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Integrity Ingredients Corporation

“Where **Quality** and **Service** Meet”

About Us

Incorporated in 1979, Color Techniques has specialized in the manufacture, blend and surface treatment of inorganic pigments and mineral products for over 20 years. Originally founded in Toms River, New Jersey, the company was purchased by its current owners in 1991. In order to accommodate substantial growth and advancing technologies, its headquarters were relocated to a state-of-the-art facility in 1992. The new South Plainfield, New Jersey facility increased capacity threefold and currently houses its corporate offices, manufacturing facilities, warehousing areas and Research & Development Labs.

As we entered the new millennium, we embarked upon an expansion project, which doubled our production capabilities yet again, and further improved upon the quality of our manufacturing and order processing systems. Warehousing areas were expanded, technologies became more complex, and our qualified staff continued to grow. Sales and Marketing functions are now in-house with agents representing Color Techniques outside the Northeast United States.

Enhancing the Performance of Your Products

Color Techniques' product line includes a library of more than 100 Inorganic pigments and mineral products. All are available in their standard form with one or multiple surface treatments, totaling thousands of formulating possibilities. Our products are sterilized to meet global cosmetics specifications and manufactured onsite in South Plainfield, New Jersey. Standard packaging is a 50kg fiber drum, although custom repacks are available for an additional fee. Due to increased production capabilities, most standard colors are in stock at all times.

Custom Services – Treatments, Blending & Milling

Color Techniques' staff can work with your personnel to customize any of our surface treatments. You may choose to send us a material to receive a current treatment or work with our technical staff to develop a new treatment that meets your needs. We also offer a custom blending and milling service, starting from small quantity pilot runs to large, full-scale production batches. Most custom work involves very short lead times. Whatever you choose, Color Techniques pursues these partnerships with discretion and confidentiality.

Inorganic Colors

Colors used in the cosmetic industry can be grouped into two categories: FDA Certified Organics which include D&C and FD&C dyes and lakes and Inorganic Pigments.

Inorganic pigments are controlled by the Food and Drug Administration. Prior to 1960, the only requirements for inorganic pigments were that they meet heavy metal concentrations as specified by the FDA. The inorganic pigments do not have to be certified as do the D&C or FD&C colors. By certification is meant that samples of the lots made are sent to the FDA for chemical analysis. The FDA will test the organic colors and if they meet their specifications, they will certify the given lot with a particular certification number.

The inorganic pigments do not have to go through these requirements. We do a chemical analysis on the colors and they have to meet certain FDA requirements. A listing of these color additives and requirements can be found in the Code of Federal Regulations 21, Part 73. Certain companies with global markets may also require the colors to meet European Specifications for iron oxides; or EC 172. These requirements are a bit more stringent. However, we do have materials that will meet these specifications.

Inorganic pigments are primarily used in pigmented face powders, foundations, blushers and cosmetics used in the area of the eyes such as mascaras, eyeshadows, liners, etc. They are generally dirtier and weaker than the organics and usually more difficult to disperse. Equipment such as Hammermills or Rollermills may be required to get optimum dispersions. However, in some cases, high speed dispersers such as a cowels may be sufficient.

[Iron Oxides](#) | [Ultramarines](#) | [Greens](#) | [Manganese Violets](#) | [Iron Blue](#)

Iron Oxides

Available in two grades: **Standard** (comply with US Title 21, CFR) and **Euro Grades** (also comply with E 172 regulations).

BlacksA-1403

A-1404

A-1405

A-1407

RedsA-1201

A-1204

A-1206

A-1226

A-1249

A-1293

YellowsA-1301

A-1303

A-1307

A-1311

BrownsA-1104

A-1109

A-1115

A-1156

A-1193 **Ultramarines**

The ultramarine family of colors includes blue, pink and violet.

Ultramarine blues are synthetically produced sodium aluminosulphosilicates. Further oxidation of one of the finer particle size red shade blue produces violet. The redness of hue depends on the degree of oxidation.

An ion exchange reaction with violet produces pink. They are easily dispersed in aqueous media, have excellent light stability and are very stable in alkali (pH of 7 or higher) compounds. Ultramarines are extremely acid sensitive and will release hydrogen sulfide in acid conditions. However, there is a silica coated ultramarine blue that resists mild acid conditions. Their primary use is in eye products such as shadows and eye pencils as well as in bar soaps.

