ATTACHMENT "3"

Specifications and Design Finish

COROTECH
HIGH PERFORMANCE

100% SOLIDS EPOXY PRE-PRIMER V155

Features

- 100% Solids Epoxy Pre-Primer
- Fills Voids - Does Not Shrink
- Surface Tolerant
- Low VOC
- Suitable For Use In USDA Inspected Facilities
- Eliminates Gassing & Craters on Concrete Floors
- Barrier Coat - Bonding Primer

General Description

100% Solids Epoxy Pre-Primer is a two component penetrating epoxy sealer. This product is formulated for use on clean, rusted steel where extensive surface preparation is needed, but not possible. The penetrating properties and extended dry time of V155 provides a method of reinforcing rusty steel surfaces, ensuring adhesion of subsequent coatings. This product also exhibits excellent penetration and sealing of masonry substrates. Can also be used as a barrier coat when applying high performance coating systems over existing alkyd coatings.

Recommended For

Interior or Exterior, Concrete, Galvanized Metal and Reinforced Steel. 100% Solids Epoxy Pre-Primer is designed for use on bare or previously coated concrete, "White Rusted" galvanized metal, and reinforcement of rusted steel. It seals loose edges and crevices, pinholes and other surface imperfections.

Limitations

- Do not apply if material, substrate or ambient temperature is below 55°F (13°C) or greater than 90°F (32°C). Relative humidity should be below 90%.
- Do not apply if within 5 degrees of dew point or if rain is expected within 12 hours of application.

Product Information

Colors — Standard:

Clear

— Tint Bases:

Do not tint.

— Special Colors:

N/A

Certification:

The products supported by this data sheet contain a maximum of 100 grams per liter VOC / VOS (0.83 lbs. /gal.) excluding water & exempt solvents.

This product is compliant under the Ozone Transport Commission regulations as an Industrial Maintenance Coating.

This product meets qualifications for LEED (Leadership In Energy and Environmental Design) projects on any surface application.

Suitable for use in USDA inspected facilities

Technical Assistance:

Available through your local authorized independent dealer. For the location of the dealer nearest you, call 1-800-225-5554, or visit www.corotechcoatings.com

Technical Data◊		Clear
Generic Type		2-Component Epoxy
Pigment Type		N/A
Volume Solids (mixed as recommended)		Greater than 98% mixed
Practical Coverage Per Gallon:		Steel - 800 - 1200 sq. /ft. Masonry - 500 - 800 sq. /ft. Previously Painted Surface - 1200 - 1600 sq. /ft.
Recommended Film Thickness	– Wet – Dry	1.0 – 1.5 mils 1.0 – 1.5 mils
Dry Time @ 77°F	– To Touch – To Recoat	12 Hours 16 Hrs. – Max: 3 Days

SERVICE TIME: Light Industrial Use: 72 Hours **Moderate to Heavy Industrial Use:** 5-7 days **Full Cure:** Approximately 7 Days *If top coat is not applied within 72 hours abrade the surface to ensure proper inter-coat adhesion. Maximum abrasion and chemical resistance are achieved at full cure; care should be taken to prevent damage to the coating during the curing process. High humidity and cool temperatures will result in longer dry, recoat and cure times.

Dries By		Chemical Cure
Dry Heat Resistance		300°F
Viscosity @ 77°F (mixed as recommended)		30 – 50 seconds (#2 Zahn Cup)
Flash Point		Mixed: 135°F (TT-P-141, Method 4293)
Gloss/Sheen		Medium Gloss
Surface Temperature at application	– Min. – Max.	55°F 90°F
Thin With		Do Not Thin
Clean Up Thinner		Corotech® V704 Epoxy Reducer
Mixed Ratio (by volume)		3 : 1 mix with catalyst
Induction time @ 77°F		30 Minutes
Pot Life @ 77°F (25°C)		3 – 4 Hours
Weight Per Gallon (mixed as recommended)		8.5 lbs.
Storage Temperature	– Min. – Max.	45°F 95°F

Volatile Organic Compounds (VOC)
6 Grams / Liter* 0.05 Lbs. / Gallon*
* Catalyzed

◊ **Reported values are for** Clear. Contact dealer for values of other bases or colors.

100% Solids Epoxy Pre-Primer V155

Surface Preparation:

The surface to be coated must be clean, sound and dry. Freshly poured concrete must age at least thirty days before coating. All oil, grease, release agents, curing compounds, concrete hardeners, laitance and other contaminates must be removed before coating. Previous paint finishes that have deteriorated need to be removed to bare concrete. Previous paint finishes that are in sound condition need to be cleaned and screened to a uniform dull condition. To remove these contaminants scrub the surface with Corotech® V600 Oil & Grease Emulsifier. Rinse thoroughly with clean water per label directions.

CONCRETE: Curing compounds, concrete hardeners and previous paint finishes can be removed by chemical or mechanical methods. Using mechanical method, abrade or shot blast the surface until curing compound, hardener or paint is completely removed. For laitance removal etch the bare concrete with Corotech® V620 Concrete Etch. Neutralize the acid by rinsing with a solution of 1 lb. Baking Soda to 5 gallons of water or a 5% solution of non-sudsing ammonia and water. When properly prepared, the bare concrete surface should resemble the texture of medium grade sandpaper. Whenever acid etching and/or shot blasting methods of surface preparation are used, it is important to leave the concrete with a uniform profile texture. Over profiling the concrete surface could damage the concrete integrity and will result in reduced coverage rates of the 100% Solids Epoxy Pre-Primer and/or subsequent top coats of Epoxy finishes. After the concrete floor has been prepared and allowed to dry, apply a coat of 100% Solids Epoxy Pre-Primer at a rate not to exceed 800 square feet per gallon. Brush or roll out "puddles" after 20 - 30 minutes. Allow at least 24 hours but not more than 72 hours dry time before applying the 100% Solids Epoxy Finish Coat.

Steel and Ferrous Metals: Although V155 is designed for use over less than ideal surfaces, performance will improve as surface preparation becomes better. The minimum surface preparation for using this sealer is a high pressure wash of at least 2500 PSI at 3 gallons per minute followed by a hand tool [SSPC-SP 2] or power tool [SSPC-SP 3] cleaning.

Previously Painted Surfaces: Can be applied over old alkyd or thermoset finishes in good condition.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Application

Mixing Instructions:

This is a two-component product that requires 3 part of the V155 "A" Component mixed with 1 part of the V155-90 "B" Component. (Mix ratio 3:1) Do not mix partial kits.

This is a two component kit and is pre-proportioned for error free mixing Do NOT vary from these instructions. Mix "A" & "B" separately

1. Carefully empty the entire contents of V155-90 activator into the can of V155-Part A component resin; scrape the sides of the pail of Part B to make sure all liquid has been added. Part A container is oversized to completely accept entire contents of Part B material.
2. Using a jiffy mixer at low speed, blend this mixture for three to five minutes until completely blended. Keep the mixing blade turning at a slow speed to minimize whipping air into material.
3. Care must be taken to assure both components are completely mixed in order to avoid partially cured spots in the coating.
4. Allow to induct for 30 minutes.

Do not thin this product – it is ready to use once both components are thoroughly mixed.

It is extremely important to remember that Epoxy Coatings have a limited pot life; therefore, it is wise to make sure sufficient manpower and correct application tools are in order prior to starting the mixing sequence. Estimated pot life is: 3 – 4 Hrs. @ 77°F (25°C).

Application: Apply by brush, roller or conventional spray.

Airless Spray: Apply with .009 tip and low pressure (just enough to atomize the product).

Air Spray (Preferred for appearance and film build): To minimize over spray, use low air pressure and a pot pressure of 5-10 PSI. **Do not apply at more than 1.5 mils per coat.** Must be top-coated within 72 hours of being tack free.

Garden Sprayer: may be used

Brush: Natural Bristle only.

Roller: Industrial Cover with Phenolic core. ¼" nap.

NOTE: Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with recommended thinner or follow state/local guidelines on solvent use. No reduction is necessary. Do not apply if material, substrate or ambient temperature is below 55°F (13°C) or greater than 90°F (32°C). Relative humidity should be below 90%. Do not apply if within 5 degrees of dew point or if rain is expected within 12 hours of application.

NOTE ON SPREAD RATE: Theoretical coverage at 1 mil dry is 1604 square feet per gallon; however, practical application is expected to be 600-800 square feet per gallon. Actual spread rate will vary based upon numerous factors, including texture of the substrate, application method, waste and surface porosity. The Theoretical Spread rate listed on this document has not taken into account these factors and is only based upon the volume solids of this product and the recommended wet film thickness when applied to a smooth substrate.

ADDED NOTES: All painted surfaces can be slippery. When nonskid properties are required, add a non-skid additive such as needed. All epoxy coatings will chalk and fade if applied on exterior surfaces subjected to direct sunlight. Where color and gloss retention are important, top-coating will be necessary.

