Alesta® AG
Anti-gassing Additive

Alesta® AG Additive XX1003 is an additive designed to minimize the formation of bubbles in the coating surface caused by gas or moisture released from porous substrate during cure.

Product Information
- Specific Gravity: 0.95
- Appearance: White powder
- 325 mesh retention <0.01%
- Requires only a minimal amount of AG additive to minimize or eliminate the formation of bubbles or pinholes in the coating surface
- Compatible with most Alesta® powder coatings
- Eliminates the need for custom-formulated anti-gassing powders
- Reduces inventory carrying costs (no need for multiple SKUs)
- Conveniently packaged in 25 lb. boxes, also we can repackage in 5 lb., 10 lb. boxes similar to samples.

Directions for purpose:
- Use proper personal protection equipment and consult the SDS prior to use
- Make sure all equipment is clean and in good working condition
- Add Alesta® powder coating to a clean fluidized hopper (no box feeders) and start fluidizing powder. Refer to Mix Ratio Table for proper ratios of AG Additive.
- The severity of the substrate's porosity will determine the amount of AG Additive needed; however, adding more than the recommended quantity of AG Additive may result in excessive loss of gloss. *Testing the product prior to application is recommended.
- Thoroughly mix the AG Additive with the Alesta® powder prior to application

Typical types of porous substrates:
- Die-cast aluminum
- Magnesium
- Other die-cast parts
- Galvanized metals
- Porous substrates

Important notes:
- AG Additive may reduce gloss by approximately 10 units based on a 60° gloss meter. It is recommended not to exceed adding more than 4% of the AG Additive.
- At elevated cure temperatures, a waxy film may occur on the surface. It can easily be removed by buffing with a clean, soft cloth.
- AG Additive may interfere with adhesion of silk-screening inks, labels and may cause an unusual appearance in metallic-effect powder coatings. *Testing the product prior to application is recommended.
- A minimum of 6 months when stored at 75 F and 50% relative humidity.
- For additional physical information see Section 9 of the Safety Data Sheet (SDS)

Mix ratios:

<table>
<thead>
<tr>
<th>Powder Quantity</th>
<th>2% AG Additive XX1003</th>
<th>4% AG Additive XX1003</th>
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<tbody>
<tr>
<td>25 pounds</td>
<td>½ lb., 227 g. or 8 ounces</td>
<td>1 lb., 454 g. or 16 ounces</td>
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<tr>
<td>55 pounds</td>
<td>1 lb., 500g. or 18 ounces</td>
<td>2 lbs., 1,000 g. or 35 ounces</td>
</tr>
<tr>
<td>110 pounds</td>
<td>2 lbs., 1,000 g. or 35 ounces</td>
<td>4.4 lbs., 2,000 g. or 70 ounces</td>
</tr>
</tbody>
</table>
# Troubleshooting guide for out-gassing problems

<table>
<thead>
<tr>
<th>METHOD</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
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</table>
| Purchase higher quality castings  
- Mold casting (best)  
- Die casting (good)  
- Sand casting (worst) |  
- Good long term solution  
- Highly effective  
- Consistent |  
- May increase cost (could be off-set by savings in rejects, lost production, etc.)  
- Poor short term solution - requires time to investigate and specify |
| Change alloy composition  
If an effective alloy is found, then:  
- Good long term solution  
- Highly effective  
- Consistent |  
- May increase cost (could be off-set by savings in rejects, lost production, etc.)  
- Poor short term solution - requires time to investigate and specify |
| Pre-bake parts to de-gas before coating |  
- Good short term solution for small quantities or batch processes |  
- Can burn soils into the casting  
- Results may be inconsistent  
- Some castings may require very high temperatures and/or long treatment time  
- May affect temper of some alloys  
- Generally too time consuming for long term use or mass production |
| Use anti-gassing powder |  
- Good long term solution  
- Relatively inexpensive |  
- Poor short term solution if a new product must be designed - R&D and production usually require time  
- May not totally eliminate problem |
| Use I.R. cure to prevent part heat-up |  
- Good long term solution  
- Relatively inexpensive |  
- May be expensive to purchase and install equipment, but cost could be offset by savings in rejects, lost production, etc.  
- Poor short-term solution - requires time to investigate, purchase equipment and install |
| Grit blast parts to open pores near surface of casting |  
- If this works, then this is a good short term solution for small quantities or batch processes  
- Improves adhesion, corrosion performance and physical properties of the powder coating |  
- Can introduce soils into the casting  
- Results may be inconsistent  
- May make out-gassing worse in some cases  
- Cannot be used in light gage metal  
- Labor and time intensive - not easily adapted for mass production |
| Re-cast parts |  
- May be an effective short term solution |  
- Increased cost and time  
- Poor long term solution |
| Coat parts hot |  
- Can be a good short term solution  
- If production line is set up for it, can be a good long term solution  
- Has added advantage of improved adhesion and coating appearance  
- Thicker films may improve corrosion resistance |  
- Time and labor intensive if shop is not set-up for pre-heating  
- Film control may be difficult  
- Thicker films will increase powder usage and reduce impact and chip resistance  
- Any out-gassing may be exaggerated due to large bubble formation in thicker films  
- Good timing required to prevent parts from cooling before coating |
| Apply two coats of powder |  
- Can be an effective short term or long term solution |  
- Doubles time and costs  
- May not be totally effective  
- Thicker films will increase powder usage and reduce impact and chip resistance  
- If part is double coated cold, can have inner-coat adhesion problems and electrostatic application problems |

Contact Axalta Coating Systems - Powder NA Customer Service for more information or to place an order.

In the U.S., call 1-800-247-3886 or e-mail weborders.powder@axaltacs.com.

In Canada, call 1-888-447-2598 or e-mail powder.info@axaltacs.com