ALSTONE®
SILICONE

# GP-300

General Purpose Sealant

**TECHNICAL DATA SHEET**

**Revision:- 01/07/2013**

## Description

ALSTONE GP-300 Silicone Sealant is a High Grade cost effective, general purpose, acetic cure silicone sealant offering long term durability in general sealing and general glazing applications. It may be used to glaze, seal and fill joints on:

- Windows
- Skylights
- Signs
- Internal/external fixtures and fittings
- Doors etc.

## FEATURES

- Superior clarity.
- Easy to use – one part, no mixing required. Can be dispensed with an ordinary caulking gun.
- Cures to a strong, flexible seal capable of withstanding movement in and around the joint.
- Acetic Cure; Fast Cure.
- Can be applied in any season.
- Excellent resistance to weathering, vibration, moisture, ozone, temperature extremes, airborne pollutants, cleaning detergents and many solvents.
- Non-slumping; can be used in vertical and overhead joints.
- Choice of colors: Clear, White and Black.

## SUITABLE FOR SEALING

• Glass • Aluminum • Painted Surfaces • Ceramics
• Fiberglass • Non-oily wood etc.

## LIMITATIONS

- Do not use for structural glazing.
- Not recommended for use on materials where the cure by-product (acetic acid vapor) may cause corrosion, discoloration or where the sealant may affect their appearance (eg. galvanized iron, copper, brass, zinc-coated steel, concrete, cement, brick, limestone, marble and similar highly porous stone finishes).
- Not recommended for continuous water immersion applications.
- Not recommended for joints exceeding ±25% movement.
- Not recommended for use on polycarbonate plastic sheeting. Suitability for use on other types of plastic should be tested prior to application.
- Not recommended for use in below ground joints or trafficable joints where abrasion and physical abuse are encountered.
- Do not use in the sealing or construction of aquariums.
- Paint will not adhere well to sealant (paint before applying sealant).
- Should not be applied to materials that bleed plasticisers or solvents or release by-products that may inhibit its cure, affect adhesion or discolor the sealant (eg. bituminous based adhesives and coatings).
- Do not clean or treat the sealant with materials, solvents or cleaning agents that may affect or discolor the sealant, particularly during sealant cure.
- Do not apply at temperatures below -5°C.
- Do not use in the manufacture of Insulated Glass (IG) Units.
- All organically extended silicone sealants exhibit higher shrinkage than 100% silicone sealants.
- Should not be used as an interior penetration fire stop sealing system.
- Not recommended for direct contact on the reflective coatings on mirrors.
- Polyester powder coat paint exhibits a highly variable wax content on the surface. Ensure thorough solvent cleaning.
- Sealant cures by contact with moisture vapor in the air. Not recommended for use in closed or confined areas where sealant cure may be inhibited by lack of air.



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## TYPICAL PROPERTIES

| NOTE: These values are not intended for use in preparing specifications. | |
|---|---|
| **As supplied- tested at 25°C, 50% relative humidity** | |
| Flow, Sag or Slump | Nil |
| Approximate Working Time, Minutes | 6/8 |
| Tack Free Time, Minutes | 15-20 |
| In-Depth Cure at 25°C 2mm | |
| Depth/Day | |
| **As cured- After 7 days at 25°C, 50% relative humidity** | |
| Durometer Hardness, Shore A, Points | 25 |
| Ultimate Tensile Strength, MPa | 1.35 |
| Temperature Stability, °C | -45 to +150 |
| Movement Capability, Percent | ±25 |

## USABLE LIFE AND STORAGE

Store in original unopened containers in a dry place. Temperature should not exceed 27°C for prolonged periods. Previously opened cartridges may be used, provided still within the "Use By" date, by simply removing any cured sealant from the nozzle.

## PACKAGING

Supplied in standard size plastic cartridges with net volume of 280ml, which fit ordinary caulking guns.

## SIX STEPS TO SURE SEALING

STEP 1: CORRECT JOINT DESIGN: Correct joint design minimizes stresses on the sealant, enables optimum sealant movement capability, facilitates sealant application and minimizes the potential for sealant splitting and voiding by enabling cure by-products to exit from the joint. Guidelines are: **1.** Minimum joint width of 6mm **2.** Minimum joint depth of 6mm **3.** For larger joints the width of the joint should be greater than the sealant depth **4.** Avoid 3 sided adhesion; Apply backer rod or bond breaker tape in the base of the joint to ensure the sealant is only bonded to the sides of the joint and is free to move to its full capacity under joint movement.