Blues E-5100
E-5101

Pinks E-5300
E-5302

Violets E-5401
E-5400

Greens

Cosmetic greens consist of chromium oxides which have an olive-like color with strong yellow undertones and chromium hydroxide green that is stronger and considerably bluer, more aqua shade. The principle use is in the area of the eye and for bar soaps. They have a tendency to be very hard pigments and sometimes difficult to grind and disperse. Both colors have excellent strength and stability.

<i>Chromium Hydroxide Green</i>	E-3100
<i>Chromium Oxide</i>	E3200

Manganese Violets

This strong violet pigment is a complex of manganese ammonium pyrophosphate. It is stronger violet than ultramarine and is primarily used in eye products. Manganese violet decomposes in water and cannot be used in hydrated emulsion systems. It is relatively stable in acid pH ranges. Along with the standard shade of manganese violet, we also offer material that is considerably redder in mass tone and tint. It is slightly weaker in strength, but more transparent. The red tone and transparency are benefits for customers using carmine in formulations. Addition of this grade will allow the formulator to reduce the amount of carmine required which will give excellent cost savings.

Manganese Violets

A-2100

A-2101

A-2102

Iron Blue

Iron Blue is the modern name given to ferro ferricyanide pigments first synthesized by a German named Diesbach in 1704. It was produced commercially by a Frenchman named Milori (thus its other common name) in the 19th century. It is a strong, deep blue pigment that is primarily used in eye makeup. It is much stronger and greener than ultramarine blue. It bleeds slightly and can decompose in alkali systems. A big drawback in using iron blue is that it is very difficult to disperse. The types of iron blue available are Ferric Ferrocyanide, which has more global acceptance and Ferric Ammonium Ferrocyanide, which is not permitted for use in EC.

Surface Treatments

Introduction

Surface treatment of pigments and fillers is used to improve performance in a variety of cosmetic formulations. Surface coatings improve skin feel by smoothing the rough pigment surfaces and reducing oil absorption.

Treated pigments compress more easily, permitting formulation of pressed powders with lower binder content, further improving skin feel. In addition to the deagglomeration achieved by the coating process alone, surface characteristics can be modified to optimize wetting in a variety of vehicles. Surface treated pigments and fillers have permitted the development of new product forms, including cosmetically elegant water in oil foundations, cream to powder cosmetics, and powder to liquid formulations.

Surface treatments are applied by a variety of mechanisms:

Chemical Reaction

A permanent chemical bond is formed between the surface treatment molecule and the pigment surface, resulting in an insoluble, shear resistant coating. Chemically bonded treatments are recommended for use in aqueous and anhydrous dispersed systems.

AS – Alkyl Silane

Composition INCI Name(s): Triethoxycaprylylsilane

Coating Type: chemical bond

Characteristics: very hydrophobic; lipophilic; AS pigments wet easily into oil and silicones; no hydrogen potential; shear resistant

Applications: w/o, w/silicone foundation, wet/dry compacts, powder cream hot pours, stabilizes and aids wetting of inorganic sunscreens

Regulatory Status: OK USA, EU, Japan

D, D/I – Hydrophobics (Methicone)

Composition INCI Name(s): Methicone

Coating Type: chemical bond

Characteristics: hydrophobic; D pigments wet easily in silicones; shear resistant

D/I is emulsion grade

Applications: wet/dry compacts, powder cream hot pours

D/I grade: w/silicone foundations

Regulatory Status: OK USA, EU, Japan

PFD – Fluoropropyl Methicone

Composition INCI Name(s): Fluoropropyl Methicone

Coating Type: chemical bond

Characteristics: hydrophobic and lipophobic; resists wetting by common cosmetic oils and sebum; exceptional skin adhesion; improves wear

Applications: pressed powder foundation, blushers and eye shadows; water in silicone foundations

Regulatory Status: OK USA, EU, Japan

Precipitation

The treating compound is either precipitated by the pigment surface or is precipitated by addition of a polyvalent metal ion, forming a continuous, hydrophobic coating. Precipitated coatings are tenacious but may be dissolved from the pigment surface during prolonged heating in oil.

MM – Magnesium Myristate

Composition INCI Name(s): Magnesium Myristate

Coating Type: precipitation

Characteristics: hydrophobic, shear resistant, MM treatment aids adhesion, compression

Applications: pressed powders

Regulatory Status: OK USA, EU, Japan

HSE – Herbal Skin Enhancer

Composition INCI Name(s): Camellia Sinesis (Green Tea Leaf) Extract, Sesamum Indicum (Sesame) Seed Oil, Cetyl Phosphate

Coating Type: mechanical, high shear, high temperature

Characteristics: increases substantivity, adds softness, lubricity, natural antioxidant protects against free radical damage, hydrophobic

Applications: pressed powders, foundations

Regulatory Status: OK USA, EU, Japan

Adsorption

Molecules can be adsorbed onto the surface of pigments or fillers, resulting in a shear resistant coating.

