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Statguard® Conductive Acrylic Paint

Application Instructions



Made in the
United States of America



Figure 1. Statguard® Conductive Acrylic paint.

Test Patch Requirement

A test patch on new applications is required to receive a full product warranty.

Prior to the shipment of your Statguard® Conductive Acrylic Paint, Desco Industries Inc. (DII) will provide samples and technical documentation for installing the test patch. The test patch will allow for a full evaluation of the floor preparation and of our Statguard® Conductive Acrylic Paint, performance features to include color, adhesion, physical properties and electrical resistance.

Test Patch application instructions are located in the Surface Preparation section. Please contact your customer service representative to organize a test patch kit.

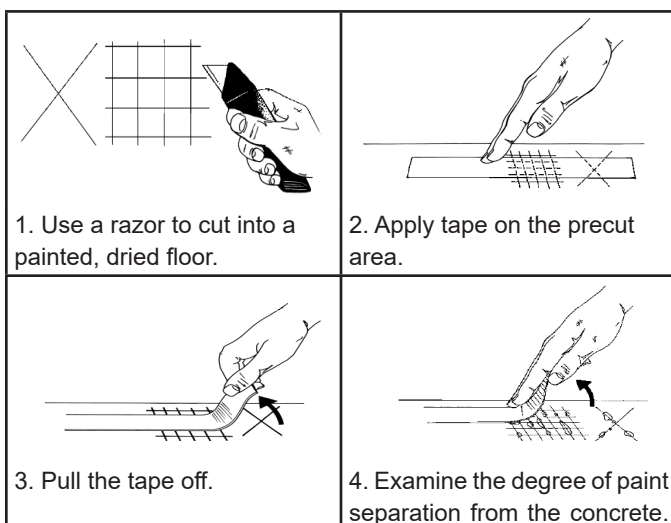


Figure 2. Adhesion test on the painted floor.

Allow newly applied paint to dry a minimum of 48 hours before proceeding with the test. At humidity levels over 55% RH, allow 72 hours of drying time before testing. Use a razor to cut a cross or a few perpendicular lines over a 3" by 3" (75 mm by 75 mm) area on several spots of the thoroughly dried area. (See Figure 2).

Use a piece of masking tape to cover the marked area. Make sure the tape is thoroughly adhered to the test area. Pull the tape off the surface and examine the amount of paint which has peeled off during the test. If any significant portion is transferred to the tape, better surface preparation (acid etching, cleaning or sanding) should be done on the substrate to enhance the adhesion.

If your test patch is on a bare or prepped concrete we recommend using Baril WB 500 Water Base Primer / Tinted Light Grey to achieve proper performance of the Statguard® Conductive Paint properties. Please contact Baril at 260-665-8431 for additional product details.

Description

Statguard® Conductive Acrylic Paint is a one part floor coating formulated to produce controlled dissipation of static electrical charges. Statguard® Conductive Acrylic Paint is very effective as a static control floor coating for electronics manufacturing, assembly, and storage. It is available in grey (similar to PMS 432) in 5 gallon (19 liters) containers; and in light grey (similar to PMS 429) in 5 gallon (19 liters) containers. The color may vary between production lots.

NOTE: Statguard® Conductive Acrylic Paint should not be allowed to freeze. Store at temperatures above 45°F (7°C) as stated in the Safety Data Sheet. We recommend that these products be stored in their original containers and be sealed when not in use. We cannot guarantee performance if not properly mixed or used within 3 months from date of sale.

Surface Preparation

The two most important characteristics for successful application of Statguard® Conductive Acrylic Paint applications are:

1. The surface must be clean, dry, dull, and smooth. Heavy dirt or grease build-up should be removed with a stripper or degreaser. Cleaning methods range from: sweeping, vacuuming, wire brush, air-blasting, water jet, steam cleaning, or stripping.
2. If the surface is concrete, it must be in good condition.

CONCRETE:

New concrete should cure for a minimum of 28 days before coating with Statguard® Conductive Acrylic Paint. Not all concrete is created equal -- concrete surfaces vary widely in physical and chemical qualities due to the way the concrete was formulated, poured, or finished.

There are several methods to prepare problem concrete. Each method depends on the condition of the concrete. Adhesion properties can be increased by profiling or roughing the surface through acid etching, rotary drum sanding, scarifying, or mechanically scratching the surface.

You must test for moisture in the concrete. If moisture is present, the floor should not be coated until the source of the moisture is determined and eliminated.

PRIMING:

Statguard® Conductive Acrylic Paint bonds well to clean, dry concrete. However if the sub floor is bare or prepped concrete we recommend using the Baril WB 500 Water Base Primer / Tinted Light Grey to achieve proper performance of the Statguard® Conductive Paint properties. Please contact Baril at 260-665-8431 for additional product details.

Installing Statguard® Conductive Paint on improperly prepared surfaces will void product warranty and cause product failure.

PREVIOUSLY PAINTED SURFACES:

The surface should be clean and free of dust, grease, wax, and soap residue. Wash with ordinary detergent and water. Rinse thoroughly with clean water and let dry. Glossy surfaces can be dulled by lightly sanding and then vacuuming and cleaning. Cracks and holes should be repaired before applying the Statguard® Conductive Acrylic Paint. Adhesion can be improved by using a standard industrial type primer.