TEST DATA	
Steam Resistant	Yes
Dry Heat Resistance	300° F
Wet Heat Resistance	150 °F
Adhesion (ASTM D3359)	Pass 5A
CHEMICAL RESISTANCE GUIDE (NON-IMMERSION)	
Fresh Water	Excellent
Salt Water	Excellent
Acids	Good
Alkalis	Good
Solvents	Excellent
Fuel	Good
Acidic Salt Solutions	Excellent
Alkaline Salt Solutions	Excellent
Neutral Salt Solutions	Excellent

SYSTEMS RECOMMENDATIONS
COMPATIBLE FINISHES
V200 Line, V201, V230 Line, V231 Line, V220 Line, V300 Line, V330 Line, V400 Line, V410, V440 Line, V500 Line, V510 Line, V520 Line, V540 Line, and Other Alkyds, Acrylics and Moisture Cured Urethanes
For substrates other than listed above, or for usage in severe environmental conditions, please consult with Corotech® Technical Service.

Clean Up

Clean up with Corotech® V704 Epoxy Reducer or follow state/local guidelines on solvent use.

Environmental Health & Safety Information

DANGER!

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

Prevention: Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves /protective clothing /eye protection /face protection. Avoid breathing dust /fume /mist /vapors /spray. Contaminated work clothing should not be allowed out of the workplace.

Response: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. If on skin, wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs, get medical attention.

Disposal: Dispose of contents /container to an approved waste disposal plant.

IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of all components. Before opening packages, read all warning labels. Follow all precautions.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

This document represents hazards of the product referenced above. Refer to the individual Safety Data Sheet for hazards of the specific product you will be using.

KEEP OUT OF REACH OF CHILDREN
FOR PROFFESIONAL USE ONLY

Refer to Safety Data Sheet for additional health and safety information.

Manufactured by Benjamin Moore & Co. 101 Paragon Drive, Montvale, NJ 07645 Tel: 800-225-5554 Fax: 888-248-2143 www.corotechcoatings.com M72 V155 EN 111014

SAFETY DATA SHEET

Revision Date: *20-Oct-2014* **Revision Number:** *1*

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	**100% SOLIDS EPOXY PRE-PRIMER CLEAR**
Product Code	**V155-00**
Alternate Product Code	V15500
Product Class	SOLVENT THINNED PAINT
Color	Clear
Recommended use	Paint
Restrictions on use	No information available

Manufacturer
Benjamin Moore & Co.
101 Paragon Drive
Montvale NJ 07645
Phone: 800-225-5554
corotechcoatings.com

Emergency Telephone Number(s)
CHEMTREC (US): 800-424-9300
CHEMTREC (outside US): (703)-527-3887

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1B

Label elements

Warning

Hazard statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction

Appearance liquid **Odor** solvent

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace

Eyes
If in eyes rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists get medical attention
Skin
If on skin wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs get medical attention

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise **classified** (HNOC)
Not Applicable

Other information
No information available

Other Hazards

IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of all components.
CAUTION: All floor coatings may become slippery when wet. Where non-skid characteristics are desired, a small amount of clean sand may be added. Stir often during application.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight % (max)
4,4-isopropylidenediphenol-epichlorohydrin copolymer	25068-38-6	55
Glycidyl neodecanoate	26761-45-5	35
Benzyl alcohol	100-51-6	20

4. FIRST AID MEASURES

General Advice	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. Call a physician immediately
Ingestion	Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician.
Protection Of First-Aiders	Use personal protective equipment
Most Important Symptoms/Effects	No information available.
Notes To Physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Foam, dry powder or water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment And Precautions For Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific Hazards Arising From The Chemical	Closed containers may rupture if exposed to fire or extreme heat. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.
Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	No
Flash Point Data	
Flash Point (°F)	214
Flash Point (°C)	101
Flash Point Method	PMCC
Flammability Limits In Air	
Lower Explosion Limit	Not available
Upper Explosion Limit	Not available

NFPA **Health:** 1 **Flammability:** 0 **Instability:** 0 **Special:** Not Applicable

NFPA Legend
0 - Not Hazardous
1 - Slightly
2 - Moderate
3 - High
4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.

Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition.

Other Information Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Environmental Precautions See Section 12 for additional Ecological Information.

Methods For Clean-Up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Wear personal protective equipment.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible Materials No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Chemical Name	ACGIH	OSHA
4,4-isopropylidenediphenol-epichlorohydrin copolymer	N/E	N/E
Glycidyl neodecanoate	N/E	N/E
Benzyl alcohol	N/E	N/E

Legend
ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
OSHA - Occupational Safety & Health Administration Exposure Limits
N/E - Not Established

Engineering Measures	Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment	
Eye/Face Protection	Safety glasses with side-shields.
Skin Protection	Long sleeved clothing. Protective gloves.
Respiratory Protection	In operations where exposure limits are exceeded, use a NIOSH approved respirator that has been selected by a technically qualified person for the specific work conditions. When spraying the product or applying in confined areas, wear a NIOSH approved respirator specified for paint spray or organic vapors.
Hygiene Measures	Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	solvent
Odor Threshold	No information available
Density (lbs/gal)	8.7 - 8.8
Specific Gravity	1.04 - 1.05
pH	No information available
Viscosity (cps)	No information available
Solubility	No information available
Water Solubility	No information available
Evaporation Rate	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Wt. % Solids	95 - 100
Vol. % Solids	95 - 100
Wt. % Volatiles	0 - 5
Vol. % Volatiles	0 - 5
VOC Regulatory Limit (g/L)	< 100
Boiling Point (°F)	401
Boiling Point (°C)	205
Freezing Point (°F)	No information available
Freezing Point (°C)	No information available
Flash Point (°F)	214
Flash Point (°C)	101
Flash Point Method	PMCC
Flammability (solid, gas)	Not available
Upper Explosion Limit	Not available
Lower Explosion Limit	Not available
Autoignition Temperature (°F)	No information available
Autoignition Temperature (°C)	No information available
Decomposition Temperature (°F)	No information available
Decomposition Temperature (°C)	No information available
Partition Coefficient (n-octanol/water)	No information available.

10. STABILITY AND REACTIVITY

Reactivity	Not Applicable
Chemical Stability	Stable under normal conditions. Hazardous polymerisation does not occur.
Conditions To Avoid	Excessive temperatures.
Incompatible Materials	Incompatible with strong acids and bases and strong oxidizing agents.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors.
Possibility Of Hazardous Reactions	None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product
No information available

Inhalation	No information available
Eye contact	No information available
Skin contact	No information available
Ingestion	No information available

Acute Toxicity
Product No information available

Information on toxicological effects

Symptoms No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization:	Not available
Mutagenic Effects	Not available
Reproductive Effects	No information available

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	5287 mg/kg
ATEmix (dermal)	5777 mg/kg
ATEmix (inhalation-dust/mist)	43 mg/L

Acute Toxicity
Component

4,4-isopropylidenediphenol-epichlorohydrin copolymer
LD50 Oral: 11,400 mg/kg (Rat)

Glycidyl neodecanoate
LD50 Oral: > 2000 mg/kg
LD50 Dermal: > 2000 mg/kg
LC50 Inhalation (Vapor): > 5 mg/L

Benzyl alcohol
LD50 Oral: 1230-1660 mg/kg (Rat)
LD50 Dermal: 2,000 mg/kg (Rabbit)
LC50 Inhalation (Vapor): > 5,000 mg/m^3 (Rat)

Carcinogenicity
There are no known carcinogenic chemicals in this product above reportable levels.

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Product

Acute Toxicity to Fish
No information available

Acute Toxicity to Aquatic **Invertebrates**
No information available

Acute Toxicity to Aquatic Plants
No information available

Persistence / Degradability
No information available

Bioaccumulation / Accumulation
No information available

Mobility in Environmental Media
No information available

Ozone
No information available

Component

Acute Toxicity to Fish

4,4-isopropylidenediphenol-epichlorohydrin copolymer
LC50: 1.5 mg/L (Rainbow Trout - 96 hr.)

Acute Toxicity to Aquatic Invertebrates
No information available

Acute Toxicity to Aquatic Plants
No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with federal, state, provincial, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

Empty Container Warning

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO / IATA Contact the preparer for further information.

IMDG / IMO Contact the preparer for further information.

15. REGULATORY INFORMATION

International Inventories

United States TSCA Yes - All components are listed or exempt.
Canada DSL Yes - All components are listed or exempt.

