

MATERIAL SAFETY DATA SHEET

B54WZ401
14 00

DATE OF PREPARATION
Nov 28, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

B54WZ401

PRODUCT NAME

Industrial Enamel HS, Pure White

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

| | |
|----------------------------------|-------------------------------------|
| Product Information | www.sherwin-williams.com |
| Regulatory Information | (216) 566-2902 www.paintdocs.com |
| Medical Emergency | (216) 566-2917 |
| Transportation Emergency* | (800) 424-9300 |

**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

| % by Weight | CAS Number | Ingredient | Units | Vapor Pressure |
|-------------|------------|-------------------------|-----------------------------|----------------|
| 24 | 64742-88-7 | Mineral Spirits | | |
| | | ACGIH TLV | 100 PPM | 2 mm |
| | | OSHA PEL | 100 PPM | |
| 0.2 | 100-41-4 | Ethylbenzene | | |
| | | ACGIH TLV | 100 PPM | 7.1 mm |
| | | ACGIH TLV | 125 PPM STEL | |
| | | OSHA PEL | 100 PPM | |
| | | OSHA PEL | 125 PPM STEL | |
| 2 | 111-76-2 | 2-Butoxyethanol | | |
| | | ACGIH TLV | 20 PPM | 0.88 mm |
| | | OSHA PEL | 25 PPM | |
| 8 | 14808-60-7 | Quartz | | |
| | | ACGIH TLV | 0.025 mg/m3 as Resp. Dust | |
| | | OSHA PEL | 0.1 mg/m3 as Resp. Dust | |
| 16 | 13463-67-7 | Titanium Dioxide | | |
| | | ACGIH TLV | 10 mg/m3 as Dust | |
| | | OSHA PEL | 10 mg/m3 Total Dust | |
| | | OSHA PEL | 5 mg/m3 Respirable Fraction | |

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary and blood forming systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

| HMIS Codes | |
|--------------|----|
| Health | 2* |
| Flammability | 2 |
| Reactivity | 0 |

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

- EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
 Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

| | | | |
|--------------------|------------|------------|--|
| FLASH POINT | LEL | UEL | FLAMMABILITY CLASSIFICATION |
| 103 °F PMCC | 1.0 | 10.6 | Combustible, Flash above 99 and below 200 °F |

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

To minimize the possibility of spontaneous combustion: control the accumulation of overspray; soak wiping rags and waste immediately after use in a water-filled, closed metal container; air dry filters outside, far from any combustible material and separated by bricks or other non-combustible spacers; dispose of all contaminated materials and waste properly. Consult OSHA 29 CFR 1910.107(b)(5) and NFPA 33, Chapter 8 (8-9) for the proper procedures.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|--|--------------|
| PRODUCT WEIGHT | 9.71 lb/gal | 1162 g/l |
| SPECIFIC GRAVITY | 1.17 | |
| BOILING POINT | 300 - 395 °F | 148 - 201 °C |
| MELTING POINT | Not Available | |
| VOLATILE VOLUME | 40% | |
| EVAPORATION RATE | Slower than ether | |
| VAPOR DENSITY | Heavier than air | |
| SOLUBILITY IN WATER | N.A. | |
| VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged) | | |
| | 2.67lb/gal | 320g/l |
| | Less Water and Federally Exempt Solvents | |
| | 2.67lb/gal | 320g/l |
| | Emitted VOC | |

SECTION 10 — STABILITY AND REACTIVITY**STABILITY — Stable****CONDITIONS TO AVOID**

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION**CHRONIC HEALTH HAZARDS**

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

| CAS No. | Ingredient Name | | | |
|------------|------------------|----------|-----|---------------|
| 64742-88-7 | Mineral Spirits | LC50 RAT | 4HR | Not Available |
| | | LD50 RAT | | Not Available |
| 100-41-4 | Ethylbenzene | LC50 RAT | 4HR | Not Available |
| | | LD50 RAT | | 3500 mg/kg |
| 111-76-2 | 2-Butoxyethanol | LC50 RAT | 4HR | Not Available |
| | | LD50 RAT | | 470 mg/kg |
| 14808-60-7 | Quartz | LC50 RAT | 4HR | Not Available |
| | | LD50 RAT | | Not Available |
| 13463-67-7 | Titanium Dioxide | LC50 RAT | 4HR | Not Available |
| | | LD50 RAT | | Not Available |

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION**US Ground (DOT)**

May be Classed as a Combustible Liquid for U.S. Ground.
UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.
UN1263, PAINT, CLASS 3, PG III, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (39 C c.c.), EmS F-E, S-E

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

| CAS No. | CHEMICAL/COMPOUND | % by WT | % Element |
|----------|-------------------|---------|-----------|
| 100-41-4 | Ethylbenzene | 0.1 | |
| | Glycol Ethers | 2 | |

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



Protective & Marine Coatings

INDUSTRIAL ENAMEL HS

B54Z-400 SERIES

Revised 9/09

PRODUCT INFORMATION

2.17

PRODUCT DESCRIPTION

INDUSTRIAL ENAMEL HS is a high solids, low VOC, alkyd, gloss topcoat. It is easy to apply by brush, roll, or spray and is intended for interior/exterior use in industrial environments.

