



Borchi® Dragon High-Performance Catalyst Formulation Guide

1. Add Borchi® Dragon high-performance catalyst as the last ingredient into alkyd resin or fully formulated alkyd-based paint
 - Leave out any secondary driers or anti-skis in initial testing
2. Test a ladder study to determine optimum loading
 - Borchers recommends 0.5%, 1%, 2% up to 3% Borchi® Dragon, as supplied on resin solids.

Adding too much of Borchi® Dragon can overdose the system and cause dry retardation

3. To determine drier requirement:

(% resin solids in paint formulation) x (% dosage loading of Borchi® Dragon) x (batch size) = amount of Borchi® Dragon required in paint formulation

Example of adding 1% Borchi® Dragon into 40% resin solids paint formulation for 100g batch

size 0.4 (resin solids) X 0.01 (dosage loading) X 100g (batch size) = 0.40g Borchi® Dragon

4. To determine how much Borchi® Dragon is needed for (X) gallons of paint:

W= gallons of paint produced

Y=density of paint lbs/gallon

Z= wt/wt dosage of Borchi® Dragon

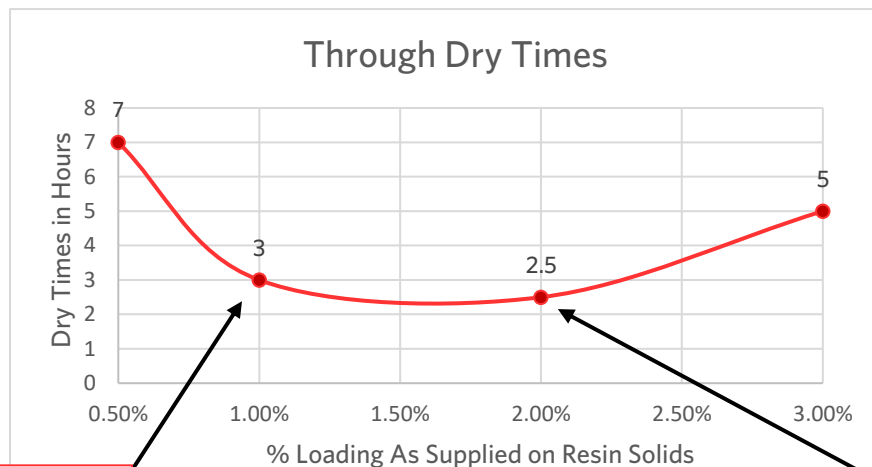
$$\frac{(W)(Y)(Z)}{(\text{gallons}) 8.68 \text{ lbs/gal}} = \text{Volume of Borchi® Dragon needed}$$

Example of 1% Borchi® Dragon into 40% resin solids paint formulation. (0.4g into 100g batch size.) Density of the paint is 8.83lbs/gallon, and 100 gallons of paint is produced annually.

$$\frac{100 \text{ gallons (paint produced)} \times 8.83 \text{ lbs/gallon (density of paint)} \times 0.004 \text{ (wt/wt)}}{8.68 \text{ lbs/gallon}} = 0.41 \text{ gallons Borchi® Dragon}$$



5. Mix in required drier addition at medium to low shear
6. Allow the formulas to sit for 24 hours to allow the Borchi® Dragon to equilibrate
7. After 24 hours, drawdown paint formulation on Leneta or customer specific substrate and measure for dry times
 - Circular dry recorders are standard practice
8. Once optimum dosage loading is determined add in secondary driers or anti-skin as needed to achieve desired performance properties
 - Secondary driers such as Zirconium Hex-Cem® can help decrease dry times
 - Secondary driers such as Calcium Hex-Cem® can prevent loss of surface dry by preferentially being absorbed by pigments
 - Secondary driers such as AOC E (aluminum) can help decrease dry times and increase hardness



Add in secondary driers such as Zr to decrease dry times further

Optimum Loading

Additional Information:

Anti-Skinning agents can negatively impact drying performance. It is important to test Borchi® Dragon without anti-skins initially. If an anti-skinning agent is required, a separate ladder study with anti-skins must be performed. We recommend the addition of 0.2% up to 1% Borchi® Shield as supplied on total formula weight.

Borchi® Shield is a MEKO-Free anti-skinning agent synergistically designed for optimum anti-skin performance when used in combination with Borchi® Dragon high-performance catalyst.

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PLEASE NOTE: As each customer's use of our product may be different, information we provide, including without limitation, recommendations, test results, samples, care/labeling/processing instructions or marketing advice, is provided in good faith but without warranty and without accepting any responsibility/liability. Each customer must test and be responsible for its own specific use, further processing, labeling, marketing, etc. All sales are exclusively subject to our standard terms of sale posted at www.milliken.com/terms (all additional/different terms are rejected) unless explicitly agreed otherwise in a signed writing.