Federal Regulations

SARA 311/312 hazardous categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

None

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following HAPs:

None

State Regulations

California Proposition 65

This product may contain small amounts of materials known to the state of California to cause cancer or reproductive harm.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania
Benzyl alcohol	X		X

Legend
X - Listed

16. OTHER INFORMATION

HMIS **Health:** 1 **Flammability:** 0 **Reactivity:** 0 **PPE:** -

HMIS Legend
0 - Minimal Hazard
1 - Slight Hazard
2 - Moderate Hazard
3 - Serious Hazard
4 - Severe Hazard
* - Chronic Hazard
X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By	Product Stewardship Department Benjamin Moore & Co. 101 Paragon Drive Montvale, NJ 07645 855-724-6802
Revision Date:	20-Oct-2014
Revision Summary	Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

END OF SAFETY DATA SHEET

COROTECH
HIGH PERFORMANCE

100% SOLIDS EPOXY PRE-PRIMER V155

Features

- 100% Solids Epoxy Pre-Primer
- Fills Voids - Does Not Shrink
- Surface Tolerant
- Low VOC
- Suitable For Use In USDA Inspected Facilities
- Eliminates Gassing & Craters on Concrete Floors
- Barrier Coat - Bonding Primer

General Description

100% Solids Epoxy Pre-Primer is a two component penetrating epoxy sealer. This product is formulated for use on clean, rusted steel where extensive surface preparation is needed, but not possible. The penetrating properties and extended dry time of V155 provides a method of reinforcing rusty steel surfaces, ensuring adhesion of subsequent coatings. This product also exhibits excellent penetration and sealing of masonry substrates. Can also be used as a barrier coat when applying high performance coating systems over existing alkyd coatings.

Recommended For

Interior or Exterior, Concrete, Galvanized Metal and Reinforced Steel. 100% Solids Epoxy Pre-Primer is designed for use on bare or previously coated concrete, "White Rusted" galvanized metal, and reinforcement of rusted steel. It seals loose edges and crevices, pinholes and other surface imperfections.

Limitations

- Do not apply if material, substrate or ambient temperature is below 55°F (13°C) or greater than 90°F (32°C). Relative humidity should be below 90%.
- Do not apply if within 5 degrees of dew point or if rain is expected within 12 hours of application.

Product Information

Colors — Standard:

Clear

— Tint Bases:

Do not tint.

— Special Colors:

N/A

Certification:

The products supported by this data sheet contain a maximum of 100 grams per liter VOC / VOS (0.83 lbs. /gal.) excluding water & exempt solvents.

This product is compliant under the Ozone Transport Commission regulations as an Industrial Maintenance Coating.

This product meets qualifications for LEED (Leadership in Energy and Environmental Design) projects on any surface application.

Suitable for use in USDA inspected facilities

Technical Assistance:

Available through your local authorized independent dealer. For the location of the dealer nearest you, call 1-800-225-5554, or visit www.corotechcoatings.com

Technical Data◊		Clear
Generic Type		2-Component Epoxy
Pigment Type		N/A
Volume Solids (mixed as recommended)		Greater than 98% mixed
Practical Coverage Per Gallon:		Steel - 800 - 1200 sq. /ft. Masonry - 500 - 800 sq. /ft. Previously Painted Surface - 1200 - 1600 sq. /ft.
Recommended Film Thickness	– Wet	1.0 – 1.5 mils
	– Dry	1.0 – 1.5 mils
Dry Time @ 77°F	– To Touch	12 Hours
	– To Recoat	16 Hrs. – Max: 3 Days

SERVICE TIME: Light Industrial Use: 72 Hours **Moderate to Heavy Industrial Use:** 5-7 days **Full Cure:** Approximately 7 Days *If top coat is not applied within 72 hours abrade the surface to ensure proper inter-coat adhesion. Maximum abrasion and chemical resistance are achieved at full cure; care should be taken to prevent damage to the coating during the curing process. High humidity and cool temperatures will result in longer dry, recoat and cure times.

Dries By		Chemical Cure
Dry Heat Resistance		300°F
Viscosity @ 77°F (mixed as recommended)		30 – 50 seconds (#2 Zahn Cup)
Flash Point		Mixed: 135°F (TT-P-141, Method 4293)
Gloss/Sheen		Medium Gloss
Surface Temperature at application	– Min.	55°F
	– Max.	90°F
Thin With		Do Not Thin
Clean Up Thinner		Corotech® V704 Epoxy Reducer
Mixed Ratio (by volume)		3 : 1 mix with catalyst
Induction time @ 77°F		30 Minutes
Pot Life @ 77°F (25°C)		3 – 4 Hours
Weight Per Gallon (mixed as recommended)		8.5 lbs.
Storage Temperature	– Min.	45°F
	– Max.	95°F

Volatile Organic Compounds (VOC)
6 Grams / Liter* 0.05 Lbs. / Gallon*
* Catalyzed

◊ Reported values are for Clear. Contact dealer for values of other bases or colors.

100% Solids Epoxy Pre-Primer V155

Surface Preparation:

The surface to be coated must be clean, sound and dry. Freshly poured concrete must age at least thirty days before coating. All oil, grease, release agents, curing compounds, concrete hardeners, laitance and other contaminates must be removed before coating. Previous paint finishes that have deteriorated need to be removed to bare concrete. Previous paint finishes that are in sound condition need to be cleaned and screened to a uniform dull condition. To remove these contaminants scrub the surface with Corotech® V600 Oil & Grease Emulsifier. Rinse thoroughly with clean water per label directions.

CONCRETE: Curing compounds, concrete hardeners and previous paint finishes can be removed by chemical or mechanical methods. Using mechanical method, abrade or shot blast the surface until curing compound, hardener or paint is completely removed. For laitance removal etch the bare concrete with Corotech® V620 Concrete Etch. Neutralize the acid by rinsing with a solution of 1 lb. Baking Soda to 5 gallons of water or a 5% solution of non-sudsing ammonia and water. When properly prepared, the bare concrete surface should resemble the texture of medium grade sandpaper. Whenever acid etching and/or shot blasting methods of surface preparation are used, it is important to leave the concrete with a uniform profile texture. Over profiling the concrete surface could damage the concrete integrity and will result in reduced coverage rates of the 100% Solids Epoxy Pre-Primer and/or subsequent top coats of Epoxy finishes. After the concrete floor has been prepared and allowed to dry, apply a coat of 100% Solids Epoxy Pre-Primer at a rate not to exceed 800 square feet per gallon. Brush or roll out "puddles" after 20 - 30 minutes. Allow at least 24 hours but not more than 72 hours dry time before applying the 100% Solids Epoxy Finish Coat.

Steel and Ferrous Metals: Although V155 is designed for use over less than ideal surfaces, performance will improve as surface preparation becomes better. The minimum surface preparation for using this sealer is a high pressure wash of at least 2500 PSI at 3 gallons per minute followed by a hand tool [SSPC-SP 2] or power tool [SSPC-SP 3] cleaning.

Previously Painted Surfaces: Can be applied over old alkyd or thermoset finishes in good condition.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Application

Mixing Instructions:

This is a two-component product that requires 3 part of the V155 "A" Component mixed with 1 part of the V155-90 "B" Component. (Mix ratio 3:1) Do not mix partial kits.

This is a two component kit and is pre-proportioned for error free mixing Do NOT vary from these instructions. Mix "A" & "B" separately

1. Carefully empty the entire contents of V155-90 activator into the can of V155-Part A component resin; scrape the sides of the pail of Part B to make sure all liquid has been added. Part A container is oversized to completely accept entire contents of Part B material.
2. Using a jiffy mixer at low speed, blend this mixture for three to five minutes until completely blended. Keep the mixing blade turning at a slow speed to minimize whipping air into material.
3. Care must be taken to assure both components are completely mixed in order to avoid partially cured spots in the coating.
4. Allow to induct for 30 minutes.

Do not thin this product – it is ready to use once both components are thoroughly mixed.

It is extremely important to remember that Epoxy Coatings have a limited pot life; therefore, it is wise to make sure sufficient manpower and correct application tools are in order prior to starting the mixing sequence. Estimated pot life is: 3 – 4 Hrs. @ 77°F (25°C).

Application: Apply by brush, roller or conventional spray.

Airless Spray: Apply with .009 tip and low pressure (just enough to atomize the product).

Air Spray (Preferred for appearance and film build): To minimize over spray, use low air pressure and a pot pressure of 5-10 PSI. **Do not apply at more than 1.5 mils per coat.** Must be top-coated within 72 hours of being tack free.

Garden Sprayer: may be used

Brush: Natural Bristle only.

Roller: Industrial Cover with Phenolic core. ¼" nap.

NOTE: Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with recommended thinner or follow state/local guidelines on solvent use. No reduction is necessary. Do not apply if material, substrate or ambient temperature is below 55°F (13°C) or greater than 90°F (32°C). Relative humidity should be below 90%. Do not apply if within 5 degrees of dew point or if rain is expected within 12 hours of application.

NOTE ON SPREAD RATE: Theoretical coverage at 1 mil dry is 1604 square feet per gallon; however, practical application is expected to be 600-800 square feet per gallon. Actual spread rate will vary based upon numerous factors, including texture of the substrate, application method, waste and surface porosity. The Theoretical Spread rate listed on this document has not taken into account these factors and is only based upon the volume solids of this product and the recommended wet film thickness when applied to a smooth substrate.

ADDED NOTES: All painted surfaces can be slippery. When nonskid properties are required, add a non-skid additive such as needed. All epoxy coatings will chalk and fade if applied on exterior surfaces subjected to direct sunlight. Where color and gloss retention are important, top-coating will be necessary.

