



## **Waterborne Acrylic Traffic Paint ALT-100 White, ALT-101 Yellow**

Allstates Coatings Company waterborne striping paints ALT-100 and 101 are formulated with 100% acrylic polymer (HD21-a or DT-400) emulsions. The paints meet Texas Department of Transportation Specifications along with many other governmental agencies and are exceptionally tough, durable and attractive. They are suitable for application on surfaces such as concrete, bituminous, asphalt, tar and previously painted areas. They are ready to use on parking lots, traffic islands, walkways, aisles, fire lanes, safety areas, and related surfaces such as airport runways, roadways and highways.

### **GENERAL INFORMATION:**

#### **1. HAZARDOUS WASTE**

Most waterborne paints do not contain lead, chrome, cadmium, or other dangerous metals and therefore are not considered hazardous waste. Some waterborne paints do contain lead chromate (**MCY**). Check your labeling and MSDS to determine which type of paint that you are using

#### **2. FLAMMABILITY**

Waterborne paints are not regulated by **DOT** and are not considered flammable. They do not require placards. Sprinklers are not required for inside storage in most areas. Check your zoning and local codes.

#### **3. STORAGE**

The shelf life is nine (9) to twelve (12) months depending on how it is stored.

Waterborne traffic paints consist of a pigmented latex emulsion in a water system. **THEY WILL FREEZE!** While all paints have a freeze/thaw protection in them, they must be stored above 33 degrees F. and preferably indoors. Allowing paint to freeze can cause the paint to become unstable and unusable.

When storing outdoors during the warmer months, store out of direct sunlight if possible.

#### **4. CLEANING MATERIALS**

When wet, waterborne paints can be cleaned with plain water, therefore the main cleaning solvent is water.

When paint is too dry for plain water to work, general household cleaners, such as "Fantastic", or a good industrial soap can be used. "Windex" works well on small parts like fan caps or hose connections. When these do not work, use a mixture of 75% water and 25% Methanol to clean dried paint.

## 5. APPLICATION TEMPERATURES & DRYING TIMES

Waterborne paints dry or cure in a two-stage process. In the first, the water evaporates and the paint dries to a no track condition. This evaporation is dependent on temperature and humidity. Low temperature and high humidity give longer drying times. In the second stage, the emulsion coalesces after the water is gone from the film. This process gives you the durable film. This process takes two (2) hours at temperatures above 60 degrees F. Paints that are rained on or the temperature drops before this coalescing is complete will have their durability severely reduced.

Fifty (50) degrees F. is the recommended minimum application temperature for surface and air temperatures. The paint will form a film down to 38 degrees F., but the durability will be severely reduced. If applied at temperatures below 50 degrees F. extended dry to no pick up times may be a problem. A good rule of thumb is that it is too cold to paint when lows at night reach 35 degrees F. If you must paint on colder days, paint when temperatures are rising and stop when high for the day is reached. Two hours to form a film at or above 60 degrees F. may be three (3) to five (5) hours at forty (40) to fifty (50) degrees F.

Paints may be heated to give optimum drying times and consistent flow viscosities. Set the glycol temperature on the furnace at 160 degrees F. maximum. Set the paint temperature between 100 and 130 degrees F. depending on the need for heat. Temperatures above 130 degrees F. on the paint do not give any benefit. Actually above 130 degrees F. is detrimental.

Since drying times are dependent on temperature and humidity, if faster drying times are needed, reduce the film thickness from 15 mils to 13 mils and increase the glass beads from 6 pounds to 8 pounds. This will give much better results than turning up the heat.

Thicker applications increase drying and cure times unless designed for heavier application. Stay within the 13 to 16 mil range with standard paints. Paints designed for 20 to 30 mil application will be designated as such.

Occasionally you will experience drying in the fan cap. This usually occurs on a low humidity day with a steady wind blowing. First try lowering the heat. If this does not solve the problem, add two (2) gallons of water for each 100 gallons of paint in your tank and agitate until mixed in well. This should eliminate the problem.

## 6. WEATHER CONDITIONS

Waterborne traffic paints are sensitive to wet pavements and rain. Best results are obtained when pavements are dry (24 hours since measurable rain) and no rain occurs for four (4) hours after application.