GA – Hydrophilics

Composition INCI Name(s): Galactoarabinan

Coating Type: wet process, mechanical deposition

Characteristics: natural, GA treatment aids wetting, reduces viscosity in aqueous systems

Applications: o/w foundations, eyeliners, mascaras

Regulatory Status: OK USA, EU, Japan

*NHE- Natural Humectant Enhanced
Surface Treatment on Sericite for Talc
Free Formulations with Enhanced
Moisturizing Properties*

- Increased Emolliency
- Silky Feel
- Long Wearing
- Highly Compatiable
- Non Irritating

Composition:

Sericite	95.0%
PCA Dimethicone	5.0%

Electrostatic

Under conditions of high shear, small particles are adhered to the surface of the larger pigments or fillers.

LL/SI

Composition INCI Name(s): Lauroyl Lysine, Methicone

Coating Type: added chemical bond

Characteristics: adds hydrophobicity

Applications: pressed and loose powders, liquid foundation, w/o, w/silicone emulsions

Regulatory Status: OK USA, EU, Japan

LL – Lauroyl Lysine

Composition INCI Name(s): Lauroyl Lysine

Coating Type: mechanical, high shear

Characteristics: natural, pH of the skin, silky, smooth feel

Applications: pressed and loose powders, liquid foundation

Regulatory Status: OK USA, EU, Japan

SP-Surface Passivated Pigments

SP- Pigments are surface treated with aluminosilicate to provide unique performance advantages for inorganic pigments:

- Surface Passivation
- Hydrophilicity
- Improved Dispersion

Surface Passivation - Yellow Iron Oxide
**Comparison of *SP-Surface Passivated* Treated Yellow Iron Oxide
vs. Non-treated Yellow Iron Oxide as a Function of Aging Time at
55oC**

avobenzene Fe-chelation reaction was studied in the presence and in
the

absence of yellow oxide powders. The powders were dispersed in a
solution containing 2.5% avobenzene in caprylic triglyceride (w/w).

Samples were prepared by blending 7.5 g of solution, 0.4g powder and
0.06 g water. They were placed in an oven to age at 55oC.

3 days 78 days

treated Non-treated treated Non-treated

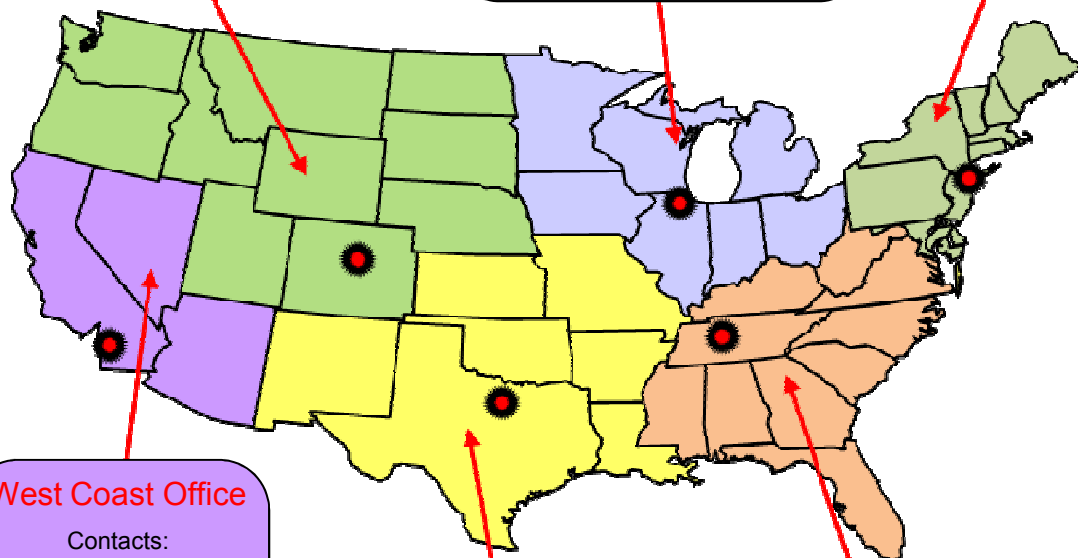
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