UNPAINTED SURFACES:

Adhesion can be improved by using a standard industrial type primer. Metal should be primed with red oxide primer. Concrete, wood, plastics, and most other surfaces should be properly cleaned. Let dry and then apply Statguard® Conductive Acrylic Paint.

COVERAGE:

Statguard® Conductive Acrylic Paint will cover 300 to 400 square feet (27.87 to 37.16 square meters) at a 1 to 1.5 mil (0.0254 to 0.0381 mm) thick dry film per gallon (3.87 liters) on a smooth surface. Coverage is less on coarse or textured surfaces. Two coats are recommended to achieve maximum performance from the paint.

Application

Always use in a well ventilated area or wear a suitable respirator. Wear appropriate eye protection such as splash goggles and impervious type protection gloves to protect hands.

MIXING

1. Mix paint thoroughly before use (See Figure 3) using a 500-1500 RPM variable speed drill and paint mixing attachment or a paint mixer.
2. If the paint, after properly mixing, is not freely transferring from the roller to the floor, the Statguard® ESD paint can be thinned with water up to 10% max by volume.
 - a. Start by slowly mixing 5% water into the master container and apply again.
 - b. Do not add more than 10% of water to the mix.

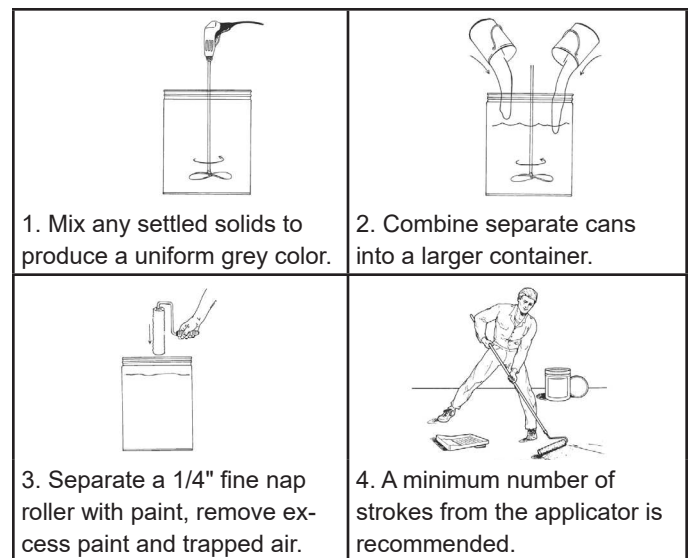


Figure 3. Paint application with roller.

APPLICATION BY ROLLER

1. Stir paint thoroughly to mix any settled solids to produce uniform grey color.
2. Combine separate cans of paint into one container to ensure uniform color distribution. It is recommended that a test area be coated to ensure that the adhesion and electrical performance of the paint is acceptable. (See Adhesion Testing, Figure 2.) If the test areas show inadequate adhesion, use an industrial floor primer/sealer.
3. Saturate a 1/4" (6.35 mm) fine nap roller or an industrial brush with paint. Remove excess paint and trapped air from the applicator by moving applicator several times in the paint tray.
4. A minimum number of strokes from the applicator on the substrate is recommended to minimize air bubbles.

APPLICATION BY SPRAY

Conventional Spray Gun: "E" fluid tip and needle and #704, 765 or 78 air gap.

Airless Spray: Spray gun and spray cap or suitable orifice diameter 0.020-0.025" (0.508-0.635 mm).

Mix paint thoroughly before using and stir occasionally when applying. No thinning necessary for spray applications. Room temperature must be above 50°F (10°C).

A minimum of two coats of Statguard® Conductive Acrylic Paint is recommended for appropriate static protection.

Grounding

Conventional grounding practices like connecting coated surfaces to equipment or earth ground is recommended for meeting ANSI/ESD S20.20, EN 61340-5-1 and ISO 9000 recommendations for verifying grounds. However the following is also true of conductive Acrylic Paint flooring "Floor finishes ... function by two separate mechanisms. First, they reduce the surface's tendency to generate a static charge.

Second, they provide a path for the dissipation of charge. The charge may dissipate over the surface of the finish or it may dissipate to ground if the floor finish is grounded." [Per ESD Handbook ESD TR20.20 section 5.3.4.2]

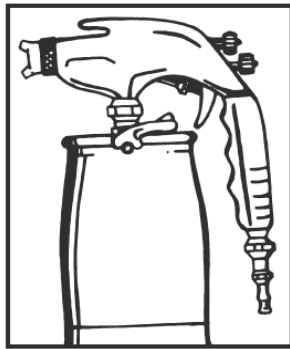


Figure 4. Spray paint application.

4. Bolt a grounded metal plate to the Conductive Acrylic Paint surface.

Statguard® Conductive Acrylic Paint applied in excess of 50 square feet (4.6 square meters) enable the surface to dissipate 5000 volts to zero in less than 0.01 seconds per FTMS 101C, Method 4046 without conventional grounding grids or wires. The conductive coating becomes a capacitive reservoir that effectively drains static charges. ESD footwear must be used in conjunction with Statguard® Conductive Acrylic Paint to ground personnel.

