



protective coatings
caulking compounds
sealants • adhesives

LABORATORY PRODUCT REPORT
ON
PR-1432-G

DESCRIPTION

PR-1432-G is a sprayable, two-part, chemically curing, polysulfide liquid polymer compound with increased soluble chromate content to inhibit corrosion.

PR-1432-G forms a resilient rubber coating with excellent adhesion to aluminum, magnesium, titanium, steel, and numerous other materials; and, has outstanding resistance to aircraft fuel (aviation gasoline or jet fuel) and lubricating oils.

PR-1432-G must be used with a protective topcoat to prolong the corrosion inhibitive action of soluble chromates when in contact with excessive moisture.

APPLICATION PROPERTIES (Typical)

Color	Base compound Accelerator	Gray Black
Viscosity, At 75°F (Brookfield Spindle #2 @ 10 rpm)		850 centipoises (mixed compound)
Soluble Chromate Content		3 - 5% by weight
Nonvolatile Content		66% minimum (mixed compound)
Mixing Ratio	(Base compound:Accelerator)	15:1 by weight
Spray Application Life		1½ hours
Tack Free Time		6 hours @ 75°F, 50% RH
Cure Time To 40 Rex		72 hours, 75°F, 50% RH

PERFORMANCE PROPERTIES (Typical)

Color	Brownish gray
Specific Gravity	1.4

SUPERSEDES

August 1970

PRODUCTS RESEARCH & CHEMICAL CORPORATION

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Hardness, Rex	45
Tensile Strength	250 psi
Ultimate Elongation	200%
Peel Strength	
Initial	20 piw
After immersion in TT-S-735, Type III fluid, 40 hrs. @ 75° F	15 piw
After immersion in 3% salt water, 40 hrs. @ 75° F	20 piw
Temperature Range	-100° F to +275° F
Fungus Resistance	Non-nutrient

NOTE: The above application and performance property values are typical for the material, but are not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions, and configurations.

SURFACE PREPARATION

To obtain good adhesion, the surface should be cleaned with an oil-free solvent (reclaimed solvents should not be used) which will dissolve oil and wax. A progressive cleaning procedure should be used. Wash one small area at a time; then dry with a clean cloth before solvent evaporates to prevent redeposition of oil, wax, and other surface contaminants.

Always pour the solvent on the washing cloth to maintain a clean solvent supply.

MIXING INSTRUCTIONS

NOTE: PR-1432-G base compound has a tendency to settle out during storage; therefore, proper mixing and correct proportions are extremely important if maximum results are to be obtained.

PR-1432-G should be mixed as follows:

1. Kits consist of the proper proportions of base compound and accelerator and the entire contents are to be mixed. When sealant is supplied in full containers or bulk, mix 1 part (by weight) of accelerator with 15 parts (by weight) of base compound.
2. Thoroughly stir or paint shake base compound to obtain a uniform consistency before addition of the accelerator.
3. Thoroughly stir accelerator in its container until an even consistency is obtained.
4. A standard gallon-capacity paint shaker (1350 vibrations/minute) should be used to mix all kit sizes. (Full containers should not be mixed on a paint shaker.) Add the entire accelerator to the base compound, replace the container lid, and vibrate 2 to 3 minutes in an upright position followed by 2 to 3 minutes in an inverted position.

5. For mechanical mixing, an air motor with a T-shape, flat-blade, mixing paddle attached to a steel rod may be used. Limit speed to 80 rpm to avoid whipping air into the mix and to avoid generating internal heat in the compound which will reduce application life.
6. For non-mechanical mixing, rapidly stir the accelerator into the base compound and thoroughly mix approximately 5 to 7 minutes. Be sure to scrape the sides and bottom of the container in order to include all the compound in the mixture and to assure uniform blending. Scrape mixing paddle periodically to remove unmixed compound.
7. For laboratory testing of large kits, apportion 400 grams of base compound into a one pint can, add appropriate quantity of accelerator and paint shake for 5 minutes. Prepare all test specimens by spraying or brushing.

