

**PRODUCT CODE: ARMOR SHIELD AS8411 (L1) RED OXIDE PRIMER**

**END USE:** RUST INHIBITIVE COATING FOR USE AS A PRIMER ON STRUCTURAL STEEL, BRIDGES, DAMS, DAM GATES TRANSMISSION TOWERS AND TANK EXTERIORS.

**RESIN TYPE:** CALCIUM SULFONATE ALKYD (CSA), 4:1 RATIO SULFONATE TO ALKYD (MAXIMUM 25% ALKYD by Weight)

**SOLVENT TYPE:** ALIPHATIC HYDROCARBON

**VISCOSITY:** 85 - 115 KU @ 77°F (25°C)  
**WEIGHT/GALLON** 9.97 ± 0.5 lbs./gallon (1.196 kg/liter)

**WEIGHT % SOLIDS:** 76 ± 2.0 (31% CALCIUM SULFONATE by Weight)  
**VOLUME % SOLIDS:** 59 ± 2.0

**SURFACE PREPARATION:** SSPC SP-1, SSPC SP-2, SSPC SP-3, SSPC SP-6, SSPC SP-7, SSPC SP-12 OR SSPC SP-14 (OR EQUIVALENT NACE STANDARDS).

**WET FILM:** 7 - 18 mils (175 – 450 microns)  
**DRY FILM:** 4 - 10 mils (100 – 250 microns)

**FLASH POINT:** 105°F (40.5°C)  
**GLOSS 60°:** LOW

**THINNER RATIO:** IF REQUIRED USE UP TO 10% MINERAL SPIRITS BY VOLUME.  
**V.O.C.** 2.60 LBS./GALLON (312 gms/liter).

**CHARACTERISTICS:** FIRM DRY PROPERTIES. HIGH SOLIDS AND EXCELLENT CORROSION RESISTANCE. CAN BE APPLIED OVER TIGHT RUST.

**PERFORMANCE CHARACTERISTICS:**

**SYSTEM TESTED:** STEEL BLASTED TO SSPC-SP10, AS8411 @ 4 mils (100 microns) DFT  
AS8410 @ 4 mils (100 microns) DFT

**CYCLIC WEATHERING:** ASTM D5894, 4 CYCLES OR 5000 HOURS  
RUSTING ASTM D610 – RATING 10  
BLISTERING ASTM D714 – RATING 10  
UNDERCUTTING ASTM D1654 – RATING 10

**SALT FOG RESISTANCE:** ASTM B117, 5000 HOURS  
RUSTING ASTM D610 – RATING 10  
BLISTERING ASTM D714 – RATING 10  
UNDERCUTTING ASTM D1654 – RATING 10

**PENCIL HARDNESS:** ASTM D3363 5B

**FLEXIBILITY:** ASTM D522 PASES 180° BEND, 1/8" (3.2 mm) MANDREL

## APPLICATION INSTRUCTIONS

THE RECOMMENDED APPLICATION METHOD FOR ARMOR-SHIELD CSA PRODUCTS IS AS A SINGLE COAT SYSTEM APPLIED AT 7 – 18 mils (175 – 450 microns) WFT OR AS SPECIFIED BY DRY FILM REQUIREMENTS. WHEN USING A TWO-COAT APPLICATION METHOD (i.e. PRIMER/TOPCOAT), A MINIMUM OF 6 HOURS IS REQUIRED BETWEEN COATS.

**EQUIPMENT:** AIRLESS SPRAY – 30:1 GRACO BULLDOG WITH 3/8” (9.5 mm) I.D. HIGH PRESSURE LINE AND A GRACO SILVER GUN WITH A 0.017”-0.021” (0.43 – 0.53 mm) SPRAY TIP.

CONVENTIONAL SPRAY – USE A DV-MBC GUN OR EQUIVALENT WITH A “D” FLUID NOZZLE AND A 64 AIR CAP.

NOTE: BRUSH AND ROLLER APPLICATION CAN BE USED AS WELL AS OTHER SPRAY EQUIPMENT. CONTACT YOUR REPRESENTATIVE FOR RECOMMENDATIONS.

**SAG RESISTANCE:** 30 mils (750 microns) DFT

**COVERAGE:** 175-190 SQ. FT. PER GAL. @ 5 mils DFT (4.295 – 4.663 m<sup>2</sup>/l @ 125 microns DFT).

**THINNING:** UP TO 10% WITH MINERAL SPIRITS AS NECESSARY.

**MIXING:** MIX BY HAND UNTIL UNIFORM OR POWER MIX IF DESIRED.

**DRYING TIMES:** DUST FREE.....2 –6\* HOURS @ 77°F (25°C), 5 mils (125 microns) DFT, 50% RH  
FIRM.....20 – 48\* HOURS @ 77°F (25°C), 5 mils (125 microns) DFT, 50% RH  
RECOATABILITY...NO MAXIMUM

\* TIMES VARY DEPENDING UPON ENVIROMENTAL CONDITIONS, WIND, SUN EXPOSURE, ETC.

- MAY BE APPLIED TO SURFACES AND IN AMBIENT TEMPERATURES DOWN TO 0°F (-17.7°C) AS LONG AS NO VISIBLE CONDENSATION OR ICE IS PRESENT.
- THE MATERIAL TEMPERATURE, PRIOR TO BEING APPLIED, MUST BE ELEVATED TO ACHIEVE A WORKABLE VISCOSITY. THIS TEMPERATURE MAY BE HIGHER THAN THE MINIMUM RECOMMENDATION OF 35-45°F (1.6 – 7.2°C) BASED ON EQUIPMENT, DESIRED WORKING TIMES AND AMBIENT CONDITIONS.
- AMBIENT TEMPERATURES MUST REMAIN 3% ABOVE THE DEW POINT DURING THE APPLICATION PROCESS.
- MAY BE STORED AT TEMPERATURES DOWN TO 0°F (-17.7°C).

**CLEAN-UP:** CLEAN EQUIPMENT WITH MINERAL SPIRITS.

Limitation of Liability: The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this literature do not constitute a warranty, whether expressed, or implied as to the product performance and merchantability for a particular purpose. Watson Coatings can guarantee this product to conform to our standards of quality, and our liability, if any, shall be limited to replacement of defective materials. Any and all technical information is subject to change without notice and it is the responsibility of the end user to verify that they have the most current available technical and safety information.