TEST DATA	
Steam Resistant	Yes
Dry Heat Resistance	300° F
Wet Heat Resistance	150 °F
Adhesion (ASTM D3359)	Pass 5A
CHEMICAL RESISTANCE GUIDE (NON-IMMERSION)	
Fresh Water	Excellent
Salt Water	Excellent
Acids	Good
Alkalis	Good
Solvents	Excellent
Fuel	Good
Acidic Salt Solutions	Excellent
Alkaline Salt Solutions	Excellent
Neutral Salt Solutions	Excellent

SYSTEMS RECOMMENDATIONS
COMPATIBLE FINISHES
V200 Line, V201, V230 Line, V231 Line, V220 Line, V300 Line, V330 Line, V400 Line, V410, V440 Line. V500 Line, V510 Line, V520 Line, V540 Line, and Other Alkyds, Acrylics and Moisture Cured Urethanes
For substrates other than listed above, or for usage in severe environmental conditions, please consult with Corotech® Technical Service.

Clean Up

Clean up with Corotech® V704 Epoxy Reducer or follow state/local guidelines on solvent use.

Environmental Health & Safety Information

DANGER!

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

Prevention: Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves /protective clothing /eye protection /face protection. Avoid breathing dust /fume /mist /vapors /spray. Contaminated work clothing should not be allowed out of the workplace.

Response: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. If on skin, wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs, get medical attention.

Disposal: Dispose of contents /container to an approved waste disposal plant.

IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of all components. Before opening packages, read all warning labels. Follow all precautions.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

This document represents hazards of the product referenced above. Refer to the individual Safety Data Sheet for hazards of the specific product you will be using.

KEEP OUT OF REACH OF CHILDREN
FOR PROFFESIONAL USE ONLY

Refer to Safety Data Sheet for additional health and safety information.

Manufactured by Benjamin Moore & Co. 101 Paragon Drive, Montvale, NJ 07645 Tel: 800-225-5554 Fax: 888-248-2143 www.corotechcoatings.com M72 V155 EN 111014

COROTECH®
100% SOLID EPOXY FLOOR COATING V430

Features

- 100% Solid Epoxy Floor Coating
- Suitable For Use In USDA Inspected Facilities

General Description

Corotech® V430 100% Solids Epoxy Floor Coating is a two component, high build epoxy. It is formulated for use as a one coat application on interior concrete floors subjected to industrial chemicals and fumes (2 coats on new surfaces). This product can also be used in severe exposure applications subjected to heavy abrasion and vehicular traffic. This coating will fill many hairline cracks and superficial concrete defects, producing a smooth and aesthetically pleasing high gloss finish. This product is intended for use in industrial or commercial exposures and should only be applied by professional contractors, knowledgeable in the use of these types of coating systems. This is a two-component product that requires 3 parts of the V430-00 "A" Component (1.33 gallons mixed with 1 part of the V430-90 "B" Component (0.67 gallons). Do not mix partial kits. It is extremely important to remember that 100% Solids Sealer and Finish Coat have a limited pot life; therefore, it is wise to make sure sufficient manpower and correct application tools are in order prior to starting the mixing sequence. If area to be coated should be exposed to frequently wet conditions, broadcast aggregate is recommended.

Recommended For

Interior Concrete. Corotech® V430 100% Solids Epoxy Floor Coating is designed for use on bare or previously coated concrete – interior floor applications only. This product will amber and chalk if exposed to ultraviolet light.

Limitations

- The floor area should be maintained at a minimum surface and ambient air temperature of 50° F and a maximum of 90° F throughout the entire recommended dry time. Do not apply if surface temperature is within 5 degrees of dew-point or if condensation or fog is expected before the product is fully dry.
- Not intended for use on vertical surfaces. Interior floor applications only.

Product Information

Colors — Standard:

Clear, White, Terra Cotta, Sandstone, Silver Gray

— Tint Bases:

Do Not Tint.

— Special Colors:

Contact your dealer.

Certification:

The products supported by this data sheet contain a maximum of 100 grams per liter VOC / VOS (0.83 lbs/gal.) excluding water & exempt solvents.

This product is compliant under the Ozone Transport Commission regulations as an Industrial Maintenance Coating.

This product does meet qualifications for LEED (Leadership in Energy and Environmental Design) projects as a Floor Coating.

Suitable for use in USDA Inspected Facilities

Technical Assistance:

Available through your local authorized independent dealer. For the location of the dealer nearest you, call 1-800-225-5554, see www.corotechcoatings.com or consult your local Yellow Pages.

Technical Data◊		White
Generic Type		Two Component Epoxy
Pigment Type		Titanium Dioxide
Volume Solids		Component A: 96% ± 1.0% Component B: 99.7%
Coverage per Gallon at Recommended Film Thickness		100 – 150 Sq. Ft.
Recommended Film Thickness	– Wet – Dry	10 – 15 mils 10 – 15 mils
Depending on surface texture and porosity. Be sure to estimate the right amount of paint for the job. This will ensure color uniformity and minimize the disposal of excess paint.		
Dry Time @ 77°F	– To Touch – To Recoat – Full Cure	6 Hours 12 – 24 Hours 7 Days
*If top coat is not applied within 72 hours abrade the surface to ensure proper inter-coat adhesion. Maximum abrasion and chemical resistance are achieved at full cure; care should be taken to prevent damage to the coating during the curing process. High humidity and cool temperatures will result in longer dry, recoat and cure times.		
Dries By		Chemical Cure
Dry Heat Resistance		300° F
Viscosity @ 77°F (mixed as recommended)		90 – 95 KU
Flash Point		200° F or greater (TT-P-141, Method 4293)
Gloss / Sheen		80+ units @ 60°
Surface Temperature at application	– Min. – Max.	50°F 90°F
Surface must be dry and at least 5° above the dew point		
Thin With		Do Not Thin
Clean Up Thinner		Corotech® V703 (Xylene)
Mixed Ratio (by volume)		2 : 1
Induction time @ 77°F		None. Use immediately after mixing
Pot Life @ 77°F (25° C)		30 Minutes
Weight Per Gallon		Part A Component: 11.05 lbs. Part B Component: 8.50 lbs.
Storage Temperature	– Min. – Max.	40°F 90°F

Volatile Organic Compounds (VOC)
13 Grams / Liter* 0.11 LBS / Gallon*
* Catalyzed

◊ Reported values are for White. Contact dealer for values of other bases or colors

Surface Preparation

Surface to be coated must be clean, sound and dry. Freshly poured concrete must age at least thirty days before coating. All oil, grease, release agents, curing compounds, concrete hardeners, laitance and other contaminates must be removed before coating. Previous paint finishes that have deteriorated need to be removed to bare concrete; previous paint finishes that are in sound condition need to be cleaned and screened to a uniform dull condition. To remove dirt, oil, grease and form release agents, scrub the surface with an Industrial degreaser and emulsifier. Rinse thoroughly with clean water, per label directions. Curing compounds, concrete hardeners and previous paint finishes can be removed by chemical or mechanical methods. Pick up residue and dispose of per local, state and federal requirements. Using mechanical method, abrade or shot blast the surface until curing compound, hardener or paint is completely removed. Vacuum dust before proceeding. For laitance removal and to assure a PH level of between seven and nine, acid etch using manufacturers' recommendations. When properly prepared, the bare concrete surface should resemble the texture of medium grade sandpaper (80 grit). Whenever acid etching and/or shot blasting methods of surface preparation are utilized, it is important to leave the concrete with a uniform profile texture. Over profiling the concrete surface could damage the concrete integrity and will result in reduced coverage of the coatings. For a 10 mil or greater coating application thickness, a profile of 2.5 to 3 mils is recommended.

After the concrete floor has been prepared and allowed to dry (measuring 5% or less with moisture meter), apply One Coat of V155 100% Solids Epoxy Pre-Primer at 600-800 sq. ft. per gallon (1.5 mils) following label instructions. Do not allow to puddle. Allow at least twelve hours, but not more than twenty-four hours dry time before applying the 100% Solids Epoxy Floor Coating. If a previous paint finish, in good condition is already in place, clean and screen the finish and proceed to the 100% Solids Epoxy Finish.

WARNING! If you scrape, sand or remove old paint, you may release lead dust. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.** Wear a NIOSH-approved respirator to control lead exposure. Carefully clean up with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead

Application

Mixing Instructions:

This is a two component kit and is pre-proportioned for error free mixing. DO NOT vary from these instructions. Mix "A" & "B" separately.

1. Carefully empty the entire contents of V 430-90 activator into the can of V430-Part A component resin; scrape the sides of the pail of Part B to make sure all liquid has been added. Part A container is oversized to completely accept entire contents of Part B material.
2. Using a jiffy mixer at low speed, blend this mixture for three to five minutes until completely blended. Keep the mixing blade turning at a slow speed to minimize whipping air into material. Scrape sides of pail during the mixing process.
3. Care must be taken to assure both components are completely mixed in order to avoid partially cured spots in the coating.
4. Do not allow to induct – use immediately after mixing.

