



Polyurethane Corrosion Protective Coating

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Macmet provides world class polyurethane corrosion protective coating services and is the approved applicator of TIB Chemicals AG's PROTEGOL range of PU coatings- Protegol UR Coating 32-55R (Pure PU) and Protegol UR Coating 32-10R (Tar modified PU).

PROTEGOL is a solvent free, 100 % solids, two components, internally plasticized, high build, elastomeric thermosetting polyurethane compound, carefully engineered to protect and preserve the integrity of structures over their design life. Both the grades conform to DIN Standard 30671 (June 1992) and DIN Standard 30677 Part II (September 1988) as also various performance standards of ASTM.

USES.

PROTEGOL is highly recommended as protective coating in following applications:

- Cross country buried pipelines, valves & fittings
- LPG mounded bullets
- Rehabilitation of buried pipelines
- HDD or thrust bore pipelines
- Field joints of cross country pipelines
- Piling pipes
- DI pipes in municipal water supply schemes.

EQUIPMENT

The pot life of PROTEGOL system is only 40 seconds at dispensing temperature. Hence for successful application, MACMET employs WIWA's 'state of the art', plural component, airless hot spray equipment 'DUOMIX – Series 333', specially configured to dispense such a fast setting PU coating.

APPLICATION

PROTEGOL can be applied in a factory / workshop setting or 'in situ' at construction sites using the above equipment mounted on a mobile trailer. For long lasting PU coating, surface preparation is critical

Surface Preparation: The steel surface to be coated must be dry, clean and free from dust, oil & grease or old paint. It should then be subjected to high pressure blasting with compressed air and abrasives to achieve near white of steel conforming to Sa 2 ½ degree of cleanliness. The surface profile must be 50-75 microns conforming to SSPC-SP10 in order to get the desired bonding with PU coating.

PU coating operation must be commenced immediately after the blast cleaning. In case of delay, coating shall be started only if the degree of surface cleanliness is same as originally achieved. If the blasted surface has turned pink, or shows traces of rusting, sweep blasting shall be done before commencing the coating operation

Coating Application: Before commencing coating operation the operator shall measure the ambient temperature and relative humidity to ensure that surface temperature of the substrate is at least 3 degree C above the dew point to avoid condensation. Further, the relative humidity during the coating operation must always be < 80 %.

PROTEGOL is sprayed directly on the prepared steel surface without any primer, using the WIWA plural component airless hot spray system. It can be applied up to 2500 microns in a single coat with multiple passes wet on wet.

PROTEGOL is a fast setting PU coating that does not run or drip even on a vertical surface. The surface finish shall be smooth and free from defects.

At ambient 20 degree C, PROTEGOL becomes tack free within 10 minutes and after 8 hours stacking is permitted (subject to weight of coated structure). Holiday tests can be conducted after 2 hours. On line tests are carried out for wet & dry film thickness, hardness, holidays, adhesion etc. as per relevant ASTM standards. Holidays or defects, if detected / pointed out during inspection, shall be repaired immediately on line using PROTEGOL hand applied repair kit, or original PU coating as per manufacturers recommendations.

MACMET employs highly skilled applicators who are well trained and experienced in application of PROTEGOL system and familiar with all safety standards and industry norms.