NOTE: Application life and tack free time are affected by the mixing procedure used. Slow mixing by hand will increase application life and tack free time. Longer paint shaker mixing than shown above will decrease application life and tack free time.

APPLICATION INSTRUCTIONS

Application life is the time that the mixed compound remains suitable for application by spraying. Application life is always based on standard conditions of 75°F to 50% relative humidity. For every 10°F rise in temperature, application life is reduced by half, and for every 10°F drop, it is doubled. High humidity at the time of mixing shortens application life.

PR-1432-G is designed to be sprayed with standard high pressure paint equipment; however, as supplied, it may be too viscous to be easily sprayed. The mixed material can be thinned to a good spraying consistency by adding a 20 - 30% (by volume) blend of 50% (by volume) methyl ethyl ketone (MEK) and 50% (by volume) toluene, without altering the tack free or application time. Satisfactory results can be obtained by using the following equipment:

DeVilbiss gun P-MBC-510 with
Nozzle combination 704-E
Fluid tip 0.070 inches I.D., AV-601-E
Air Cap AV-1239 #704
Fluid needle MBC-444-E

A line pressure of 45 psig and a pot pressure of 5 psig is recommended.

PR-1432-G is easily repaired when the coating has been physically damaged or when necessary for structural rework or repair. To repair the coating, remove coating with a plexiglass scraper from the damaged area or the area requiring structural rework or repair.

When ready to recoat stripped area, clean metal with an oil-free solvent (reclaimed solvents should not be used). Slightly roughen a strip of coating approximately one inch wide around the periphery of the stripped area. Apply PR-1432-G by brush in small areas or by spray in large areas. Be sure freshly applied compound overlaps the existing coating onto the roughened area.

CURE

PR-1432-G will cure to a firm, resilient coating within 72 hours at 75°F and 50% relative humidity. The length of cure depends on the ambient temperature and relative humidity. The temperature/time relationship is approximately the same for curing as it is for application life. Low humidities will extend the cure time. Cure may be hastened by applying heat up to 130°F.

TOPCOATING

PR-1432-G must be used with a protective topcoat to prolong the corrosion inhibitive action of soluble chromates when in contact with excessive moisture.

CLEANING OF EQUIPMENT

Wash equipment and tools with a chlorinated solvent or toluene immediately after use or before coating cures. Use commercial stripping compounds to remove cured coatings.

STORAGE LIFE

The storage life of PR-1432-G is at least 6 months when stored at temperatures below 80°F in the original, unopened containers. Slight changes in the application properties may occur during storage, but these changes should not affect the usefulness or performance properties of the cured materials.

SAFETY PRECAUTIONS

WARNING: CONTAINS FLAMMABLE AND VOLATILE SOLVENTS.

Keep away from heat, sparks, and flame. Proper precautions used with flammable materials must be taken when applying this product. Comply with all local safety regulations.

HEALTH PRECAUTIONS

PR-1432-G and related products are safe materials to handle when reasonable care is observed. A component of the accelerator is readily absorbed through the skin. Avoid all contact with the open breaks in the skin, inhalation of spray mist, and ingestion. Always wash hands before eating or smoking. Polyethylene mitts and chemical-type goggles must be used when such protection is necessary. If accelerator contacts skin, flush area with warm water. Obtain medical attention in case of extreme exposure or ingestion.

PR-1432-G contains methyl ethyl ketone and toluene. Threshold limit value in air is 200 parts per million for safe working conditions. Use adequate ventilation or air-supplied respirators during application. Avoid repeated or prolonged breathing of vapors and spray mist. In cases of extreme vapor exposure, remove affected personnel to fresh air immediately and obtain medical attention. For additional information consult a Material Safety Data Sheet which is available upon request.

NOTE: PR-1432-G is protected by U. S. Patent No. 3,730,937.

"PRC" is a trademark of Products Research & Chemical Corporation, registered with the U. S. Patent Office

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