It is extremely important to remember that Epoxy Coatings have a limited pot life; therefore, it is wise to make sure sufficient manpower and correct application tools are in order prior to starting the mixing sequence. Estimated pot life is: 30 Minutes @ 77°F (25°C)

Do not thin this product – it is ready to use once both components are thoroughly mixed.

Application:

Component A mixed with Component B – pour the entire mixed contents of a kit in a bead of material in the form of a continuous ribbon onto the surface to be coated. The mixed material should not be left in the container because it will drastically shorten the pot life. 100% Solids Epoxy Finish can be applied by smooth/notched blade squeegee (which is preferable) or rolled. The use of a porcupine roller is recommended approximately 10 minutes after application to help in the removal of any air in the coating.

SQUEEGEE APPLICATION: When using a smooth/notched blade squeegee spread the ribbon of poured material by pulling the squeegee toward the applicator and spread material at a rate not to exceed 120 square feet per gallon. Apply as evenly as possible working from left to right then back again. After ten minutes, roll with a porcupine roller to remove excess air bubbles. Do not mix less than full batch/container quantities.

ROLLER APPLICATION: Using a quality phenolic core cover, between 3/8" and 1/2" nap size, gently spread the ribbon of poured material by lightly working the material back and forth until even. Avoid overworking material; allow product to flow out and self lever. Spread at a rate not to exceed 120 square feet per gallon. Avoid working back into the previously applied epoxy, particularly after ten minutes duration or color variations can occur in the lapped area. Do not mix less than full batch/container quantities. The floor area should be maintained at a minimum surface and ambient air temperature of 50° F and a maximum of 90° F throughout the entire recommended dry time. Do not apply if surface temperature is within 5 degrees of dew-point or if condensation or fog is expected before the product is fully dry. Not intended for use on vertical surfaces.

IMPORTANT NOTES: All high gloss surfaces can be slippery. When non skid properties are required, add a non-skid additive as needed. When using with V430, anti-slip additives must be broadcast into the applied paint film while wet. Do not mix it into the paint before application as this will leave the additive buried in the coating and will not allow for proper anti-slip properties. All epoxy coatings will chalk and fade if applied on exterior surfaces subjected to direct sunlight. Where color and gloss retention are important, top-coating will be necessary. May stain with prolonged exposure to brake fluid and some other solvents, or in a kennel if exposed to animal urine or waste. This staining will not affect the durability or protective qualities of the coating.

TEST DATA	
Steam Resistance	Yes
Dry Heat Resistance	300° F
Wet Heat Resistance	150° F
Adhesion (ASTM D3359)	Pass 5B
Accelerated Weathering (ASTM G53)	500 hours, no change
Abrasion Resistance (ASTM D4060) CS-17 Wheel, 1000g load	0.06 g loss after 1000 cycles
Compression Strength (ASTM C-579)	11,500 psi

CHEMICAL RESISTANCE GUIDE (NON-IMMERSION)	
Fresh Water	Excellent
Salt Water	Excellent
Acids	Good
Alkalis	Good
Solvents	Excellent
Fuel	Good
Acidic Salt Solutions	Excellent
Alkaline Salt Solutions	Excellent
Neutral Salt Solutions	Excellent

SYSTEMS RECOMMENDATIONS	
PRIMERS	
Concrete	V430-00, V155-00
Aged coatings	Use Direct (Abrade as necessary)
For substrates other than listed above, or for usage in severe environmental conditions, please consult with Coronado® / Insl-x® Technical Service.	

Cleanup

Clean up with Corotech® V703 (Xylene)

USE COMPLETELY OR DISPOSE OF PROPERLY. This product contains components which may cause adverse affects to the environment if handled improperly. **Local disposal requirements vary; consult your sanitation department or state-designated environmental agency on disposal options.**

Environmental, Health & Safety Information

DANGER!

VAPOR AND SPRAY MIST HARMFUL

CAUSES EYE AND SKIN BURNS

CAUSES IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT

Contains: Epoxy Resins, Alkyl glycidyl ether, Isophoronediamine, Nonyl Phenol, Benzyl Alcohol

CAUSES BURNS OF EYES, SKIN AND MUCOUS MEMBRANES. HARMFUL BY INHALATION. HARMFUL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. CAUSES IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN REACTION. VAPORS MAY AFFECT BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHES AND NAUSEA. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION.

Cancer Hazard. Contains Crystalline Silica that can cause cancer when in respirable form (spray mist or sanding dust).

IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of all components. Before opening packages, read all warning labels. Follow all precautions.

Caution: All floor coatings may become slippery when wet. Where non-skid characteristics are desired, a small amount of clean sand may be added. Stir often during application.

Use only with adequate ventilation. Do not breathe vapors, spray mist or sanding dust. Do not get in eyes, on skin or on clothing. Wear chemical resistant goggles and face shield, chemical resistant gloves and protective clothing during application and cleanup. Do not wear contact lenses. Open doors, windows or use other means to ensure fresh air entry during application and cleanup. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor levels are above the applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area. Wash thoroughly after handling. Close container after each use.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

FIRST AID: If affected by inhalation of vapors or spray mist, remove to fresh air. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately. In case of eye contact, flush immediately with copious amounts of water holding eyelids open for at least 15 minutes and get medical attention immediately. In case of skin contact, remove contaminated clothing and flush affected area with water for at least 15 minutes, get medical help immediately. If swallowed, DO NOT INDUCE VOMITING, get medical help immediately.

IN CASE OF FIRE – Use foam, CO_2, dry chemical or water fog.

IN CASE OF SPILL – Absorb with inert material and dispose of as specified under "Clean Up."

KEEP OUT OF REACH OF CHILDREN
FOR PROFFESIONAL USE ONLY

Refer to Material Safety Data Sheet for additional health and safety information.

Manufactured by Benjamin Moore & Co., 101 Paragon Drive, Montvale, NJ 07645 Tel: 800-225-5554 Fax: 888-248-2143 www.corotechcoatings.com M72 V430 US 030613

Material Safety Data Sheet

Revision Date: *24-May-2013* **Revision Number:** *8*

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	**COROTECH 100% SOLIDS EPOXY FLOOR COATING**
Product Code	**V430-SERIES**
Product List	V430-01, V430-22, V430-52, V430-70, V430-75, V430-3931
Product Class	FINISH COATING
Color	All

Manufacturer
Complementary Coatings Corp.
360 Route 206
Flanders, NJ 07836
Phone: (800)-225-5554
Fax: (888)-248-2143
www.coronadopaint.com

Emergency Telephone Number(s)
CHEMTREC (US): 800-424-9300
CHEMTREC (outside US): (703)-527-3887

2. COMPOSITION INFORMATION ON COMPONENTS

Hazardous Components

Chemical Name	CAS-No	Weight % (max)
Epoxy resin	25068-38-6	65
Silica, crystalline	14808-60-7	20
Titanium dioxide	13463-67-7	20
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	68609-97-2	10
Nonylphenol	84852-15-3	10
Iron oxide	1309-37-1	5
Carbon black	1333-86-4	0.5

3. HAZARDS IDENTIFICATION

3. HAZARDS IDENTIFICATION

Emergency Overview

DANGER

The product causes burns of eyes, skin and mucous membranes. May cause allergic skin reaction. Irritating to respiratory system. May be harmful if swallowed.

IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of all components.
CAUTION: All floor coatings may become slippery when wet. Where non-skid characteristics are desired, a small amount of clean sand may be added. Stir often during application.

Appearance liquid **Odor** solvent

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Effects

Eyes Avoid contact with eyes. Causes eye irritation. Causes burns. Risk of serious damage to eyes.

Skin Avoid contact with skin. Irritating to skin. Causes burns. May cause skin sensitization. Prolonged contact may cause severe skin irritation with local redness and discomfort.

Inhalation Avoid breathing vapors or mists. May cause irritation of respiratory tract. Inhalation may cause nose, throat and lung irritation.

Ingestion Harmful if swallowed. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Can burn mouth, throat, and stomach.

Chronic Effects Avoid repeated exposure. Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons.

Contains: Crystalline Silica which has been determined to be carcinogenic to humans by IARC (1) when in respirable form. Risk of cancer depends on duration and level of inhalation exposure to spray mist or dust from sanding the dried paint.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Skin disorders. Asthma and other respiratory disorders.

HMIS **Health:** 2* **Flammability:** 1 **Reactivity:** 0 **PPE:** -

HMIS Legend
0 - Minimal Hazard
1 - Slight Hazard
2 - Moderate Hazard
3 - Serious Hazard
4 - Severe Hazard
* - Chronic Hazard
X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

4. FIRST AID MEASURES

General Advice	Show this safety data sheet to the doctor in attendance.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes, Remove and wash contaminated clothing before re-use, Call a physician immediately.
Inhalation	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. Call a physician immediately.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.
Notes To Physician	Treat symptomatically
Protection Of First-Aiders	Use personal protective equipment

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Foam, dry powder or water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment And Precautions For Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific Hazards Arising From The Chemical	Closed containers may rupture if exposed to fire or extreme heat. Keep product and empty container away from heat and sources of ignition.
Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	Yes
Flash Point Data	
Flash Point (°F)	310
Flash Point (°C)	154
Flash Point Method	PMCC
Flammability Limits In Air	
Lower Explosion Limit	Not available

Upper Explosion Limit	Not available

NFPA **Health:** 2 **Flammability:** 1 **Instability:** 0 **Special:** -

NFPA Legend
0 - Not Hazardous
1 - Slightly
2 - Moderate
3 - High
4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.

Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove all sources of ignition.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained..

Methods For Clean-Up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly..

Other Information None known

7. HANDLING AND STORAGE

Handling Handle and open container with care. Keep in a well-ventilated place. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.. Remove and wash contaminated clothing before re-use.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep in properly labeled containers.. Keep away from direct sunlight. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Hazardous Components

Chemical Name	ACGIH	OSHA
Epoxy resin	N/E	N/E

Silica, crystalline	0.025 mg/m³ - TWA	respirable - (10)/(%SiO2 + 2) mg/m³ TWA respirable - (250)/(%SiO2 + 5) mppcf TWA total dust - (30)/(%SiO2 + 2) mg/m³ TWA
Titanium dioxide	10 mg/m³ - TWA	15 mg/m³ - TWA total
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	N/E	N/E
Nonylphenol	N/E	N/E
Iron oxide	5 mg/m³ - TWA	10 mg/m³ - TWA
Carbon black	3.5 mg/m³ - TWA	3.5 mg/m³ - TWA

Legend
ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
OSHA - Occupational Safety & Health Administration Exposure Limits
N/E - Not Established

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Avoid contact with eyes. Safety glasses with side-shields. If splashes are likely to occur, wear:. Goggles. Face-shield.

Skin Protection Long sleeved clothing. Protective gloves.. Impervious gloves.

Respiratory Protection In operations where exposure limits are exceeded, use a NIOSH approved respirator that has been selected by a technically qualified person for the specific work conditions. When spraying the product or applying in confined areas, wear a NIOSH approved respirator specified for paint spray or organic vapors..

Hygiene Measures Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	solvent
Density (lbs/gal)	10.3 - 11.4
Specific Gravity	1.25 - 1.35
pH	Not available
Viscosity (centistokes)	Not available
Evaporation Rate	Not available
Vapor Pressure	Not available
Vapor Density	Not available
Wt. % Solids	95 - 100
Vol. % Solids	95 - 100
Wt. % Volatiles	0 - 5
Vol. % Volatiles	0 - 5
VOC Regulatory Limit (g/L)	<100
Boiling Point (°F)	252
Boiling Point (°C)	122
Freezing Point (°F)	Not available
Freezing Point (°C)	Not available
Flash Point (°F)	310
Flash Point (°C)	154

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point Method	PMCC
Upper Explosion Limit	Not available
Lower Explosion Limit	Not available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions. Hazardous polymerisation does not occur.
Conditions To Avoid	Extremes of temperature and direct sunlight.
Incompatible Materials	Incompatible with strong acids and bases and strong oxidizing agents.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors.
Possibility Of Hazardous Reactions	None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product
Repeated or prolonged exposure to organic solvents may lead to permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

Component

Epoxy resin
LD50 Oral: 11,400 mg/kg (Rat)

Silica, crystalline
LD50 Oral: 500 mg/kg (Rat) vendor data

Titanium dioxide
LD50 Oral: > 10000 mg/kg (Rat)
LD50 Dermal: > 10000 mg/m³ (Rabbit)
LC50 Inhalation (Dust): > 6.82 mg/L (Rat, 4 hr.)

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.
LD50 Oral: 19200 mg/kg (Rat)
LD50 Dermal: > 4500 mg/kg (Rabbit)
Sensitization: May cause sensitization by skin contact

Nonylphenol

LD50 Oral: 1300 mg/kg (Rat)

Iron oxide
LD50 Oral: > 5000 mg/kg (Rat) vendor data

Carbon black
LD50 Oral: > 15400 mg/kg (Rat)
LD50 Dermal: > 3000 mg/kg (Rabbit)

Chronic Toxicity

Carcinogenicity
The information below indicates whether each agency has listed any ingredient as a carcinogen:

Chemical Name	ACGIH	IARC	NTP	OSHA Carcinogen
Silica, crystalline	A2 - Suspected Human Carcinogen	1 - Human Carcinogen	Known Human Carcinogen	Listed
Titanium dioxide		2B - Possible Human Carcinogen		Listed
Carbon black		2B - Possible Human Carcinogen		Listed

- Crystalline Silica has been determined to be carcinogenic to humans by IARC (1) when in respirable form. Risk of cancer depends on duration and level of inhalation exposure to spray mist or dust from sanding the dried paint.
- Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

Legend
ACGIH - American Conference of Governmental Industrial Hygienists
IARC - International Agency for Research on Cancer
NTP - National Toxicity Program
OSHA - Occupational Safety & Health Administration

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Product
Acute Toxicity to Fish
No information available

Acute Toxicity to Aquatic Invertebrates
No information available

12. ECOLOGICAL INFORMATION

Acute Toxicity to Aquatic Plants
No information available

Component

Acute Toxicity to Fish
No information available

Epoxy resin
LC50: 1.5 mg/L (Rainbow Trout - 96 hr.)

Titanium dioxide
LC50: >1000 mg/L (Fathead Minnow - 96 hr.)

Acute Toxicity to Aquatic Invertebrates
No information available

Acute Toxicity to Aquatic Plants
No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of in accordance with federal, state, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options..
Empty Container Warning	Emptied containers may retain product residue. Follow label warnings even after container is emptied. Residual vapors may explode on ignition.

14. TRANSPORT INFORMATION

DOT	Not regulated
ICAO / IATA	Contact the preparer for further information.
IMDG / IMO	Contact the preparer for further information.

15. REGULATORY INFORMATION

International Inventories

United States TSCA	Yes - All components are listed or exempt.
Canada DSL	Yes - All components are listed or exempt.

Federal Regulations

SARA 311/312 hazardous categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

This product may contain trace amounts of (other) SARA reportable chemicals. Contact the preparer for further information.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

This product may contain trace amounts of (other) HAPs chemicals. Contact the preparer for further information.

State Regulations

California Proposition 65

This product may contain small amounts of materials known to the state of California to cause cancer or reproductive harm.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Louisiana	Rhode Island
Silica, crystalline	X	X	X		X
Titanium dioxide	X	X	X		X
Iron oxide	X	X	X		X
Carbon black	X	X	X		X

Legend
X - Listed

16. OTHER INFORMATION

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By

Product Stewardship Department
Complementary Coatings Corp.
dba Insl-X
101 Paragon Drive
Montvale, NJ 07645
Phone: 1-800-225-5554

Revision Date: 24-May-2013
Revision Summary Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

End of MSDS

TORGINOL
710 Forest Avenue | P.O. Box 102
Sheboygan Falls, WI 53085 | USA
Toll-Free 1-800-558-7596
(920) 467-2471 | (920) 467-8674 Fax
service@torginol.com | www.torginol.com

Product Data Sheet

COLOR FLAKES

ColorFlakes™

Decorative Vinyl Color Chips/Flakes

For use in Seamless, Resin-based FlooringSystems

For more information, please visit our website at: www.torginol.com

DESCRIPTION

Product Name:
Decorative Vinyl Color Chips/Flakes
Trade Name: *ColorFlakes* ™

Manufacturer:
Torginol, Inc.
P.O. Box 102
710 Forest Avenue
Sheboygan Falls, WI 53085 USA
(800) 558-7596 toll-free
(920) 467-2471 telephone
(920) 467-8674 facsimile
www.torginol.com
service@torginol.com

Torginol *ColorFlakes*™, also known as color chips, flake or fleck are composed of water-based resin materials, inorganic minerals, additives and various pigments. This unique product is integrally pigmented, brilliantly colored, random in shape, sized within a standardized range and custom blended with infinite options to achieve optimal appearance and texture qualities with a resin-based flooring or wall-coating system.