If footwear/flooring is being used as a primary ground to meet the personnel grounding requirements of ANSI/ESD S20.20 then we would advise to ground the Conductive Acrylic Paint for testing and verification of a ground point. If the footwear/flooring are being used as a secondary or back up grounding for personnel then grounding practices like electrically connecting Statguard® Dissipative Floor Finish to ground is only required for applications of Conductive Acrylic Paint that are less than 50 square feet. For applications that are greater than 50 square feet, the capacitance of Conductive Acrylic Paint is several hundred times greater than the capacitance of the human body model at 100pF. The difference in capacitance is so great that the Statguard® treated floor acts as a second capacitor in series with the person and a human body charge even as great as 5,000 volts will have a resulting voltage well below the 100V limit peak of ANSI/ESD S20.20. The surface resistance of the Statguard® treated floor will decay a 5000v charge to zero in .05 sec. per FTMS 101B, Method 4046. Statguard® has substantially less than the maximum static decay time of 0.1 seconds.

Clean Up

Wash applicators with water immediately after painting. Remove paint spills promptly with a wet cloth. Close container after each use. Keep container from freezing.

Finish/Sealer

Statguard® Conductive Acrylic Paint can be overcoated or sealed with Statguard® Floor Finish static dissipative coating to increase durability, enhance shine, improve ease of maintenance, and seal out dirt and debris. **Because of the matte finish of Statguard® Conductive Light Grey Acrylic Paint it is recommended that Statguard® Floor Finish be applied for gloss and ease of maintenance.**

Statguard® Dissipative Floor Finish is a polymer base floor finish/sealer that can be used as a top coat on the Conductive Acrylic Paint. Surface Resistance will then be in the 1×10^5 to $< 1 \times 10^8$ ohm range. Two coats are recommended. Three coats will improve electrical properties, durability and reduce frequency of maintenance. Apply Statguard® Floor Finish after 48-72 hours after last coat of paint. Paint becomes dry to the touch, but is not fully cured to accept a finish coat until this time. If you notice the paint color coming off when finishing, it is too soon to apply. Please wait for the paint

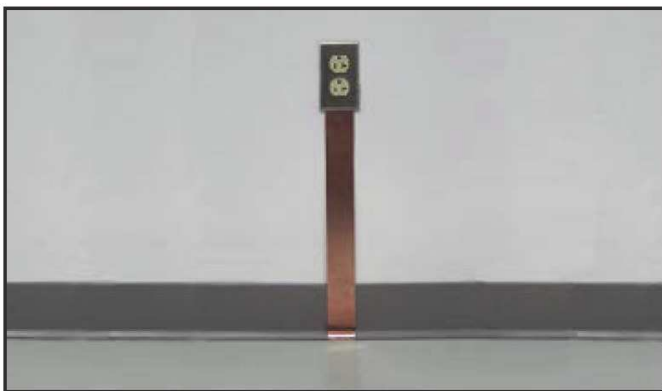


Figure 5. ESD Floor Ground Strip.

Four examples on how to achieve connection to the Conductive Acrylic Paint surface are:

1. Install a Statguard® ESD Floor Ground Strip per 1,000 square feet throughout the installation.
2. Bring Conductive Acrylic Paint coating in contact with a building ground rod.
3. Install a grounded lag bolt to the floor so the bolt comes in contact with the Conductive Acrylic Paint when screwed in place.

to cure fully. Ask for Technical Bulletin [TB-7042](#) for more information on Statguard® Floor Finish.

Maintenance

Use sweeper, vacuum, or broom to remove dirt. Allow two weeks drying time before using a damp mop to clean the coated area. Do not use abrasive cleaners, floor rinse, or scrubbing machine to clean the floor.

Drying Time

It is recommended that Statguard® Conductive Acrylic Paint be allowed to dry at a temperature in excess of 45°F (7°C) until dry. A minimum of 1 to 2 hours drying time should be allowed before applying the second coat. The 2nd coat should be allowed to cure for 24 hours before taking electrical readings. After 24 hours readings taken will be reflective of the long term electrical characteristics of the material.

Physical Properties

Type	Water base acrylic coating	
Color	Grey, Light Grey	
Vehicle Type	Pure acrylic resin waterborne	
Pigment Type	Lead free, iron oxide, titanium dioxide and extenders	
Viscosity	Light Grey	26" #3 Zayn cup
	Grey	23" #3 Zayn cup
Solids	Light Grey	24% by volume
	Grey	20% by volume
Coating Density	Light Grey	9.54 lbs per gallon
	Grey	10.27 lbs per gallon (1.0 kilograms per liter)
Gloss	Light Grey	2 @ 60°F
	Grey	22 @ 60°F (30 @ 60°C)
Temperature Range	Wet	33°F - 110°F (1°C - 43°C)
	Dry	33°F - 300°F (1°C - 149°C) (300°F [149°C] not continuous)

Electrical Properties

Static Charge Decay	< 0.01 sec. per FTMS B, Method 4046
Charge Generation	Zero per AATCC Step Test, Method 134-1979
Rtt	1 x 10 ⁴ to < 1 x 10 ⁷ ohms per ANSI/ESD STM 7.1
Rtg	1 x 10 ⁴ to < 1 x 10 ⁷ ohms per ANSI/ESD STM 7.1

Testing

Test patch areas should be tested for adhesion and electrical performance of the paint before applying paint to the entire floor. To best ensure consistent results, the test should be done at various locations.

