HPP Industrial

High Performance Products

Mark Sholtes

"Fighting the endless battle of Industrial Corrosion"

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February 20, 2020

Scott Hudson
Frankfort Plant Board

RE: Light Pole Coating Project

Surface Preparation: Clean the substrate with Krud Kutter Pro to remove all contaminants and chalk. SSPC-SP 2 & 3 hand tool/power tool clean as needed.

Primer: Full coat of Rust-Oleum V7400 Primer.

Finish Coat: After 12 hours, apply 1 coat of Rust-Oleum MetalMax.

[redacted]

Data sheets are attached. Let me know if you have any questions.

Thanks

Mark Sholtes
Technical & Engineering Services

C.I.M. Industries Inc.

Dudick inc.

WASSER
ADVANCED COATINGS TECHNOLOGY

	TECHNICAL DATA	KKP-01

KRUD KUTTER® PRO

CONCENTRATED CLEANER DEGREASER

PHYSICAL PROPERTIES

	KRUD KUTTER PRO CONCENTRATED CLEANER DEGREASER
Composition	Proprietary Blend of Biodegradable Surfactants, Detergents and Emulsifiers
pH	12.5.13.5
Color	Colorless
Odor	Mild
Volatile Organic Compounds	0% By Weight
Practical Coverage	Heavy Soils (Full Strength) – 200-300 sq.ft./gal. Medium Soils (10 to 1) – 2,200-3,300 sq.ft./gal. Light Soils (30 to 1) – 6,200-9,300 sq.ft./gal.
Shelf Life	7 years
Flash Point	>200°F (>93°C)
Caution!	In case of contact with eyes or skin, flush with water for at least 15 minutes. If irritation persists, seek medical attention. If swallowed, take large amounts of water. **Do not induce vomiting.** Get medical attention. **KEEP OUT OF REACH OF CHILDREN.**
Safety Information	For additional information, see SDS

RUST-OLEUM
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois 60061
Phone: 800-323-3584
www.rustoleum.com

Form: ARJ-1924
Rev.: 110819

KRUD KUTTER® PRO

CONCENTRATED CLEANER DEGREASER

DESCRIPTION AND USES

Krud Kutter® PRO Concentrated Cleaner Degreaser is a heavy duty formula for industrial cleaning applications. It is designed to quickly dissolve grease and grime on most non-porous surfaces. For use on cleaning tools, machinery, engine parts, construction equipment, fiberglass, unfinished concrete, masonry, asphalt and more.

This concentrated commercial strength formula safely and easily removes food and drink stains, dried latex paint, paint overspray, tape residue, glue and adhesive, acid rain, bird droppings, smoke damage, tree sap, grease & oil, marker & crayon, pet stains, brake dust, fireplace soot, oxidation, lipstick, scuff marks, blood stains, sun tan oil, tar & wax, chewing gum, soap scum mildew stains, shoe polish and more.

An all purpose formula (1½ cups of concentrate to 1 gallon of water) cleans and degreases appliances, mini-blinds, canvas, chrome, silver, brass, copper, porcelain, plastic, fiberglass, linoleum, aluminum, vinyl, patio furniture, walls and baseboards, carpets, upholstery, stainless steel and wheels.

For reflective surfaces such as computer and TV screens, glass mirrors, windows, display case, crystal, lights and car finishes, add 1½ ounces of concentrate to 1 gallon of water.

PRODUCTS

SKU	DESCRIPTION
352239	20 oz. Foaming Aerosol
352263	32 oz. Trigger Sprayer
352261	128 oz. Bottle
352257	5 Gallon Pail
352255	55 Gallon Drum
352254	275 Gallon Tote

PRODUCT APPLICATION

DIRECTIONS

Always test on an inconspicuous area first. Apply directly on surface to be cleaned and allow to penetrate briefly. Wipe off with a clean cloth or towel.

For older, more difficult jobs, apply a generous amount of cleaner and allow to stand for a few minutes before wiping dry. For extremely tough jobs such as the removal of old, dried latex paint, scrub with a brush or scouring pad and wipe off with a wet rag. For engine cleaning, use on a cold, dry engine. **Do not use on varnished surfaces or leather. When used in a food processing facility, rinse with potable water after use. Do not mix this product with any other chemicals.**

PRODUCT APPLICATION (cont.)

PRESSURE WASHER APPLICATION

Contains anti-corrosive agents to safeguard pressure washer parts (bleach can erode O-rings). Please be aware that water pressure alone may remove paint or highlight existing discoloration caused by sun exposure.