### **SINCE WE CANNOT CONTROL THE WEATHER, HERE ARE SOME REASONABLE RULES OF THUMB:**

- A. Do not stripe on visually wet pavement even though it has not rained.
- B. Lines need at least one (1) hour to dry before any rain. If it looks threatening don't chance it. You may have to repaint.
- C. If it does rain a significant amount, wait until the next day before beginning to paint.
- D. **PAINTS WILL NOT DRY BELOW THE DEW POINT!** If painting at night or early morning, check your weather news for the dew point temperatures. Wait until above dew point temperature before starting or stop when dew point is reached at night. Dew point is pure physics and there is nothing that you can do to change it. If you paint below dew point, you will have to cone until the paint dries.

## 7. APPLICATION RATES

Manufacturer or specification application rates should be adhered to. Too thick or too thin applications do not give the desired results. Normal thickness ranges are: 9 to 11 wet mils for parking lots, 14 to 16 wet mils for standard road marking, and 25 to 30 wet mils for durable thick applications. Drop on glass beads are applied at the rate of 3 to 4 pounds per gallon for parking lots and 6 to 8 pounds per gallon for standard road marking. Apply specialty paints designed for thicker application using Visibeads according to manufacturer's specifications.

## 8. MATERIAL TEMPERATURES

For best results, waterborne paints may be heated to 100 to 130 degrees F. Viscosity and ease of spraying are dependent on material temperatures especially on cooler days when paint is cold from being stored outdoors. Increasing the heat above 130 degrees F. does no good. **DO NOT EXCEED 150 DEGREES F. ANYWHERE IN THE PAINT SYSTEM. EXCESSIVE TEMPERATURES CAN CAUSE THE PAINT TO GEL WITH DISASTROUS RESULTS. YOU MIGHT HAVE TO REPLACE HEAT EXCHANGERS !** All paints are totally stable below 150 degrees F. Always cool down the heat exchangers before shutting down for the day or extended periods of time during the day.

## 9. APPLYING OVER EXISTING MARKINGS

Waterborne paints have not exhibited problems when applied over old markings that were in good condition. I.E. no chipping, delaminating, or peeling. Always remember that the adhesion of your new stripe to the road surface is no better than the stripe that you are painting over. Painting over old fast dry alkyd/solvent base paints will sometimes make the old stripe come loose from the surface. Use good judgment before applying over old stripes that have been recoated many times. **WATERBORNE PAINTS PERFORM EQUALLY WELL ON BOTH NEW CONCRETE AND ASPHALT. USE DISCRETION WHEN PAINTING OVER SEAL COAT, SLURRY SEAL, AND NEW CHIP SEAL.**

## 10. HANDLING OF PAINT

Care must be taken when loading to prevent air from entering the system. After filling the tanks, fill the plumbing with paint to void air or rinse water. Always agitate the paint before loading or with the agitators in the paint tank. If loading less than a full tote or drum, always agitate or circulate prior to loading. Almost all containers have a water float on the top to reduce skinning. This is part of the paint and needs to be mixed in before using the material.

**DO NOT EXCEED THE MANUFACTURER'S RECOMMENDED MAXIMUM PAINT TEMPERATURE EITHER IN STORAGE OR APPLICATION.**

**GALVANIZED, BRASS, COPPER, ALUMINUM, AND MILD STEEL WILL REACT WITH WATERBORNE TRAFFIC PAINTS. CONTACT WITH THESE METALS WILL CAUSE THE PAINT TO REACT TO A HARDENED STATE. ALL PIPING, VALVES, HEAT EXCHANGERS, AND TANKS SHOULD BE STAINLESS STEEL.** PVC plastic may be used where the contents are not under pressure. Teflon lined hoses work best. Be sure that fittings, reducers, and strainers are stainless if they come in contact with the paint. Use stainless fluid tips and fan caps.