ELECTRICAL PROPERTIES:

Test the surface, point-to-point resistance, (Rtt) and resistance-to-ground (Rtg) properties of coated area per ANSI/ESD STM7.1 test method and/or ESD TR53. For quick and easy verification of the paint's electrical properties, we recommend the use of our a Surface Resistance Test Kit (Figure 6). For more information contact any of the Desco Industries Inc. companies.

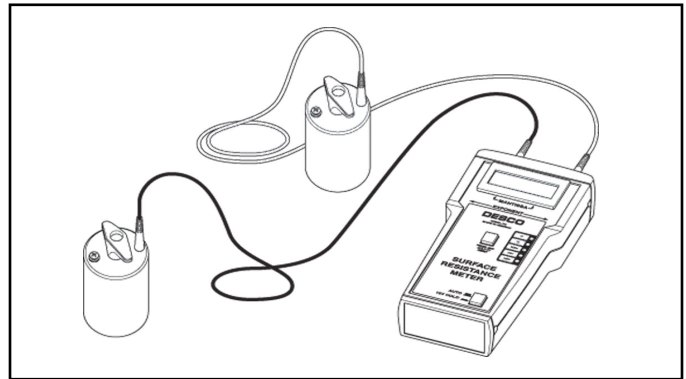


Figure 6. Electrical testing on the painted floor using a Surface Resistance Test Kit.

RoHS 3, REACH, and Conflict Minerals Statement

See the Desco Industries RoHS 3, REACH, and Conflict Minerals Statement:

<http://www.descoindustries.com/ROHS.aspx>

Desco Industries Limited Warranty

See the Desco Industries Limited Warranty:

<http://www.descoindustries.com/Warranty.aspx>

Statguard® Conductive Acrylic Paint is available from these Desco Industries brands:

STATGUARD FLOORING

for service and support in North America

5 Gallons Dark Grey [46041](#)

5 Gallons Light Grey [46051](#)

DESCO EUROPE

for service and support in United Kingdom and Europe

19 Litres Dark Grey [210221](#)

19 Litres Light Grey [210222](#)

DESCO ASIA

for service and support in Asia

19 Litres Dark Grey [10409](#)

19 Litres Light Grey [10410](#)

Safety Data Sheet

May be used to comply with ANSI Z400.1-2004, 29 CFR 1910.1200, Regulation (EC) No 1272/2008 (CLP Regulation) and GHS. Standards must be consulted for specific requirements.

NFPA Designation 704

Degree of Hazard

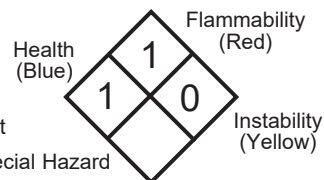
4 = Extreme

3 = High

2 = Moderate

1 = Slight

0 = Insignificant



Revision Date: 2017-04-06

HMIS RATING: Health 1, Flammability 1, Physical Hazard 0, Personal Protection B

SECTION 1 — IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product Name: Statguard® Conductive Acrylic Paint, Dark grey
EC No.: None
REACH Registration No.: None
CAS No.: None

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use: Conductive Acrylic Paint

1.3 Details of the supplier of the safety data sheet

Manufacturer: Desco Industries, Inc.
One Colgate Way.
Canton, MA 02021
781-821-8370
Email Address: Service@DescoIndustries.com

1.4 Emergency telephone number

Emergency Number: 781-821-8370

SECTION 2 — HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Skin Irritation	Category 2
Eye Irritation	Category 2A
Skin Sensitisation	Category 1
Carcinogenicity	Category 2
Reproductive toxicity	Category 2

2.2 Label elements

Symbol: Health hazard. Exclamation mark.
Signal word: Warning
Hazard statements: (H315): Causes skin irritation.
(H317): May cause an allergic skin irritation.
(H319): Causes serious eye irritation.
(H351): Suspected of causing cancer.
(H361): Suspected of damaging fertility or the unborn child.
Precautionary statements: (P201): Obtain special instructions before use.
(P261): Avoid breathing dust/fume/gas/mist/vapors/spray.
(P264): Wash hands thoroughly after handling.
(P272): Contaminated work clothing should not be allowed out of the workplace.
(P280): Wear protective gloves/ protective clothing/ eye protection/ face protection.
(P302+352): IF ON SKIN: Wash with plenty of water.
(P305+351+338): IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
(P308+313): IF exposed or concerned: Get medical advice/attention.
(P333+313): If skin irritation or rash occurs: Get medical advice/attention.

