



# Aculon Balance Weight Adhesion Promoter

## Nano-Scale Adhesion-Promoting Surface Treatment

### Product Information

**Aculon Balance Weight Adhesion Promoter** is a nano-scale organometallic coating product is a surface treatment capable of promoting adhesion on most metal surfaces. It can be applied via most traditional coating processes, including dipping, spraying, wiping, etc. It is designed to improve adhesion for coatings that react with metal alkoxide functional groups (e.g. silane/siloxanes, phosphonate/phosphates (acid forms), carboxylic acids, etc.).

Solids	Solvent	Color
<5% Proprietary Ingredient	Isopropanol	Clear/ Colorless

Physical Properties of Formulation (all values @ 25°C)	
Viscosity*	<2 cP
Boiling Point of Solvent	82°C
Flash Point	12°C
Environmental	Non toxic, non-ozone depleting, flammable
Shelf Life	2 years (Unopened container)
Specific Gravity	0.8 g/ml

Physical Properties of Post Treatment Coating	
Visible Light Transmission	100%
Coating Thickness	Variable, depends on application technique (typically 5 – 100 nm)
Solvent and Chemical Resistance	High

### Features

- Improved adhesion strength of silicone paints/coatings on metal surfaces
- Excellent chemical bonding to many metal surfaces
- Does not out gas.
- Does not change the appearance of the surface
- No Stress build-up on the substrates.
- Treated surfaces are very stable (if stored in typical office/lab conditions)
- Easy to apply through standard wet coating methods such as dipping or spraying.

### Application Ideas

- Use as a primer layer for organosiloxanes/organophosphonates
- Improved bonding of silane (high temperature) over-mold compound

## Application Protocol

### Surface Preparation/ Cleaning:

Ensure that the surface is free of any grease, fingerprints, adhesive residues or dirt (*i.e.*, water break free). This can be accomplished by first degreasing the surface with solvents or by rinsing with soap and water. Then remove monolayer-scale contaminants. This is typically performed by using a cleaner specifically designed for the metal you are working with. Contact Aculon if you are unsure what cleaner to use and we will recommend one best suited for your application. The substrate should be water break-free before continuing to coating steps.

### Treatment Application:

**Wipe:** 1) Clean the location where the adhesive weight is intended to be mounted with an isopropanol (IPA) wipe to remove any dust or other surface contamination. 2) Use the Aculon wipe and thoroughly apply with pressure to the location where the adhesive weight is intended to be mounted. 3) Wait at least 30 seconds for Aculon treatment to dry then wipe the wheel with a clean dry towel to remove any residue. This is a critical process step to ensure good adhesion. Excess material may not be visible by eye. 4) Place adhesive balance weight on intended location applying moderate pressure and hold for at least 5 seconds to ensure good adhesion.

**Spray:** Spray the solution onto the substrate using double passes. Post-application curing is recommended for best performance. **Spray Equipment Suggestions;** HVLP (Binks Mach 1), HVLP (Devilbiss JGHV), Air Atomization (Devilbiss MBC gun) and Airless (Graco Model 225-292 President Pump Series A).

**Dip:** Immerse the substrate in the solution for ten seconds, remove then air dry, preferably in a clean area.

#### Dip Coating with Sonication:

Completely submerge the substrate in the solution and sonicate for 10 seconds. Remove substrate from the solution and allow to air dry, preferably in a clean area.

#### Drying/ Curing:

Typically this product does not require a cure on most substrates however it does benefit from a brief (5 minute) cure at 60°C, when appropriate.

**Equipment Cleaning:** Clean all equipment with alcohol (*e.g.*, Isopropanol)

### Safety, Handling, Storage, Shelf Life:

Store in a cool (~25°C) and dry area, and keep away from direct sunlight. See this product's MSDS for proper handling and fire hazard data. When stored properly, product has a 2 year shelf life.

### For Additional Information:

To request additional product information or sales assistance, contact Aculon's Technical Team, at 858-350-9474. For information on other Aculon products, please visit our website at [www.aculon.com](http://www.aculon.com).

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