



Powder Coating Kitchenette

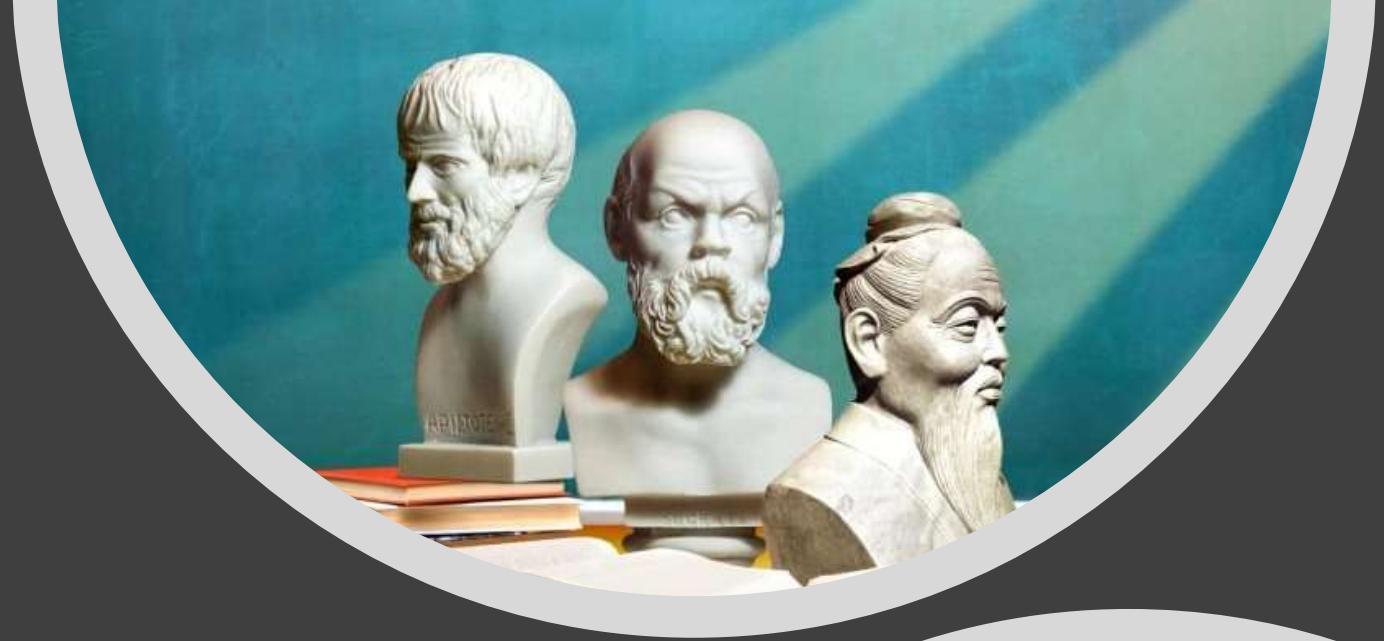
Formulating and Processing

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The Philosophy of Formulating

- Simplicity + Quality
- Criteria
 - Outdoor Durability
 - Chemical Resistance
 - Corrosion Resistance
 - Mechanical Performance
 - Aesthetics (Color, Gloss, Surface Profile)
 - Processability (Manufacturing & Application)
 - Economics



Binder Selection

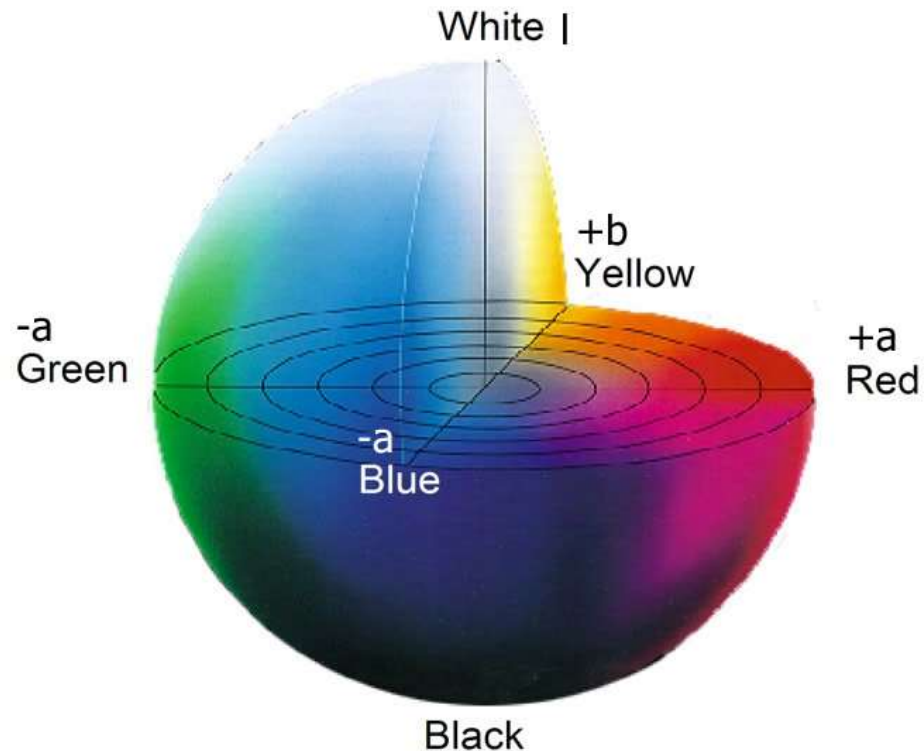
- Exterior Durable:
 - Fluoropolymer - 20+ yrs.
 - Acrylic - 10 yrs.
 - "Superdurable" - 5 yrs.
 - Polyurethane - 1.5 - 5 yrs.
 - Polyester - 1.5 - 2.0 yrs.
- Interior Grade
 - Epoxy
 - Hybrid (epoxy-polyester)
 - Acrylic Hybrid (epoxy-acrylic)



Binder Selection:

	Epoxy	Hybrid	Polyester	Polyurethane	Acrylic	Silicone	Fluoropolymer
Appearance	+	+	0	+	+++	0	-
Hardness	+++	+	0	+++	+++	-	-
Flexibility	+++	+++	+++	+	-	-	0
Weathering	-	-	+ / ++	+ / ++	+++	+	++++
Corrosion Res.	+++	++	+	++	+	-	0
Chemical Res.	+++	++	+	+++	++	0	+
Heat Res.	-	-	++	+	+	+++	++
Cost	0	+	0	-	---	--	----

Pigmentation



Minimize Pigments to Avoid Coloristic Conflicts

- Specific Gravity
- Oil Absorption
- Opacity
- Light Fastness
- Chroma
- Heat Stability

Additives:

Flow Agent

Optical Brightener

Antimicrobial

UVA/HALS

Degassing Agent

- Keep It Simple
- Avoid Unnecessary Band-Aids

Texture

Wax

Antioxidant

Pigment Dispersant

Catalyst

Corrosion Inhibitor

Extender Selection:

- Cost
- Specific gravity
- Morphology/aspect ratio
- Particle size
- Hardness
- Gloss control



Example Formula

Description	Weight %
Polyester Resin	69.83
Curing Agent	3.68
Flow/Leveling Agent	1.00
Degassing Agent	0.50
Extender Pigment	15.00
Phthalo Blue	2.50
Titanium Dioxide	7.50
Total:	100.00