Rinse surrounding plants with water before and after application. Wet the surface to be cleaned prior to applying the product. Place detergent application siphon tube and screen filter directly into container. Open the meter valve (if applicable) for maximum product flow. For reservoir machines, pour product (full strength) into pressure washer. Spray at low pressure onto a wet surface. On vertical surfaces, always spray from the top down. Allow product to remain on the surface for 3 to 5 minutes to penetrate. Do not allow product to dry on surface. Remove siphon tube from solution and rinse surface with high-pressure spray thoroughly. Flush siphon tube with clean water prior to storage.

CARPET CLEANING AND STAIN REMOVAL

Krud Kutter PRO Cleaner Degreaser is safe for all carpet types, including synthetic as well as stain resistant carpets. Test in an inconspicuous area first. The concentrated formula will clean six 9' x 12' (2.5m x 4.0m) carpets. Coverage may vary depending on type and condition of carpet. Vacuum the carpet thoroughly. Pre-treat any stubborn spots or stains by using the undiluted concentrate as a stain remover prior to cleaning carpet. Add concentrate to the receiving/waste tank of the machine to reduce buildup. Add 4 ounces of concentrate for each gallon of water in the dispensing/fill tank. For heavy traffic areas or heavily soiled carpets, add 6 ounces of concentrate for each gallon of water. Use hot (not boiling) or cold water according to the carpet manufacturer's cleaning directions. Read machine instructions carefully. Do not overfill.

CAUTION! In case of contact with eyes or skin, flush with water for at least 15 minutes. If irritation persists, seek medical attention. If swallowed, take large amounts of water. Do not induce vomiting. Get medical attention.

KEEP OUT OF REACH OF CHILDREN.

Form: ARJ-1924
Rev.: 110819

RUST-OLEUM®

TECHNICAL DATA

V7400 SYSTEM 340 VOC FAST RECOAT RUST-INHIBITIVE PRIMER

PHYSICAL PROPERTIES

		PRIMERS
Resin Type		Phenolic Modified Alkyd
Pigment Type		Calcium Borosilicate
Solvents		Aliphatic Hydrocarbons
Weight	**Per Gallon**	12.8-13.0 lbs.
	Per Liter	1.5-1.6 kg
Solids	**By Weight**	78.4-79.1%
	By Volume	60.7-60.8%
Volatile Organic Compounds		<340 g/l (2.83 lbs./gal.)
Recommended Dry Film Thickness (DFT) Per Coat		1.5-2.5 mils (37.5-62.5µ)
Wet Film to Achieve DFT (unthinned material)		2.5-4.0 mils (62.5-100µ)
Theoretical Coverage at 1 mil DFT (25µ)		975 sq.ft./gal. (24.0 m^2/l)
Practical Coverage at Recommended DFT (assumes 15% material loss)		300-550 sq.ft./gal. (7.4-13.5 m^2/l)
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	**Tack-free**	1-2 hours
	Handle	4-5 hours
	Recoat	After 1 hour or before 4 hours and after 24 hours
Dry Heat Resistance		212°F (100°C)
Shelf Life		5 years
Safety Information		For additional information, see SDS

Calculated values are shown and may vary slightly from the actual manufactured material.

RUST-OLEUM INDUSTRIAL BRANDS

Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois 60061
An RPM Company

Phone: 877•385•8155
www.rustoleum.com/industrial

Form: GDH-598
Rev.: 010417

RUST-OLEUM® HIGH PERFORMANCE

V7400 SYSTEM 340 VOC FAST RECOAT RUST-INHIBITIVE PRIMER

DESCRIPTION AND USES

Rust-Oleum® V7400 System Fast Recoat Primers are rust-inhibitive alkyd primers designed for use with Rust-Oleum V7400 System 340 VOC DTM Alkyd Enamel topcoats.

Designed for use on clean, abrasive blasted, sound rusted or previously painted steel surfaces in mild to moderate industrial environments. Not for use on galvanized steel.

PRODUCTS

1-Gallon	5-Gallon	Description
V7086402	V7086300	Gray Primer
V769402	V769300	Red Primer
258887	—	White Primer

COMPANION PRODUCTS

RECOMMENDED TOPCOATS

V7400 System 340 VOC DTM Alkyd Enamel

PRODUCT APPLICATION

SURFACE PREPARATION

Clean surface with Krud Kutter® Cleaner Degreaser or suitable cleaner and water. Rinse with water and let dry.

STEEL: Remove loose rust, mill scale, and deteriorated coatings.

PREVIOUSLY COATED: Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding to create a surface profile.

For optimal protection, abrasive blast clean to a Commercial Grade, SSPC-SP-6, with a surface profile of 1-2 mils (25-50µ). Two coats of primer are required on blast cleaned surfaces. This primer is compatible with most alkyds, but a test patch is suggested.

APPLICATION

Apply only when air temperature is between 32-100°F (0-38°C) and surface temperature is at least 5°F (3°C) above the dew point.