***ColorFlakes*™ Advantages:**

- Custom design to match any décor
- Over 150 color-styles "in-stock"
- Non-flammable
- Water-based chemistry
- Optimal flexibility & strength
- Colorfast, UV stable pigments
- Forgiving application
- Fast turnaround times
- Custom color-matching available
- Six standard sizing options
- Infinite custom-blending options
- Custom blend-matching expertise
- Lab tested resin compatibility
- Suitable in many environments
- Custom packaging & label options
- No minimum order quantities
- Diligent quality control program
- Hide sub-surface imperfections

CHARACTERISTICS

Color:
Spectrophotometer ASTM E1866
ΔE ≤ 1.0 Pass

Dry Film Thickness:
Micrometer ASTM D1005
Mils Dry 4 - 5 mils

Shape:
Visual Evaluation
Random Pass

Odor:
Olfactory Evaluation ASTM D1296
Odorless Pass

Surface Texture:
Visual Evaluation
Smooth Pass

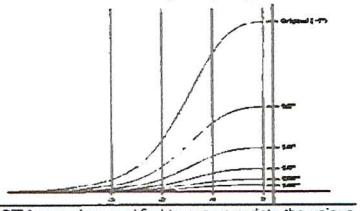
Metamerism:
Visual Evaluation ASTM D4086
Nonmetameric Pass

Sheen:
60° Gloss Meter ASTM D523
<15 units Pass

Dry Film Flexibility:
*Mandrel Bend Test ASTM F137**
Interior Angle ≤ 110° Pass

Hiding Power:
Visual Evaluation ASTM D6762
Opacity > 98% Pass
(except color C2250)

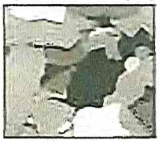
Size Distribution:
Normal Sieve Analysis (100g / 90sec)



*ASTM procedure modified to accommodate the unique characteristics of *ColorFlakes*™ material

SIZING & BLENDING

Sizing Options:

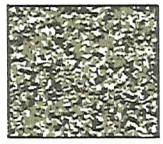


Original (~1")

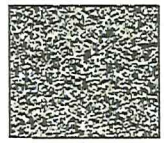
1/2"

1/4"

1/8"



1/16"



1/32"

Custom Blending:
Use *ColorFlakes*™ to coordinate your floors and walls with any décor. Our extensive line of ColorFlakes gives you the ability to custom design blends to match any color-scheme. Either choose from one of our signature blend designs or creatively mix and match colors to develop a unique color array that best fits your project. *Call 1-800-558-7596 for more information and to request samples...*

TORGINOL

ColorFlakes™

Decorative Vinyl Color Chips/Flakes

COLOR FLAKES

COLOR INDEX

(Sorted by Item Number)

Standard Colors

C1000 (Adobe Beige)
C1020 (Amethyst)
C1040 (Autumn Brown)
C1045 (Beige)
C1050 (Black)
C1055 (Brick Red)
C1060 (Brown)
C1070 (Burgundy)
C1080 (Canyon Red)
C1090 (Charcoal)
C1100 (Cocoa Brown)
C1120 (Crest Green)
C1130 (Dark Blue)
C1140 (Delray Blue)
C1150 (Dove Grey)
C1200 (Dusk Blue)
C1320 (Fawn)
C1360 (Forest Green)
C1400 (Gold)
C1410 (Granite)
C1415 (Graphite)
C1420 (Hunter Green)
C1425 (Ivory)
C1430 (Jasper)
C1480 (Medium Gray)
C1520 (Milkweed)
C1560 (Mint Green)
C1570 (Mustard)
C1600 (Olive)
C1640 (Patio Red)
C1680 (Peach)
C1720 (Powder Blue)
C1760 (Rose)
C1770 (Salmon)
C1780 (Scone)
C1785 (Tan)
C1790 (True Blue)
C1800 (Whisper Gray)
C1820 (White)
C2160 (Orange)
C2200 (Primary Yellow)
C2240 (Red)
C2250 (Semi-Transparent White)
C5051 (Afterglow)
C5052 (Chocolate)
C5101 (Seaspray)
C5102 (Lime)
C5103 (Sorbet)
C5104 (African Violet)
C5114 (Ebony)
C5115 (Putty)
C5116 (Wigwam)
C5117 (Acorn)
C5118 (Fireweed)
C5252 (Cement)
C5301 (Cornmeal)
C5302 (Cardboard)
C5303 (Cappuccino)
C5304 (Mud)
C5305 (Tabu)
C5306 (Porpoise)
C5307 (Camelback)
C5910 (JD Green)
C5920 (Cyberspace)
C5935 (Rustic Red)
C6601 (Buff)
C6602 (Latte)
C6604 (Primary Blue)
C6606 (Neutral Gray)
C6607 (Clay)
C6609 (Burnt Red)
C6611 (Evergreen)
C6612 (Creamy Orange)
C6613 (Sage)
C6614 (Cream)
C6615 (Pumpkin)
C6616 (Lemon Yellow)
C6617 (Teal)
C6621 (Stormy Blue)
C6622 (Sunrise Yellow)
C6721 (Lipstick Red)
C6723 (Camo Green)
C6804 (Gladiola)
C7551 (Terra Cotta)
C9800 (Sommelier)
C9801 (Dolphin)
C9805 (Carrot Cake)
C9806 (Flesh)
C9902 (Black Iron Oxide)
C9903 (Online)
C9904 (Dark Grey)
C9905 (Heaven)
C9907 (Blue Ox)
C9908 (Canary Yellow)
C9909 (Sugar Cookie)
C9910 (Buttermilk)
C9911 (Fossil)
C9912 (Toast)
C9916 (Favre)
C9920 (Cherry Bomb)
C9951 (Plum)
C9952 (Aquamarine)
C9953 (Honeydew)
C9954 (Caramel)
C9955 (Battleship Gray)
C9956 (Khaki)
C9957 (Taupe)
C9958 (Alpaca White)
C9959 (Antique White)
C9960 (Navajo Beige)
C9961 (Functional Grey)
C9962 (Jetstream)
C9963 (Cobalt Blue)
C9964 (Sky Blue)
C9965 (Lavender)
C9966 (Morning Fog)
C9967 (Royal Blue)
C9968 (Steel Blue)
C9969 (Navy)
C9970 (Moss)
C9971 (Peppermint)
C9972 (Moody Blue)
C9973 (Coppertone)
C9974 (Brilliant Blue)
C9975 (Raisin)
C9977 (Daiquiri)
C9978 (Tomato)
C9979 (Squash)
C9981 (Potter)
C9982 (Gravy)
C9983 (Hypnotic)
C9984 (Sonic)
C9985 (Susie-Q)
C9986 (Eggshell)
C9987 (Stone)
C9988 (Baby Blue)
C9989 (Purple Haze)
C9990 (Slime)
C9991 (Gardenview)
C9992 (Cosmo)
C9993 (Grape)
C9994 (Sand Dune)
C9995 (Berry)
C9998 (Redwood)

Varicolors

C3000 (V C Brown)
C3020 (V C. Ewa Green)
C3040 (V C. Kona Beige)
C3080 (V C Lanai Gray)
C3100 (V C Maui Blue)
C3120 (V C Pali Brown)
C3160 (V C Rose)

Phosphorescent

Glow-in-the-Dark
C9110 - Blue Glow
C9120 - Green Glow

Fluorescent

Black Light Sensitive
C4000 (Blaze Orange)
C4040 (Chartreuse)
C4080 (Hot Pink)
C4120 (Rocket Red)
C4160 (Signal Green)
C4180 (Horizon Blue)

APPLICATION

Floor Application Coverage Rates

Flake Size	Full	Partial	
Original (~1")	8-10	25-200	ft²/lb.
1/2"	7-9	25-200	ft²/lb.
1/4"	5-7	25-200	ft²/lb.
1/8"	4-6	25-200	ft²/lb.
1/16"	3-5	25-200	ft²/lb.
1/32"	2-4	25-200	ft²/lb.

*Coverage rates vary depending on customer preferences and application techniques. Torginol does not guarantee exact coverage rates.

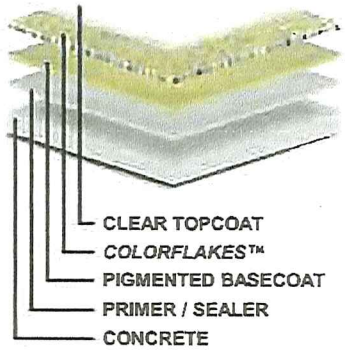
Floor Application Methods

Hand Broadcasting :

Pneumatic Hopper-Blower Gun:

TYPICAL SYSTEM

(approximate dry film thickness: 15 - 30 mils)



For best results, 10-15 mils of clear top-coating is recommended to fully encapsulate *ColorFlakes™* and provide a durable wearing surface.

SYSTEM COMPATIBILITY

Lab tested resin chemical compatibility:

- Epoxy
- Polyurethane
- Polyurea
- Various Polymers
- MMA
- Polyaspartic
- And others...

Note:

In 40+ years of manufacturing ColorFlakes™, there are no known resin incompatibilities. However, Torginol recommends unknown resin compatibility testing prior to use.

PRODUCT LIMITATIONS

- *ColorFlakes™* are random in shape due to our manufacturing process.
- Although the colorfast pigments in the *ColorFlakes™* are UV stable, the specifications for the UV stability and environmental durability of your coating system will determine outdoor suitability.
- Due to inherent product characteristics, a small amount of finer particles will be present within each box.
- Do NOT apply *ColorFlakes™* in rain.

STORAGE

Store *ColorFlakes™* in an air tight poly-bag in a dry environment at room temp. to avoid moisture, humidity and product degradation.