STEP 2: CLEAN ALL JOINT SURFACES: Substrate surfaces must be completely clean, dry and sound. Completely remove any loose debris and/or old sealant.

General recommendations are:
(a) For Non-porous surfaces such as glass and painted aluminum:

- Solvent wipe the joint surfaces using a non-oily solvent such as methyl ethyl ketone, white spirits or mineral turpentine on a clean white lint free cloth to remove any oils and contaminants.
- Immediately wipe with a second dry cloth to remove any traces of solvent and contamination.

STEP 3: INSTALL BACKING MATERIAL: Backer rod (eg. closed cell polyethylene type or open cell polyurethane foam type) or similar material (eg. low tack polyethylene tape for shallow joints) can be used in the base of the joint to control sealant depth and avoid 3 sided adhesion by preventing adhesion to the base of the joint.

STEP 4: MASK ADJACENT SURFACES WITH MASKING TAPE: Masking will ensure a clean, neat appearance and reduce clean up by protecting surrounding areas from excess sealant.

STEP 5: APPLYING SEALANT:

- Cut tip off the cartridge.
- Cut nozzle at 45° angle to the desired shape and size.
- Screw nozzle onto cartridge.
- Place cartridge in caulking gun. Air-operated or hand-operated caulking guns can be used.
- Apply sealant into the base of the joint so that it completely fills the joint, wetting both sides. Do not simply lay a bead on the surface as the sealant will not penetrate the joint under its own weight.

STEP 6: TOOL JOINT AND REMOVE MASKING TAPE: • Tool the surface of the joint immediately after sealant application to provide a smooth even finish and to ensure the sealant wets the sides of the joint.

- Tooling should be completed in one continuous stroke before the sealant forms a skin (ie; within the working time). A tool with a convex profile is recommended to keep the sealant within the joint. When sealing horizontal joints tool the sealant so that any liquids (eg. rain water, cleaning solutions) do not collect and pool on top of the sealant.
- Do not use soap or water as tooling aids.
- Remove masking tape immediately after tooling and before the sealant skins.

- After a skin has formed, do not disturb the joint for 48 hours. Avoid contact with various cleaning agents or solvents (eg. bleach) whilst sealant is curing.
- Uncured sealant can best be cleaned from tools using commercial solvents such as xylene, toluene or methyl ethyl ketone. Mineral turpentine will suffice if available. Observe proper precautions when using flammable solvents. On porous surfaces allow sealant to cure before removing by abrasion. Cured sealant is not soluble and must be trimmed with a blade, avoid undercutting the seal.
- Sealant releases acetic acid (vinegar-like odor) during cure. Once cured this odor disappears. Fully cured sealant is not hazardous.

## REQUIRED TESTING IN THE APPLICATION

It is the responsibility of the end user to thoroughly test any proposed use of the sealant and independently conclude satisfactory performance in the application.

## MAINTENANCE

No maintenance is needed. If sealant becomes damaged, replace required portion. Ensure cured sealant is clean.

## HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Alstone has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area.

For further information, please consult your local Alstone representative.

## USAGE RATE TABLE

The table below provides a guide to the linear meters per cartridge for various joint sizes. NOTE: actual sealant usage will vary depending on such factors as joint geometry, backer rod placement, tooling and wastage at the job site.

| JOINT DEPTH (mm) | JOINT WIDTH (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | **6** | **8** | **10** | **12** | **15** | **20** | **25** |
| **6** | 8.3 | 6.2 | 5 | 4.1 | 3.3 | 2.5 | 2.0 |
| **8** | N/O | 4.6 | 3.7 | 3.2 | 2.5 | 1.8 | 1.5 |
| **10** | N/O | N/O | 3 | 2.5 | 2.0 | 1.5 | 1.2 |
| **12** | N/O | N/O | N/O | 2.0 | 1.6 | 1.2 | 1.0 |

N/O: Not optimum joint design for best sealant performance.

## FURTHER INFORMATION

For additional information or clarification on any information contained either on the product packaging, this product data sheet or the MSDS, please The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that products are safe, effective, and fully satisfactory for the intended end use. Alstone sole warranty is that the product will meet the Alstone sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Alstone specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Unless Alstone provides you with a specific, duly signed endorsement of fitness for use, Alstone disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.