(P337+313): If eye irritation persists: Get medical advice/attention.
(P362+364): Take off contaminated clothing and wash it before reuse.
(P405): Store locked up.
(P501): Dispose of contents/container in accordance with local/regional/
national/international regulations.

2.3 Other hazards

N/A

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Hazardous Ingredients	CAS No.	Weight %
Titanium Dioxide	13463-67-7	10 - 25 %
Trade Secret (Epoxy Ester)		2.5 - 10 %
2-Butoxyethanol	111-76-2	2.5 - 10 %
Carbon black	1333-86-4	0.1 - 2.5 %
Cobalt bis(2-ethylhexanoate)	136-52-7	0.1 - 2.5 %
Manganese Carboxylate	15956-58-8	0.1 - 1 %

SECTION 4 — FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact	Flush with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact	Immediately wash with water and soap and rinse thoroughly.
Ingestion	DO NOT induce vomiting. Rinse mouth. If symptoms persist, consult a doctor.
Inhalation	Move subject to fresh air and keep at rest in a position comfortable for breathing. Be sure call for a doctor. In case of unconsciousness, place patient stably in side position for transportation.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5 — FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	CO ₂ , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Unsuitable Extinguishing Methods	N/A

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

No special measures protective equipment required.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Not required.

6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

6.3 Methods and materials for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to SECTION 13.

6.4 Reference to other sections

See SECTION 7 for information on safe handling.
See SECTION 8 for information on personal protection equipment.
See SECTION 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:

Hazardous Ingredients	CAS No.	Rating
Titanium dioxide	13463-67-7	30 mg/m ³
2-butoxyethanol	111-76-2	60 ppm
Carbon black	1333-86-4	9 mg/m ³
2,4,7,9-tetramethyldec-5-yne-4,7-diol	126-86-3	30 mg/m ³
1-methoxy-2-propanol	107-98-2	100 ppm
Poly(propylene glycol)	25322-69-4	30 mg/m ³
Dibutyl phthalate	84-74-2	15 mg/m ³
Stoddard solvent	8052-41-3	300 mg/m ³

PAC-2:

Hazardous Ingredients	CAS No.	Rating
Titanium dioxide	13463-67-7	330 mg/m ³
2-butoxyethanol	111-76-2	120 ppm
Carbon black	1333-86-4	99 mg/m ³
2,4,7,9-tetramethyldec-5-yne-4,7-diol	126-86-3	330 mg/m ³
1-methoxy-2-propanol	107-98-2	160 ppm
Poly(propylene glycol)	25322-69-4	330 mg/m ³
Dibutyl phthalate	84-74-2	1,600 mg/m ³
Stoddard solvent	8052-41-3	1,800 mg/m ³

PAC-3:

Hazardous Ingredients	CAS No.	Rating
Titanium dioxide	13463-67-7	2,000 mg/m ³
2-butoxyethanol	111-76-2	700 ppm
Carbon black	1333-86-4	590 mg/m ³
2,4,7,9-tetramethyldec-5-yne-4,7-diol	126-86-3	2,000 mg/m ³
1-methoxy-2-propanol	107-98-2	660 ppm
Poly(propylene glycol)	25322-69-4	2,000 mg/m ³
Dibutyl phthalate	84-74-2	9,300* mg/m ³
Stoddard solvent	8052-41-3	29,500** mg/m ³

SECTION 7 — HANDLING AND STORAGE

7.1 Precautions for safe handling

No special precautions are necessary if used correctly.

7.2 Conditions for safe storage, including any incompatibilities

Keep receptacle tightly sealed.

7.3 Specific end uses

N/A

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituent have no known exposure limits.

Hazardous Ingredients	CAS No.	TLV (long term value)	PEL (long term value)	REL (long term value)
2-butoxyethanol	111-76-2	20 ppm; 97 mg/m ³	50 ppm; 240 mg/m ³	5 ppm; 24 mg/m ³
Carbon black	1333-86-4	3 mg/m ³	3.5* mg/m ³	3.5** mg/m ³
		*inhalable fraction **0.1 in presence of PAHs; See Pocket Guide Apps. A+C		
Cobalt bis(2-ethylhexanoate)	136-52-7	0.02 mg/m ³ as Co, BEI	-	-

Ingredients with biological limit values:

2-butoxyethanol	111-76-2	BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis
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Additional information: The lists that were valid during the creation were used as basis.

8.2 Exposure controls

Individual protection measures

Protective Gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests, no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Use tightly sealed goggles.