RECOMMENDED USES

Aircraft Hangars
Auto Dealerships
Banquet Halls
Bars, Pubs & Taverns
Basements
Bathrooms
Bowling Alleys
Butcher Shops
Cafeterias
Churches
Clean Rooms
Commercial Kitchens
Dog Kennels
Garage Floors
Greenhouses
Grocery Stores
Hallways
Hospitals
Industrial Hallways
Laboratories
Laundromats
Locker Rooms
Lunch Rooms
Night Clubs
Offices
Pet Stores
Pharmaceutical Plants
Public Municipalities
Restaurants
Restrooms
Retail Stores
Schools
Show Rooms
Stadium Hallways
Zoos
And more

MATERIAL SAFETY DATA SHEET

ColorFlakes™

I. PRODUCT AND MANUFACTURER IDENTIFICATION

Product Name	*ColorFlakes™*
Manufacturer	Torginol, Inc.
Address	710 Forest Avenue P.O. Box 102 Sheboygan Falls, WI 53085-0102 U.S.A.
Emergency Phone	1-800-688-4005 (VEOLIA ES)
Information Phone	(920) 467-2471 / 1-800-558-7596
Facsimile	(920) 467-8674
Email	service@torginol.com
Website	www.torginol.com

Date Revised January, 2011

II. HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Hazardous Components	CAS Number	OSHA PEL	ACGIH TLV	Concentration (%)
Barium Sulfate*	7727-43-7	10 PPM	10 MG/M3	70 - 85%
Titanium Dioxide*	13463-67-7			0 - 10%
Proprietary Resins*	N/E			10 - 15%
Pigment(s)*	N/A			< 3%

*No toxic chemical(s) subject to the reporting requirements of SARA Section 313 of Title III and of CFR 372 are present.

III. PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point	N/A	**Specific Gravity (H_2O = 1)**	3.6
Vapor Density	Not volatile	**Appearance and Odor**	White/Colored; Odorless
Coating V.O.C.	Not volatile	**Melting Point**	N/A
Material V.O.C.	Not volatile	**Evaporation Rate**	N/A
Solubility in Water	Insoluble		

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point	N/A
Flammable Limits	N/A
Extinguishing Media	N/A
Special Firefighing Procedures	N/A
Unusual Fire and Explosion Hazards	None

* No known fire hazards present.

V. REACTIVITY DATA

Stability	Stable
Conditions to Avoid	Product is stable but decomposes at 600°liberating CO2
Incompatibility	None
Hazardous Byproducts	None
Hazardous Polymerization	Will not occur

VI. HEALTH HAZARD DATA

Inhalation Health Risks and Symptons of Exposure
Mild bronchial irritation may occur.

Skin and Eye Contact Health Risks and Symptons of Exposure
This substance is not expected to cause prolonged or significant skin or eye irritation.

Skin Absorption Health Risks and Symptons of Exposure
May cause irritation.

VI. HEALTH HAZARD DATA (CONTINUED)

Ingestion Health Risks and Symptoms of Exposure
Large quantities may cause irritation to the mouth, throat and gastrointestinal tract resulting in nausia and vomiting.

Health Hazards (Acute and Chronic)
Acute Effects: Causes mechanical skin and eye irritation.
Chronic Effects: Heavy extended industrial exposure to the dust of this product may produce benign pneumoconiosis, termed "baritosis". Mild bronchial irritation may occur.

Carcinogenicity: **NPT?** No **IARC Monographs?** No **OSHA Regulated?** No
Not listed with NTP, IARC or OSHA as a know or suspected carcinogen.

Medical Conditions Generally Aggravated by Exposure
Individuals with pulmonary and/or respiratory disease or subject to eye irritation, should be precluded from exposure.

Emergency and First Aid Procedures
Wash dust from skin with soap and water. Flush out eyes with generous amounts of water for at least 15 minutes. See a physician.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material Is Released or Spilled
Normal clean-up procedures. Care should be taken to avoid causing dust to become airborne. Vacuum cleaning systems are recommended.

Waste Disposal Method
Disposal must be made in accordance with Federal, State and Local regulations.

Precautions to Be Taken in Handling and Storing
Take normal precautions against box/bag breakage or spills of bulk material. Avoid creation of respirable dust.

Other Precautions
Use adequate ventilation and dust collection. Do not permit dust to accumulate in work area. Maintain and use proper and clean respiratory equipment. Clean clothing which has become contaminated.

VIII. CONTROL MEASURES

Respiratory Protection
Use of dust respirator recommended when exposure limits may be exceeded.

Ventilation
Local exhaust ventilation to collector or containment recommeded to control dust below exposure limit.

Protective Gloves
Leather or rubber gloves.

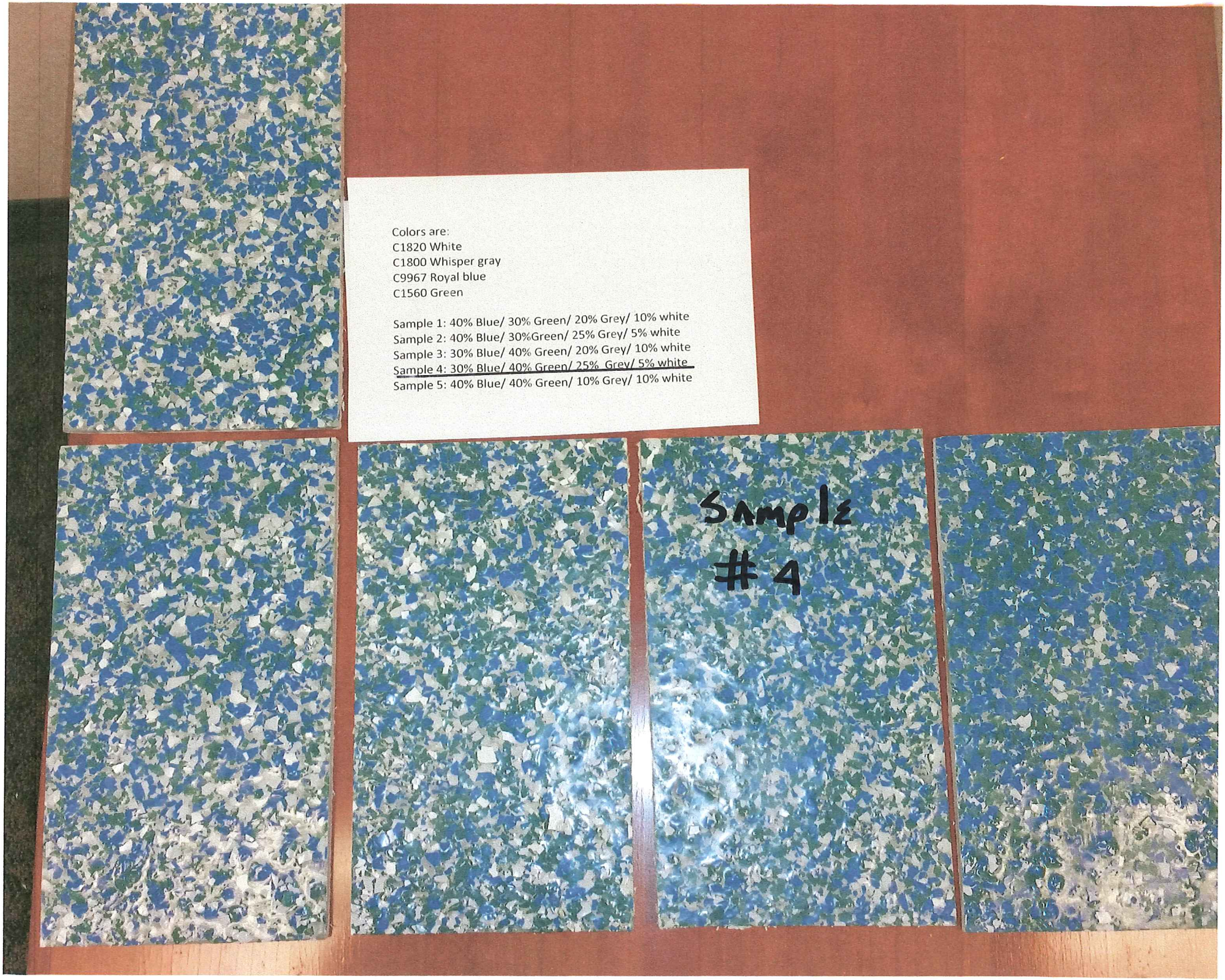
Other Protective Clothing or Equipment
As appropriate in light of specific application.

Work/Hygenic Practices
Good industrial hygiene practices required. Adequate ventilation and personal respiratory protection should be employed.

IX. DISCLAIMER

Disclaimer
The information contained herein is based on the data available to us and is believed to be correct. Torginol, Inc. makes no warranty expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Torignol, Inc. assumes no reponsibility for injury, loss or damage from the use of the product described.

N/A = Not Applicable N/D = Not Determined N/E = Not Established


Colors are:
C1820 White
C1800 Whisper gray
C9967 Royal blue
C1560 Green
Sample 1: 40% Blue/ 30% Green/ 20% Grey/ 10% white
Sample 2: 40% Blue/ 30%Green/ 25% Grey/ 5% white
Sample 3: 30% Blue/ 40% Green/ 20% Grey/ 10% white
Sample 4: 30% Blue/ 40% Green/ 25% Grey/ 5% white
Sample 5: 40% Blue/ 40% Green/ 10% Grey/ 10% white
Sample #4