PRODUCT APPLICATION (cont.)

EQUIPMENT RECOMMENDATIONS

(Comparable equipment also suitable)

BRUSH: Use a good quality synthetic bristle brush.

ROLLER: Use a good quality natural or synthetic cover.

AIR-ATOMIZED SPRAY:

Method	Fluid Tip	Fluid Delivery	Atomization Pressure
Pressure	0.055-0.070	12-16 oz./min.	25-60 psi
Siphon	0.055-0.070	—	25-60 psi
HVLP (var.)	0.043-0.070	8-10 oz./min.	10 psi (at tip)

AIRLESS SPRAY:

Fluid Pressure	Fluid Tip	Filter Mesh
1,600-2,400 psi	0.013-0.017	100

THINNING

BRUSH/ROLLER: #333402 Thinner: Normally not required.

AIR ATOMIZED SPRAY: #333402 Thinner: Use up to 15% as needed.

AIRLESS SPRAY: #333402 Thinner: Normally not required. Use 5-10% (approximately ½-2 pints per gallon, if needed).

CLEAN-UP

Use 333402 thinner or 254266 Exempt Thinner.

PERFORMANCE CHARATERISTICS

SYSTEM TESTED

Primer: Quick Dry Enamel Primer

PENCIL HARDNESS

METHOD: ASTM D3363
RESULT: F

CONICAL FLEXIBILITY

METHOD: ASTM D522
RESULT: >33%

GLOSS AT 60°

METHOD: ASTM D4587
RESULT: 5

For chemical and corrosion resistance, see the Rust-Oleum Industrial Brands Catalog (Form #275585).

Form: GDH-598
Rev.: 010417

RUST-OLEUM SIERRA PERFORMANCE

S37 SYSTEM METALMAX® DTM ACRYLIC ENAMEL

DESCRIPTION AND USES

The S37 System MetalMax® DTM Acrylic Urethane is a low VOC, low HAP, single component, water-based acrylic urethane. This coating is designed for direct to metal (DTM) application to steel surfaces in mild to moderate industrial environments. It can be used on galvanized steel, aluminum, and other metals in both interior and exterior applications. Since this coating is very low odor during application, it is ideal for use in schools, healthcare facilities, food service areas, office buildings, hotels or in any area where odors are an issue.

MetalMax DTM Acrylic Enamel complies with USDA FSIS regulatory sanitation performance standards for food establishment facilities. This coating is impervious to moisture and easily cleaned and sanitized.

PRODUCTS

1-Gallon	5-Gallon	DESCRIPTION
Semi-Gloss Finish		
208031	208032	White Pastel Tint Base
208033	208034*	Tint Base
208035	208036	Deep Tint Base
208037	208038	Accent Tint Base
208039	208556*	Black
210475	210476*	Safety Red
210477	210478*	Safety Yellow
238752	243756	White
238753	---	Safety Blue
238754	---	Navy Gray
Satin Finish		
282539	282699	Satin White
282540	282710	Satin Black
282538	282715	Satin Pastel Tint Base
282459	282714	Satin Tint Base
282537	282713	Satin Deep Tint Base
282536	282711	Satin Accent Tint Base
Primer		
238755	---	Gray Primer**

*Made-To-Order only. Contact Rust-Oleum Customer Service for details

** Use the Gray Primer to optimize corrosion protection or to provide a base coat when coating substrates which have varying color. This will help ensure a uniform final appearance

PRODUCT APPLICATION

SURFACE PREPARATION

ALL SURFACES: Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with Krud Kutter® Cleaner Degreaser, commercial detergent or other suitable cleaner. Mold and mildew must be cleaned with a chlorinated cleaner or bleach solution. Rinse thoroughly with fresh water and allow to fully dry. All surfaces must be dry at time of application.

STEEL: At minimum, Hand Tool (SSPC-SP-2) or Power Tool (SSPC-SP-3) clean to remove all loose rust, mill scale, and deteriorated previous coatings. If abrasive blast cleaning is done, the blast profile should not exceed 1-2 mils (25-50µ). Abrasive blast cleaned steel requires two coats of primer.

GALVANIZED STEEL: New galvanized steel should be solvent cleaned to remove all post galvanizing treatments such as oil, grease or wax. Old or existing galvanized steel should be thoroughly washed to remove all surface contaminants.

PREVIOUSLY COATED: Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding to create a surface profile. The S37 MetalMax DTM Finish is compatible with most coatings, but a test patch is suggested.