General protective and Hygienic Practices

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Color:	Dark grey
Odor:	Characteristic
Odor Threshold:	N/A
pH:	8.4 - 8.9
Melting Point:	N/A
Boiling Point:	100 °C (212 °F)
Flash Point:	94 °C (201 °F)
Ignition temperature	240 °C (464 °F)
Evaporation rate:	Slower than (n-Butyl Acetate)
Flammability:	N/A
Upper flammability or explosive limits:	N/A
Lower flammability or explosive limits:	N/A
Vapor Pressure @ 20°C (68°F):	17 mm Hg or 23hPa
Vapor Density (air=1):	Heavier than air
Relative Density:	N/A
Density @ 20°C (68°F):	1.206 g/cm ³ (10.064 lbs/gal)
Specific Gravity (H ₂ O = 1) :	N/A
Solubility:	Fully miscible.
Partition coefficient:	N/A
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	N/A
Dynamic viscosity:	N/A
Kinematic viscosity:	22 - 25s (#3 Zayn cup)
Explosive properties:	Product does not present an explosion hazard
Oxidizing properties:	N/A
VOC Content:	91.1 g/l / 0.76 lb/gl
Solids Content:	34 - 38%

9.2 Other information

ESD ≤ 5x10E4

SECTION 10 — STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11 — TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Effects:

Eye Contact	Irritating effect.
Skin Contact	Irritant to skin and mucous membranes.
Sensitization	Sensitization possible through skin contact.

Additional toxicological info.

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

Carcinogenic Categories:

	Chemical	CAS#	Rating
IARC (International Agency for Research on Cancer)	Titanium dioxide	13463-67-7	2B
	2-butoxyethanol	111-76-2	3
	Carbon black	133-86-4	2B
	Cobalt bis(2-ethylhexanoate)	136-52-7	2B
NTP (National Toxicology Program)	None of the ingredients is listed.		
OSHA-Ca (Occupational Safety & Health Administration)	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.		

SECTION 12 — ECOLOGICAL INFORMATION

12.1 Toxicity

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

No further relevant information available.

12.6 Other adverse effects

No further relevant information available.

12.7 Additional information

Water Hazard Class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13 — DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Uncleaned packagings	Disposal must be made according to official regulations.

13.2 Additional information

Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14 — TRANSPORT INFORMATION

This product is not classified for transport under ADR/IMDG regulations.

14.1 UN Number	N/A
14.2 UN proper shipping name	N/A
14.3 Transport hazard class(es)	N/A
14.4 Packing group	N/A

14.5 Environmental hazards	N/A
14.6 Special precautions for user	N/A
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	N/A

SECTION 15 — REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Title III Inventory of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR37.

Section 355 (Extremely hazardous substances)	None of the ingredients is listed.
Section 313 (Specific toxic chemical listings)	All ingredients are listed.

All the listed ingredients are subjected to the reporting requirements of the TSCA (Toxic Substances Control Act).

Proposition 65

	CAS No.	Ingredients
Chemicals known to cause cancer	13463-67-7	Titanium Dioxide
	1333-86-4	Carbon black
Chemicals known to cause reproductive toxicity for females/males and cause developmental toxicity	84-74-2	Dibutyl phthalate

Carcinogenic Categories

	CAS No.	Ingredients	
EPA (Environmental Protection Agency)	111-76-2	2-butoxyethanol	NL
	84-74-2	Dibutyl phthalate	D
TLV (Threshold Limit Value established by ACGIH)	13463-67-7	Titanium dioxide	A4
	111-76-2	2-butoxyethanol	A3
	1333-86-4	Carbon black	A4
NIOSH-Ca (National Institute for Occupational Safety and Health)	13463-67-7	Titanium dioxide	
	1333-86-4	Carbon black	

15.2 Chemical Safety Assessment

N/A

SECTION 16 — OTHER INFORMATION

HMIS RATING	Health 1, Reactivity 1, Flammability 0, Personal Protection B
NFPA RATING	Special Hazard: N/A, Health: 1, Flammability: 1, Instability: 0
SDS Updated	2017-04-06

Disclaimer

OTHER INFORMATION: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

Safety Data Sheet

May be used to comply with ANSI Z400.1-2004, 29 CFR 1910.1200, Regulation (EC) No 1272/2008 (CLP Regulation) and GHS. Standards must be consulted for specific requirements.

NFPA Designation 704

Degree of Hazard

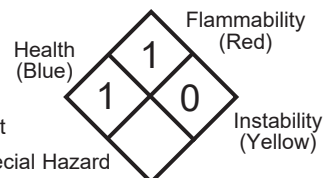
4 = Extreme

3 = High

2 = Moderate

1 = Slight

0 = Insignificant



Revision Date: 2017-04-06

HMIS RATING: Health 1, Flammability 1, Physical Hazard 0, Personal Protection B

SECTION 1 — IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product Name: Statguard® Conductive Acrylic Paint, Light grey
EC No.: None
REACH Registration No.: None
CAS No.: None

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use: Conductive Acrylic Paint

1.3 Details of the supplier of the safety data sheet

Manufacturer: Desco Industries, Inc.
One Colgate Way.
Canton, MA 02021
781-821-8370

Email Address: Service@DescoIndustries.com

1.4 Emergency telephone number

Emergency Number: 781-821-8370

SECTION 2 — HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Acute Toxicity (Oral)	Category 4
Skin Irritation	Category 2
Eye Irritation	Category 2A
Skin Sensitisation	Category 1
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (Repeated exposure)	Category 2

2.2 Label elements

Symbol: Health hazard. Exclamation mark.

Signal word: Warning

Hazard statements: (H302): Harmful if swallowed.
(H315): Causes skin irritation.
(H317): May cause an allergic skin irritation.
(H319): Causes serious eye irritation.
(H350): Suspected of causing cancer.
(H360): Suspected of damaging fertility or the unborn child.
(H373): May cause damage to organs through prolonged or repeated exposure.