- High gloss/dirt resistant
- Chip and flake resistant
- Abrasion and impact resistant
- Exterior/interior applications
- Resists yellowing
- Low temperature application
- Excellent application properties

PRODUCT CHARACTERISTICS

| | |
|-----------------------------|---|
| Finish: | Gloss |
| Color: | Wide range of colors including safety colors |
| Volume Solids: | 59% ± 2%, may vary by color |
| Weight Solids: | 72% ± 2%, may vary by color |
| VOC (EPA Method 24): | Unreduced: <320 g/L; 2.65 lb/gal Reduced 3%: <340 g/L; 2.80 lb/gal |

Recommended Spreading Rate per coat:

| | Minimum | Maximum |
|--|----------|----------|
| Wet mils (microns) | 3.5 88 | 7.0 175 |
| Dry mils (microns) | 2.0 50 | 4.0 100 |
| ~Coverage sq ft/gal (m²/L) | 241 5.9 | 482 11.8 |
| Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft | 944 23.1 | |

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.0 mils wet (100 microns):

| | @ 45°F/7°C | @ 77°F/25°C 50% RH | @ 120°F/49°C |
|-------------------|------------|-----------------------|--------------|
| To touch: | 6 hours | 4 hours | 2 hours |
| To handle: | 14 hours | 10 hours | 6 hours |
| To recoat: | 24 hours | 16 hours | 12 hours |
| To cure: | 14 days | 7 days | 4 days |

Drying time is temperature, humidity, and film thickness dependent.

| | |
|--------------------------|--|
| Shelf Life: | 36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C). |
| Flash Point: | 103°F (39.5°C), PMCC |
| Reducer/Clean Up: | Xylene, R2K4 |

RECOMMENDED USES

For use over prepared substrates in industrial environments:

- Tanks
- Bridges
- Handrails
- Interior/exterior all purpose maintenance enamel
- Machinery and equipment enamel
- Safety and pipe marking enamel
- Conforms to AWWA D102-03, OCS #1
- Acceptable for use in high performance architectural applications.
- Suitable for use in USDA inspected facilities
- Marine applications
- Rolling stock
- Vessels

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

- 1 ct. Kem Bond HS @ 3.0 mils (75 microns) dft
 - 1 ct. Industrial Enamel HS @ 3.0 mils (75 microns) dft
- *unless otherwise noted below

| Test Name | Test Method | Results |
|---|-------------------------------------|---|
| Adhesion | ASTM D4541 | 392 psi |
| Direct Impact Resistance | ASTM D2794 | 30 in. lbs. |
| Dry Heat Resistance (Topcoat only) | ASTM D2485 | 200°F (38°C), (discolors) |
| Exterior Durability | 1 year at 45° South | Excellent |
| Flexibility (Topcoat only) | ASTM D522, 180° bend, 1/4" mandrel | Passes |
| Moisture Condensation Resistance | ASTM D4585, 100°F (38°C), 500 hours | No rust, delamination, or creepage at scribe |
| Pencil Hardness | ASTM D3363 | B |
| Salt Fog Resistance | ASTM B117, 500 hours | No cracking, softening, or delamination; No more than 1/32" rust creepage at scribe |

Provides performance comparable to products formulated to federal specifications:
DOD-E-1115C
MIL-E-15090
TT-P-102F

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Protective & Marine Coatings

INDUSTRIAL ENAMEL HS

B54Z-400 SERIES

PRODUCT INFORMATION

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RECOMMENDED SYSTEMS

| | Dry Film Thickness / ct. | |
|--|--------------------------|-----------|
| | Mils | (Microns) |
| Steel (Alkyd Primer): | | |
| 1 ct. Kem Bond HS Primer | 2.0-5.0 | (50-125) |
| 1-2 cts. Industrial Enamel HS | 2.0-4.0 | (50-100) |
| Concrete Block: | | |
| 1 ct. Heavy Duty Block Filler | 10.0-18.0 | (250-450) |
| 1-2 cts. Industrial Enamel HS | 2.0-4.0 | (50-100) |
| Aluminum: | | |
| 1 ct. DTM Wash Primer | 0.7-1.3 | (18-32) |
| 2 cts. Industrial Enamel HS | 2.0-4.0 | (50-100) |
| Galvanized Metal: | | |
| 1 ct. Galvite HS | 3.0-4.5 | (75-112) |
| 1-2 cts. Industrial Enamel HS | 2.0-4.0 | (50-100) |
| Interior Plaster and Poured Concrete Walls: | | |
| 1 ct. PrepRite Masonry Primer | 3.0 | (75) |
| 1-2 cts. Industrial Enamel HS | 2.0-4.0 | (50-100) |
| Drywall: | | |
| 1 ct. PrepRite 200 Latex Primer | 1.0 -1.5 | (25-40) |
| 2 cts. Industrial Enamel HS | 2.0-4.0 | (50-100) |
| Wood: | | |
| 2 cts. Industrial Enamel HS | 2.0-4.0 | (50-100) |