APPLICATION

Apply only when air and surface temperatures are between 50-100°F (10-38°C) and surface temperature is at least 5°F above dew point. The relative humidity should not be greater than 85%. Be aware of surface temperature when ambient air temperature is above 90°F (32°C). The coating should not be applied if the surface temperature is 100°F (38°C) or greater. Ensure fresh air entry during application and drying. The MetalMax can be applied direct to metal on clean substrates. The Gray Primer should be used to optimize performance on sound rusted steel. Use the Gray Primer to optimize corrosion protection or to provide a base coat when coating substrates which have varying color. This will help ensure a uniform final appearance.

RUST-OLEUM SIERRA PERFORMANCE

S37 SYSTEM
METALMAX® DTM ACRYLIC ENAMEL

PRODUCT APPLICATION (cont.)

TINTING

The MetalMax tint bases can be tinted with Rust-Oleum 2030 Water-based Colorants or other high quality water-based or universal colorants, however these colorants will slightly increase VOC, but if used at the recommended levels, the VOC should not exceed 100 g/l. Use Evonik COLORTREND® PLUS 802 colorants to maintain zero VOC.

White Pastel Base accepts 2 oz. of tint.
Tint Base accepts 4 oz. of tint.
Deep Base accepts 8 oz. of tint.
Accent Base accepts 12 oz. of tint.

EQUIPMENT RECOMMENDATIONS

BRUSH: Use a good quality synthetic bristle brush.
ROLLER: Use a good quality synthetic nap roller cover.

AIR-ATOMIZED SPRAY:

Method	Fluid Tip	Fluid Delivery	Atomization Pressure
Pressure	0.055-0.070	12-16 oz./min	40-60 psi
Siphon	0.055-0.070	---	40-60 psi
HVLP (var.)	0.043-0.070	---	10 psi at tip

AIRLESS SPRAY:

Fluid Pressure	Fluid Tip	Filter Mesh
2000-3000 psi	0.013-0.017	100

THINNING

If needed thin with water. Do not exceed 4 fluid ounces per gallon.

CLEAN-UP

Clean up with soap and water and dispose of all waste material in a proper manner and in accordance with local waste regulations. Consult with local environmental regulations for appropriate method of disposal and/or recycling of paint and empty container.

PERFORMANCE CHARACTERISTICS

SCRUB RESISTANCE

METHOD: ASTM D2486
RESULT: >400 cycles

WASHABILITY

METHOD: ASTM D4828
RESULT: 7

CONICAL FLEXIBILITY

METHOD: ASTM D522
RESULT: 180° on 1/2" Mandrel

PROHESION (1 coat DTM)

Rating 1-10 10=best
METHOD: ASTM D5894, 1,000 hours
RESULT: 10 per ASTM D714 for blistering
RESULT: 6 per ASTM D1654 for corrosion
RESULT: 10 per ASTM D610 for rusting

IMPACT RESISTANCE (direct)

METHOD: ASTM D2794
RESULT: 100 lbs.

GLOSS AT 60°

METHOD: ASTM D523
RESULT: 40-50%

FADE RESISTANCE

METHOD: ASTM G151-06, QUV Type A bulb, 1,000 hours
RESULT: $\Delta E = 0.68$

CROSSHATCH ADHESION

METHOD: ASTM D3359
RESULT: 4B

WATER RESISTANCE

METHOD: ASTM D1735-04, CRS, 7 day cure
RESULT: No effect @ >1,000 hours

HIDING POWER

METHOD: ASTM D2805
RESULT: 0.99 (white)

For chemical and corrosion resistance, see Rust-Oleum Industrial Brands Catalog (Form #275585).

Form: GDH-450
Rev.: 010920

RUST-OLEUM SIERRA PERFORMANCE

S37 SYSTEM
METALMAX® DTM ACRYLIC ENAMEL

PHYSICAL PROPERTIES

Resin Type		Acrylic Urethane
Pigment Type		Varies with color
Solvents		Water
Weight	**Per Gallon**	8.7-10.6 lbs.
	Per Liter	1.04-1.27 kg
Solids	**By Weight**	36.3-50.8%
	By Volume	30.2-38.4%
Volatile Organic Compounds* **		<50.0 g/l***
Recommended Dry Film Thickness (DFT) Per Coat		2.0-3.0 mils (50-75µ)
Wet Film to Achieve DFT		5.0-10.0 mils (125-250µ)
Practical Coverage at Recommended DFT (assumes 15% material loss) Use this value for material quantity estimate		135-265 sq. ft./gal. (3.3-6.5 m^2/l)
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	**Tack-free**	30 minutes
	Recoat	2-4 hours
Dry Heat Resistance		200°F (93°C)
Shelf Life		3 years
Warning!		**PROTECT FROM FREEZING**
Safety Information		For additional information, see SDS

Calculated values are shown and may vary slightly from the actual manufactured material.
*** Measured by ASTM D6886. Tinting with some colorants may add minor amounts of VOC.