Precautionary statements: (P201): Obtain special instructions before use.
(P202): Do not handle until all safety precautions have been read and understood.
(P260): Do not breath dust/fume/gas/mist/vapors/spray.
(P264): Wash hands thoroughly after handling.
(P270): Do not eat, drink or smoke when using this product.

(P272): Contaminated work clothing should not be allowed out of the workplace.
(P280): Wear protective gloves/ protective clothing/ eye protection/ face protection.

(P301+312+330): IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.

(P302+352): IF ON SKIN: Wash with plenty of water.

(P305+351+338): IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(P308+313): IF exposed or concerned: Get medical advice/attention.

(P333+313): If skin irritation or rash occurs: Get medical advice/attention.

(P337+313): If eye irritation persists: Get medical advice/attention.

(P362+364): Take off contaminated clothing and wash it before reuse.

(P405): Store locked up.

(P501): Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

N/A

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Hazardous Ingredients	CAS No.	Weight %
Trade Secret (Epoxy Ester)		10 - 25 %
2-butoxyethanol	111-76-2	2.5 - 10 %
Mica - Potassium Aluminum Silicate	12001-26-2	2.5 - 10 %
Tin Antimony Oxide	68187-54-2	2.5 - 10 %
Quartz (SiO ₂)	14808-60-7	2.5 - 10 %
Titanium dioxide	13463-67-7	2.5 - 10 %
Butan-1-ol	71-36-3	0.1 - 2.5 %
Cobalt bis(2-ethylhexanoate)	136-52-7	0.1 - 2.5 %
Manganese Carboxylate	84-74-2	0.1 - 2.5 %
Dibutyl phthalate	15956-58-8	0.1 - 1 %

SECTION 4 — FIRST AID MEASURES

4.1 Description of first aid measures

General information	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Eye Contact	Flush with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact	Immediately wash with water and soap and rinse thoroughly.
Ingestion	DO NOT induce vomiting. Rinse mouth. If symptoms persist, consult a doctor.
Inhalation	Move subject to fresh air and keep at rest in a position comfortable for breathing. Be sure call for a doctor. In case of unconsciousness, place patient stably in side position for transportation.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5 — FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Unsuitable Extinguishing Methods N/A

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

No special measures protective equipment required.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Not required.

6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

6.3 Methods and materials for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to SECTION 13.

6.4 Reference to other sections

See SECTION 7 for information on safe handling.
See SECTION 8 for information on personal protection equipment.
See SECTION 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:

Hazardous Ingredients	CAS No.	Rating
2-butoxyethanol	111-76-2	60 ppm
Mica - Potassium Aluminum Silicate	12001-26-2	9 mg/m ³
Quartz (SiO ₂)	14808-60-7	0.075 mg/m ³
Titanium dioxide	13463-67-7	30 mg/m ³
Butan-1-ol	71-36-3	60 ppm
2,4,7,9-tetramethyldec-5-yne-4,7-diol	126-86-3	30 mg/m ³
1-methoxy-2-propanol	107-98-2	100 ppm
Poly(propylene glycol)	25322-69-4	30 mg/m ³
Dibutyl phthalate	84-74-2	15 mg/m ³
Stoddard solvent	8052-41-3	300 mg/m ³

PAC-2:

Hazardous Ingredients	CAS No.	Rating
2-butoxyethanol	111-76-2	120 ppm
Mica - Potassium Aluminum Silicate	12001-26-2	99 mg/m ³
Quartz (SiO ₂)	14808-60-7	33 mg/m ³
Titanium dioxide	13463-67-7	330 mg/m ³
Butan-1-ol	71-36-3	800 ppm
2,4,7,9-tetramethyldec-5-yne-4,7-diol	126-86-3	330 mg/m ³
1-methoxy-2-propanol	107-98-2	160 ppm
Poly(propylene glycol)	25322-69-4	330 mg/m ³

Dibutyl phthalate	84-74-2	1,600 mg/m ³
Stoddard solvent	8052-41-3	1,800 mg/m ³

PAC-3:

Hazardous Ingredients	CAS No.	Rating
2-butoxyethanol	111-76-2	700 ppm
Mica - Potassium Aluminum Silicate	12001-26-2	590 mg/m ³
Quartz (SiO ₂)	14808-60-7	200 mg/m ³
Titanium dioxide	13463-67-7	2,000 mg/m ³
Butan-1-ol	71-36-3	8,000** ppm
2,4,7,9-tetramethyldec-5-yne-4,7-diol	126-86-3	2,000 mg/m ³
1-methoxy-2-propanol	107-98-2	660 ppm
Poly(propylene glycol)	25322-69-4	2,000 mg/m ³
Dibutyl phthalate	84-74-2	9,300* mg/m ³
Stoddard solvent	8052-41-3	29,500** mg/m ³

SECTION 7 — HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

7.2 Conditions for safe storage, including any incompatibilities

Keep receptacle tightly sealed.

