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## TECHNICAL INFORMATION

### OMEGA-PRINT™ Fuming

Catalog Nos. CNA102, CNA103, CNA104, CNA105, CNA106, CNA108A, CNA109A

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#### INTRODUCTION

A latent fingerprint is a residue compound consisting of moisture (water), oils, salts, amino acids, and trace amounts of other chemicals. When fumes from a cyanoacrylate ester come in contact with the latent print, the vapor combines with the water component of the residue and polymerizes forming a hard surface that conforms to the ridge lines of the print. While not totally indestructible, this developed latent will in most cases withstand some punishment.

The developed latent print is white in color and, therefore, difficult to see on light-colored objects. Due to its rigidity, however, it may be dye stained or dusted with a contrasting latent print powder with little fear of disturbing the detail of the print.



Nos. CNA103 and CNA102

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### OMEGA-PRINT™—Cyanoacrylate in Liquid Form

OMEGA-PRINT™ is simple to use and very effective. Use it to develop prints on most non-porous materials such as plastics, metal (finished and unfinished), glass and finished woods. It is not recommended for use on most porous materials or old fingerprints. Processing time and sensitivity are increased with controlled high humidity (80%) through the use of a fuming chamber such as SIRCHIE's No. FR150 and FR175. The developed latent print may be enhanced with magnetic powder, fluorescent powder, Basic Yellow, Ardrex, Rhodamine 6G and SIRCHIE's *KRIMESITE™ IMAGER*. Controlled humidity may be supplied using the No. PUM100 Portable Humidifier.

### PRECAUTIONS

- Please read through all instructions before attempting to use OMEGA-PRINT™.
- To increase shelf life, keep OMEGA-PRINT™ Fuming Compound tightly sealed and refrigerated when not in use.
- Before using this kit, consult the appropriate Material Safety Data Sheets (MSDS) found on our website at [www.sirchie.com/support](http://www.sirchie.com/support).
- Should skin bonding occur, peel (do not pull) apart. Apply small amounts of acetone or nail polish remover if necessary.
- Avoid inhalation of vapors. Use only in a well-ventilated area or in a sealed developing chamber.
- Vapors given off by the fuming process may cause eye irritation—wear protective goggles.
- If eye contact occurs, flush with water and get medical attention.
- Do not wear contact lenses when using this product.

## PROCEDURE

1. For maximum effectiveness, a fuming chamber (such as No. FR150 or FR175) or enclosure is needed to contain the vapors produced during the fuming process. Heavy-duty plastic bags, plastic containers, or glass fish tanks can be used for this purpose. Regardless of what kind of device is used, be certain that it can be tightly sealed during the fuming process.
2. Under experimental conditions, unaided No. CNA102 OMEGA-PRINT™ Cyanoacrylate Fuming Compound has been found to develop latent prints in approximately 30-45 minutes, depending on the size of the container, humidity, and the age of the latent prints. OMEGA-PRINT™ was formulated, however, for use with a dispersal device. No. CNA104 OMEGA-PRINT™ Dispersal Pads serve a dual purpose. They are NOT treated with sodium hydroxide or other chemicals. These pads cause the compound to disperse permitting uniform fuming, and the cellulose content accelerates the release of fumes.
3. When fuming a large immovable object such as a door, window, etc., a tent-like enclosure may be erected. Using an object like a large plastic trash bag, tape the open end of the bag to the surface leaving one side open to permit the insertion of the fuming compound.



