

Si

SILANES

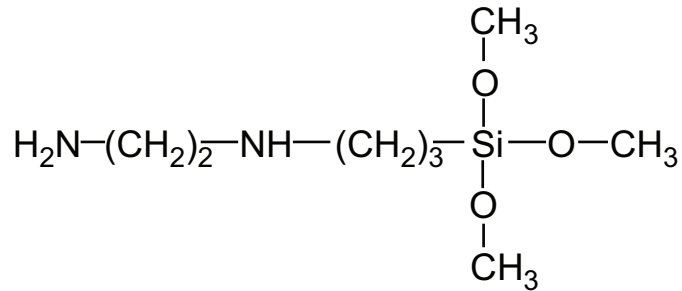


UCT

**A0700**

THE UNIVERSAL COUPLING AGENT

**INNOVATION THROUGH CHEMISTRY**

**A0700****Name:** N-(2-Aminoethyl)-3-aminopropyltrimethoxysilane**CAS#:** 1760-24-3**Molecular formula:**  $\text{H}_2\text{N} - (\text{CH}_2)_2 - \text{NH} - (\text{CH}_2)_3 - \text{Si} - (\text{OCH}_3)_3$ **Structure:****Properties:**

Purity	97%
Color	100 APHA Max
Flash Point	120° C
Specific Gravity	1.01 @ 25° C
Boiling Point	140° C /24 mm
Refractive Index	1.443 @ 25° C

A0700 is a coupling agent. Coupling agents are used to bond an inorganic phase (material) to an organic phase (material).

**Inorganic Phases can be materials such as:**

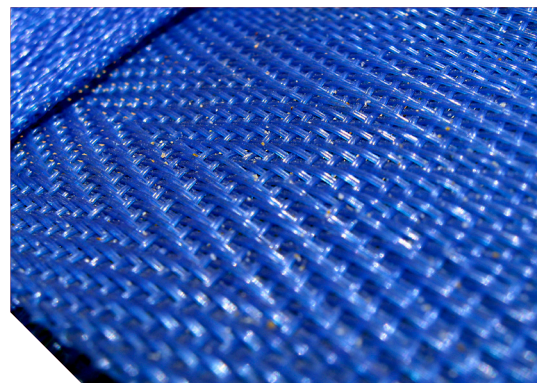
Refractories - Silica, Alumina, Titania  
 Glass  
 Wood Products  
 Metals - Aluminum, Zirconium, Tin, Titanium, Copper, Iron

**The material to be bonded to the inorganic phase includes compounds such as:**

Diallylphthalate	Cellulosics	Polysulfone
Epoxy	Polyamide-imide	Polyvinyl butyral
Imides	Polyamide	Polysulfides
Melamine	Polycarbonate	Epichlorohydrin
Phenolic	Polyethylene	Silicone
Polyester	Polyphenylene oxide	
Urethane	Polyphenylene sulfide	

## Applications

- Diagnostics and study of biological materials
  - Coating for Petri-Dishes / wire mesh / Glass slides
  - Attached to hematite and placed in a solution of bio- attributes; the bio-matter integrates with the A0700 matrix. The total mass is removed and evaluated by a magnet.
- UV degradation resistance - added to nano-particles of zinc oxide (ZnO)
- Adhering rubber mats to iron (steel) rods to produce commercial rollers
- Primer coating for epoxy coatings
- Immobilizing Cu(II) catalysts on silica
- Added to the fabric of automobile interiors - improves wear-resistance of automobile seats



## Preparation of Solution

1. Prepare a 1% to 2% A0700 solution using ordinary tap water (hard water won't work – use DI water instead).
2. Stir the solution well and allow it to sit for 5 minutes before using.
3. Apply the solution to the object to be coated (typically the inorganic substrate) by immersion, spraying or painting.
4. Allow the solution to remain in contact with the object for 1 to 2 minutes.
5. Quickly rinse the treated object with water to remove the excess silane solution.
6. Cure the coating by drying at 80° C to 100° C for 3 to 5 minutes or until dry. Room temperature cure may be accomplished by air drying for 24 hours with relative humidity  $\leq 65\%$ .
7. Place the treated phase in contact with the other phase and add heat to promote adhesion.

## Stability

- Only prepare a volume of solution with water that can be used in a day. If unused solution is stored, the silane will condensate with itself to form a useless mass (glob) of silicone.
- Shelf life is 6 months from date of manufacturing.

## Storage

- The bottle should be stored in a cool, dry location, away from light.
- After opening the headspace at the top of the bottle should be purged with nitrogen prior to recapping and storing.

**Available Sizes:** 25g to 55gal

# SPECIALTIES

## PRICES AND TERMS

Our prices are subject to change without notice. The price in effect when we receive your order will apply. All prices are in US Dollars and are F.O.B. Bristol, PA 19007. Terms of payment are net 30 days.

## MINIMUM ORDERS

We welcome all orders, therefore, we do not have a minimum order requirement. When ordering, please include your purchase order number, complete "Ship To" and "Bill To" address, catalog number, quantity, and description of product(s). Also include your name and a phone number where you can be reached should we have any questions concerning your order.

## SHIPMENTS

Normal process is shipment within one business day after receipt of an order if material is in stock. Unless special shipping arrangements are made, all orders will be sent via Federal Express Ground. Shipping and handling charges (freight, insurance, hazardous materials fee) will be added to the invoice unless requested by the customer.

## SPECIAL PRICING

We offer special pricing for volume purchases and standing orders. Please call a sales representative for more information on special pricing qualifications.

## RETURN POLICY

Our sales staff will process your return. Before returning merchandise, please call to obtain a return authorization number from a sales representative. We will need to know the reason for the return, date of purchase, purchase order number, invoice number, catalog number and lot number of product returned in order to issue a return authorization number.

## WARRANTY

All products manufactured by UCT are guaranteed against defects in materials and workmanship for a period of 90 days after shipment. UCT will replace any items that prove to be defective during this time period. The exclusive remedy requires the end user to first advise UCT of the defective product by phone or in writing and must include order number, the lot number and the shipping date.

To initiate this action, photographs of the product, including packaging and labeling of the containers, must be submitted to the UCT Representative for approval. With approval a return authorization can be initiated, and must be received within 30 days. Once the materials arrive at UCT a further inspection of the materials must be completed and accepted by our Quality Manager prior to further action of credits or replacement. UCT's total liability is limited to the replacement cost of UCT products.

This warranty does not apply to damage resulting from misuse.

## Contact Us

Phone: 215.781.9255  
800.541.0559  
Fax: 215.785.1226

UCT, Inc.  
2731 Bartram Rd.  
Bristol, PA 19007

Email: [uct\\_specialties@unitedchem.com](mailto:uct_specialties@unitedchem.com)  
Web: [www.unitedchem.com](http://www.unitedchem.com)