7.3 Specific end uses

No further relevant information available.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituent have no known exposure limits.

Hazardous Ingredients	CAS No.	TLV (long term value)	PEL (long term value)	REL (long term value)
2-butoxyethanol	111-76-2	20 ppm; 97 mg/m ³ BEI	50 ppm; 240 mg/m ³ skin	5 ppm; 24 mg/m ³ skin
Mica Potassium Aluminum Silicate	12001-26-2	3* mg/m ³	20 mppcf ppm <1% crystalline silica	3** mg/m ³ containing <1% quartz
		* as respirable fraction ** respirable dust		
Quartz (SiO ₂)	14808-60-7	0.025* mg/m ³	See Quartz listing	0.05** mg/m ³
		* as respirable fraction ** respirable dust; See Pocket Guide App. A		
Butan-1-ol	71-36-3	61 mg/m ³	100 ppm; 300 mg/m ³	50 ppm; 150 mg/m ³ skin
Cobalt bis(2-ethylhexanoate)	136-52-7	0.02 mg/m ³ as Co, BEI	-	-
Dibutyl phthalate	84-74-2	5 mg/m ³	5 mg/m ³	5 mg/m ³

Ingredients with biological limit values:

2-butoxyethanol	111-76-2	BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis
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Additional information: The lists that were valid during the creation were used as basis.

8.2 Exposure controls

Individual protection measures

Protective Gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests, no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Use tightly sealed goggles.

General protective and Hygienic Practices

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Color:	Light grey
Odor:	Characteristic
Odor Threshold:	N/A
pH:	8.2 - 8.8
Melting Point:	N/A
Boiling Point:	100 °C (212 °F)
Flash Point:	94 °C (201 °F)
Ignition temperature	240 °C (464 °F)
Evaporation rate:	Slower than (n-Butyl Acetate)
Flammability:	N/A
Upper flammability or explosive limits:	N/A
Lower flammability or explosive limits:	N/A
Vapor Pressure @ 20°C (68°F):	17 mm Hg or 23hPa
Vapor Density (air=1):	Heavier than air
Relative Density:	N/A
Density @ 20°C (68°F):	1.182 g/cm ³ (9.864 lbs/gal)
Specific Gravity (H ₂ O = 1) :	N/A
Solubility:	Fully miscible.
Partition coefficient:	N/A
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	N/A
Dynamic viscosity:	N/A
Kinematic viscosity:	24 - 28s (#3 Zayn cup)
Explosive properties:	Product does not present an explosion hazard

Oxidizing properties: N/A
 VOC Content: 124.3 g/l / 1.04 lb/gl
 Solids Content: 33 - 37%

9.2 Other information

ESD =< 1x10E4

SECTION 10 — STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11 — TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Effects:

Eye Contact	Irritating effect.
Skin Contact	Irritant to skin and mucous membranes.
Sensitization	Sensitization possible through skin contact.
Additional toxicological info.	The product shows the following dangers according to internally approved calculation methods for preparations: Irritant & Harmful

Carcinogenic Categories:

	Chemical	CAS#	Rating
IARC (International Agency for Research on Cancer)	2-butoxyethanol	111-76-2	3
	Quartz (SiO ₂)	14808-60-7	1
	Titanium dioxide	13463-67-7	2B
	Cobalt bis(2-ethylhexanoate)	136-52-7	2B
NTP (National Toxicology Program)	Quartz (SiO ₂)	14808-60-7	K
OSHA-Ca (Occupational Safety & Health Administration)	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.		

SECTION 12 — ECOLOGICAL INFORMATION

12.1 Toxicity

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

No further relevant information available.

12.6 Other adverse effects

No further relevant information available.

12.7 Additional information

Water Hazard Class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13 — DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Uncleaned packagings	Disposal must be made according to official regulations.

13.2 Additional information

Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14 — TRANSPORT INFORMATION

This product is not classified for transport under ADR/IMDG regulations.

14.1 UN Number	N/A
14.2 UN proper shipping name	N/A
14.3 Transport hazard class(es)	N/A
14.4 Packing group	N/A
14.5 Environmental hazards	N/A
14.6 Special precautions for user	N/A
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	N/A

SECTION 15 — REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Title III Inventory of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR37.

Section 355 (Extremely hazardous substances)	None of the ingredients is listed.
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Carcinogenic Categories

	CAS No.	Ingredients	
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	84-74-2	Dibutyl phthalate	D
	71-36-3	Butan-1-ol	D
TLV (Threshold Limit Value established by ACGIH)	13463-67-7	Titanium dioxide	A4
	111-76-2	2-butoxyethanol	A3
	1333-86-4	Quartz (SiO ₂)	A2
NIOSH-Ca (National Institute for Occupational Safety and Health)	13463-67-7	Titanium dioxide	
	1333-86-4	Carbon black	

15.2 Chemical Safety Assessment

N/A

SECTION 16 — OTHER INFORMATION

HMIS RATING Health 1, Reactivity 1, Flammability 0, Personal Protection B

NFPA RATING Special Hazard: N/A, Health: 1, Flammability: 1, Instability: 0

SDS Updated 2017-04-06

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