No. CNA104



No. CNA106

4. To use OMEGA-PRINT™ with Dispersal Pads, proceed as follows:
  - a. Place a control print on a smooth black surface such as a latent print-backing card inside the fuming enclosure along with the evidence to be examined. It is also good practice to place a cup of warm water inside the enclosure to reconstitute the water component of any latents present.
  - b. Using an enclosure as previously described, place a CNA104 dispersal pad on a fuming tray (No. CNA106) or piece of aluminum foil and place the tray in the enclosure. Carefully add 2 grams of No. CNA102 Fuming Compound for each pad used (shown to the right). Apply the fuming compound evenly in a swirling motion across the entire surface of the pad. Seal the enclosure immediately. A white smoke may be visible within a few seconds. This is a normal reaction. Since the fuming process generates heat and the fuming compound reacts with certain plastics, be certain that no part of the enclosure actually touches the compound or the dispersal pad.
  - c. After 10 to 15 minutes of fuming (less time if prints are known to be fresh), inspect the control being fumed for latent prints. If none are visible, reseal the enclosure and allow the process to continue. If no prints are visible after an hour, use a fresh dispersal pad and an additional 2 grams of fuming compound and repeat the process.



The OMEGA-PRINT™ formula, used according to directions, will not overdevelop prints. It is purposely designed for a slow release of fumes permitting greater detail. Accelerators or generators have been used to speed up the fuming reaction. Our laboratory tests indicate that using sodium hydroxide-treated pads will reduce fuming time, but the prints will overdevelop, filling in between the ridges. Repeated testing indicates that slower development will, over the long run, produce more stable, identifiable prints.

Since the length of fuming time is influenced by many factors, it is not unusual to hear of time periods of a week or more. As a general rule, however, if prints do not appear after two hours of fuming time, repeat the process using fresh dispersal pads and OMEGA-PRINT™ Compound. Experiments prove that persistence pays if there is a latent print present to begin with.

#### Lifting Developed Prints

Straight OMEGA-PRINT™ fuming produces white developed latent prints, which will be difficult to see on light-colored surfaces. Due to the hardness of the developed prints, dusting on most surfaces with a contrasting color of latent fingerprint powder is recommended. *NOTE: Magnetic powders are most effective on nonferrous material.*

OMEGA-PRINT™ developed latent prints may be lifted directly without coloring powder. Certain adhesives, however, have a tendency to absorb the lifted latent several hours after lifting. Use only SIRCHIE Rubber Fingerprint Lifters or GELifters™ to make a lift without adding powder. The rubber lifter has a soft, uncured rubber surface, and GELifters™ provide a gelatin lifting medium. Neither product will damage paper or thin plastic bags when lifts are made. In any event, it is preferable to photograph developed prints prior to lifting attempts.

#### Enhancing an OMEGA-PRINT™ Latent

Due to the degree of hardness of an OMEGA-PRINT™ latent, it may be dusted with a contrasting color of latent fingerprint powder and lifted several times without damage. Enhancement of latents may also be achieved with one of several dyes that are currently available to print technicians. These include



Nos. CNA108A and CNA105

Basic Yellow, Ardrox, Rhodamine 6G, and the *KRIMESITE™ IMAGER*. Contact the factory for more information on dye-staining techniques.

### **CLEANUP**

No. CNA108A OMEGA-PRINT™ Cleaning Compound is a must when processing surfaces for latent fingerprints with cyanoacrylate compounds. This solvent dissolves super glue residues from most surfaces. It is excellent for cleaning the inside of cyanoacrylate fuming chambers. Follow directions on the container. *NOTE: Do not use on plastics or vinyl as damage may occur.* OMEGA-PRINT™ Cleanettes (No. CNA105), however, are great for cleaning super glue residues from glass or plastic fuming chambers. They are individually pre-moistened with a cleaning compound formulated for dissolving cyanoacrylate compounds from most surfaces.

**Re-Order Information:**

- CNA102 .....OMEGA-PRINT™ Fuming Compound, 20g bottle
- CNA103 .....OMEGA-PRINT™ Fuming Compound, 16 oz. (454g) bottle
- CNA104 .....OMEGA-PRINT™ Dispersal Pads, package of 100
- CNA105 .....OMEGA-PRINT™ Cleanettes, package of 100
- CNA106 .....OMEGA-PRINT™ Disposable Fuming Tray, package of 85
- CNA108A.....OMEGA-PRINT™ Cleaning Compound, 8 oz. w/spray head
- CNA109A.....OMEGA-PRINT™ Cleaning Compound, 4 oz. w/out spray head

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