The systems listed above are representative of the product's use, other systems may be appropriate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

- * Iron & Steel: SSPC-SP2
 - * Aluminum: SSPC-SP1
 - * Galvanizing: SSPC-SP1
 - * Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3
- Wood, interior: Clean, smooth, dust free

Surface Preparation Standards

| Condition of Surface | ISO 8501-1 | Swedish Std. | SSPC | NACE |
|----------------------|------------|--------------|-------|------|
| | BS7079:A1 | SIS055900 | | |
| White Metal | Sa 3 | Sa 3 | SP 5 | 1 |
| Near White Metal | Sa 2.5 | Sa 2.5 | SP 10 | 2 |
| Commercial Blast | Sa 2 | Sa 2 | SP 6 | 3 |
| Brush-Off Blast | Sa 1 | Sa 1 | SP 7 | 4 |
| Hand Tool Cleaning | C St 2 | C St 2 | SP 2 | - |
| Pitted & Rusty | D St 2 | D St 2 | SP 2 | - |
| Rusty | C St 3 | C St 3 | SP 3 | - |
| Power Tool Cleaning | D St 3 | D St 3 | SP 3 | - |

TINTING

Tint with Blend-A-Color Toner or Maxitoner Colorant at 100% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum
120°F (49°C) maximum
(air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging: 1 gal (3.78L) and 5 gal (18.9L) containers
Weight: 9.69 ± 0.2 lb/gal, 1.16 Kg/L
may vary with color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.



Protective & Marine Coatings

INDUSTRIAL ENAMEL HS

B54Z-400 SERIES

Revised 9/09

APPLICATION BULLETIN

2.17

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel

Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned. Primer required.

Masonry and Concrete

For surface preparation, refer to SSPC-SP13/NACE 6 or ICR1 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with ArmorSeal Crack Filler. Weathered masonry and soft or porous cement board must be brush blasted or power tool cleaned to remove loosely adhering contamination and to get to a hard, firm surface. Laitance must be removed. Brick must be allowed to weather for one year prior to surface preparation and painting. Primer required.

Wood

Surface must be clean, dry, and sound. Paint as soon as possible. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped, sanded and spot primed. All nail holes or small openings must be properly caulked. Sand to remove any loose or deteriorated surface wood and to obtain a proper surface profile. Self priming.

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards

| Condition of Surface | ISO 8501-1 BS7079:A1 | Swedish Std. SIS055900 | SSPC | NACE |
|----------------------|-------------------------|---------------------------|-------|------|
| White Metal | Sa 3 | Sa 3 | SP 5 | 1 |
| Near White Metal | Sa 2.5 | Sa 2.5 | SP 10 | 2 |
| Commercial Blast | Sa 2 | Sa 2 | SP 6 | 3 |
| Brush-Off Blast | Sa 1 | Sa 1 | SP 7 | 4 |
| Hand Tool Cleaning | St 2 | St 2 | SP 2 | - |
| Pitted & Rusted | D St 2 | D St 2 | SP 3 | - |
| Rusted | C St 3 | C St 3 | SP 3 | - |
| Power Tool Cleaning | D St 3 | D St 3 | SP 3 | - |

APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum
120°F (49°C) maximum
(air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean UpXylene, R2K4

Airless Spray

Pressure.....1800 psi minimum
Hose.....3/8" ID
Tip......017" - .019"
Filter.....60 - 100 mesh
Reduction.....As needed up to 3% by volume

Brush

Brush.....Nylon/Polyester or Natural Bristle
Reduction.....Not recommended

Roller

Cover1/4"-3/8" lambswool or synthetic
cover
Reduction.....Not recommended

If specific application equipment is not listed above, equivalent equipment may be substituted.

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**Protective
&
Marine
Coatings**

INDUSTRIAL ENAMEL HS

B54Z-400 SERIES

APPLICATION BULLETIN

2.17

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Mix paint thoroughly to a uniform consistency with low speed power agitation prior to use.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

| | Minimum | Maximum |
|---|----------|----------|
| Wet mils (microns) | 3.5 88 | 7.0 175 |
| Dry mils (microns) | 2.0 50 | 4.0 100 |
| ~Coverage sq ft/gal (m ² /L) | 241 5.9 | 482 11.8 |
| Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft | 944 23.1 | |

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.0 mils wet (100 microns):

| | @ 45°F/7°C | @ 77°F/25°C 50% RH | @ 120°F/49°C |
|------------|------------|-----------------------|--------------|
| To touch: | 6 hours | 4 hours | 2 hours |
| To handle: | 14 hours | 10 hours | 6 hours |
| To recoat: | 24 hours | 16 hours | 12 hours |
| To cure: | 14 days | 7 days | 4 days |

Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with soap and warm water. Clean hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with Mineral Spirits to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using Mineral Spirits.

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PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Xylene, R2K4.

Deep tinted colors may exhibit burnishing characteristics.

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.