

TECHNICAL BULLETIN

Paint Storage Best Practices

When storing paints before or after a project, it is important to take the temperature at which the product is stored into consideration. When temperatures are too hot or too cold, a product's shelf life could be shortened. For example, water-based paints stored at temperatures below freezing (32°F) can cause the paint to gel, especially after numerous freeze/thaw cycles. On the other hand, hot temperatures of greater than 110°F can cause paint to form skins on the top layer, create settling, and ultimately cause the paint to gel over time. We have included some precautionary measures to ensure that you avoid putting the paint into storage conditions that could cause issues with the product.

Shelf Stability in Water-Based Paints

Latex paint consists of dispersed pigment and resin, along with some additives and liquid, which is mainly water. When the paint is still in its liquid state, the particles of pigment and resin are distributed and spaced out. During paint storage, especially when exposed to extreme cold or hot temperatures, the stability of the paint system can be stressed. This stress can result in the paint changing in the following ways:

- Increased or decreased paint viscosity (paint gets thinner or thicker)
- Skinning or seeding of paint
- Syneresis/Phase Separation (layer of semi-clear liquid on top of paint with thicker bodied paint material beneath)
- Settling of pigments (soft or hard packing of pigments dropping out of the system – similar to how sand settles in a glass of water). With soft settling, pigment can typically be stirred or shaken back into the system. However, in hard settling the pigments cannot be stirred or shaken back in, resulting in bad paint that is different in gloss, viscosity, and performance.

Another factor that makes storing products at moderate temperatures extremely important is for coatings containing reactive pigments. Many high performance water-based coatings for specific applications, such as light industrial, direct-to-metal, specialty primers, and topcoats for corrosion resistance or stain blocking, have reactive pigments. These reactive pigments are utilized to provide increased protection and performance, such as corrosion resistance or stain blocking, and are much more difficult to stabilize than typical pigments used in traditional architectural paints.

In order to help you identify Dunn-Edwards products that fall into this category of coatings containing reactive pigments, we have listed them below in alphabetical order by product code so that you take extra precautions in storing them.

1. **ARISTOSHIELD® Eggshell (ASHL30)**
ARISTOSHIELD® Semi-Gloss (ASHL50)
ARISTOSHIELD® High Gloss (ASHL70)
2. **BLOC-RUST® Premium (BRPR00)**
3. **EZ-PRIME® Wood Primer (EZPR00)**
4. **ULTRASHIELD® Low Sheen (ULSH40)**
ULTRASHIELD® DTM Semi-Gloss (ULSH50)
ULTRASHIELD® Gloss (ULSH60)
5. **ULTRASHIELD® Galvanized Metal Primer (ULGM00)**
6. **ULTRASHIELD® DTM Gray Primer (ULDM00)**

Additional Precautionary Measures

- Check the weather forecast. Determine the weather pattern for the days you are going to paint and store paint on a job site for a period of time. If the temperature is going to rise above the maximum temperature of 110°F or fall below the freezing point of 32°F, then special measures should be taken to avoid having the product be stored for prolonged periods of more than 24 hours at these temperatures.

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- If storing products for use at a later date after completing a job, know the temperature of the storage area and ensure that the products are not stored in areas where the temperature is going to rise above the maximum temperature of 110°F or fall below the freezing point of 32°F for extended periods of time.

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