## 11. DAILY MAINTENANCE OF EQUIPMENT

Do not run tanks dry! An empty tank allows air into the system causing a "tree ring effect" inside the plumbing. After this happens several times, the system will need to be torn down and completely cleaned. To prevent this if you run out of paint, reload the tanks and pump paint through the entire system until all piping is full. At the end of each daily use, remove the gun shrouds and fan atomizing caps and clean with soap and water. Clean the fluid tips with a wet rag or brush. If paint is dried so that soap and water will not clean, use a mixture of 25% Methanol and 75% water to clean dried paint. A good soap is a household cleaner like "Fantastic".

For overnight storage, completely fill the paint tanks with paint. To prevent skins (paint drying on the surface) pour some water (1/2 gal to 1 gal) on top of the paint after the truck has been parked. Check for skins on paint in the tanks each day before starting. If any skins are present, remove them before turning on the agitators. It is important not to inject water into the heat exchangers except during cleaning. Leave exchangers full of paint. It is necessary to turn off the heated glycol to the heat exchangers prior to daily shutdown to allow the paint to cool in the exchanger. Fifteen (15) minutes prior to shutdown will sufficiently cool the system down.

## 12. REGULAR AND PERIODIC CLEANING

For weekend storage, flush water through the heated hoses and out the paint guns. Clean the strainer at discharge end of the heat exchanger. It is much easier and cleaner after they have been flushed out.

Periodically remove strainer at the discharge of paint tank, clean and replace. Flush the entire system with water. Clean and check the heat exchanger at this time. After flushing and cleaning, fill the entire system with

paint to remove trapped air and water. This should be done every two weeks of operation, or more often if needed.

### 13. END OF SEASON CLEANING

Flush complete paint system with water. If needed to remove any dried residue, use a mixture of 75% water and 25% Methanol. After flushing, remove all drain plugs to prevent any settling into low spots.

Remove ends of heat exchangers and inspect to determine if additional cleaning is necessary. Over a period of several months of operation, paint will gradually collect in the heat exchangers. It may harden or remain in a putty-like condition, which will plug the tubes and interfere with normal paint flow. The heat exchanger cover can be removed and the end unbolted. Be sure to remove the exchanger ends by pulling them directly away from the main body. **DO NOT SLIDE THEM!** Some heat exchangers have small reinforcing pins and tube sheet dividers which are designed to hold the gaskets in place and can be bent or broken unless care is taken when removing the ends. The tubes should be individually routed clean. If using a drill bit be careful not to damage the tube.

After cleaning, the exchanger should be pressure tested (100 PSI) for damaged tubes. Any tubes that leak air should be soldered shut on both ends. The exchanger is then blown out, washed with water and reassembled using new gaskets.

It might be necessary to scrape off the paint buildup on the tank walls and agitators. Tanks should be left empty with no winter carry over of paint. The entire system should be flushed, cleaned, drained, and put back together prior to storage for winter.

#### PACKAGING:

5 gallon pails, 55 gallon drums and 250 and 275 gallon totes.

| Material Specifications:   | Requirements: |
|--|---------------|
| Weight per Gallon @ 77°F, ASTM D1010, (lbs) .....                    | 12.80 – 14.00 |
| Viscosity @ 77°F, (Kreb's Stormer Unit) for ambient application..... | 80 – 90 KU    |
| % Weight solids .....  | 75.00 ± 3.00  |
| % Volume solids.....   | 58.00 ± 3.00  |
| % Pigment solids.....  | 57.00 ± 3.00  |
| Dry Time (10 mil. - wet)   |               |
| @ 70°F & 57% R.H. Dry to no pick-up .....                            | 5-10          |
| VOC, grams/liter .....   | 95            |
| Fineness of dispersion, Hegman .....                                 | 4.0           |
| pH.....  | 9.6 min.      |
| Shelf Life (yrs).....  | 9 – 12 months |

**CAUTION:** **KEEP FROM FREEZING.** Do not store in direct sunlight. Container should be closed when not in use. Keep out of the reach of children. Because of alkali inherent in concrete surfaces there is no product guarantee on these. *Refer to the SDS sheet before use. This information is to assist customers in determining if this product is suitable for the proposed application, and to satisfy themselves as to the suitability of the contents. Nothing herein shall constitute a warranty, express or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent implied. Published technical data and instructions are subject to change without notice. Contact your Allstates Coatings representative for additional technical data and instruction.*