration of exposure. The chemical resistance guidelines listed assume long term exposures at ambient conditions.
- In a typical bond line, exotherm temperatures will be lower than the temperatures shown.
- Urethane-modified super-weathering gelcoats may require an alternate adhesive. As with all substrates, these gelcoats should be tested with the selected adhesive to determine suitability.
- Exterior applications require the use of coatings or primers that will inhibit oxidation of the steel.

Cartridges: 380 ml

All information on this data sheet is based on laboratory testing and is not intended for design purposes. Proxima Adhesives makes no representations or warranties of any kind concerning these data. Due to variance of storage, handling and application of these materials, Proxima Adhesives cannot accept liability for results obtained.

This Technical Data Sheet cancels all previous similar documents.