Stanvac™

USE THE BEST

#2050 POLYHYB

HYBRID POLYMER ANTI-CORROSION COATING
UNIQUE FEATURES - UNIQUE PROTECTION

TIE UP'S WITH OVER 28 GLOBAL LEADERS

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www.aervoe.com USA

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www.epigen.com.au

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www.aik-flammadur.de

RMC Rochester Midland Corporation USA
www.rochestermidland.com

SENTINEL USA
www.sentinelsynthetic.com

JSP www.jsp.co.uk UK

SLIDE
www.slideproducts.com USA

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www.brulin.com USA

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CHEMTOOL INCORPORATED
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NEPTUNE RESEARCH, INC. USA
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Introduction

STANVAC CHEMICALS INDIA LTD. was established in the year 1994.

Operation's began with the import & distribution of the worlds finest "Crown Aervoe" brand of Industrial aerosols and today the range encompasses over 1000 diverse products, sourced from over 28 Global Technology Leaders in the US, Europe, Australia… in the following areas:

1. Industrial Aerosols
2. Environments Friendly Bulk Cleaners
3. Electrical Insulation Coatings & Tapes
4. Fire Suppression Coatings
5. Single & Two Component Anti-Corrosion Coatings
6. Speciality Greases & Lubricants
7. Rust Preventatives
8. Repair & Reclamation technologies
9. Industrial Safety - PPE
10. Adhesives & Sealants…

STANVAC NATIONAL CENTRE – MANESAR, GURGAON

India's finest & most diverse range of "World Class" technologies, provides customers with unique "Single window" purchasing convenience, with fully warranted supplies.

An Extensive sales & service team of sales engineers, service technicians & area distributors ensures a full national service back-up & prompt availability anywhere in India.

ISO 9001-2008 certified quality systems further ensure truly world class performance features & quality, in line with our motto – "USE THE BEST".

Why Corrosion ?

Corrosion costs the Indian economy over 1,50,000 crores per annum in the form of :

- Premature equipment deterioration or failure resulting in the need for maintenance, repair & replacement of damaged equipment.
- Industrial leakages, contamination & accidents.
- Lost production & increased downtime.
- And in some cases, even investment in additional standby equipment.

Today corrosion is infact the single largest maintenance cost over the lifespan of an equipment & is a constant charge to a companies capital bank, estimated to be in-between 4 - 10%, of the cost of plant & machinery /structures.. . per annum.

Corrosion is caused by various environments...

a). Humidity & Moisture (environmental, condensation...)

b). Saline air & Marine environments

c). Acidic & Alkaline fumes. So2 gases, exhaust gases....

Question: Why is corrosion taking place & therefore such costs being incurred, when every industrial customer is regularly spending on anti corrosion coatings, paints...?

Answer:

(a) Inadequate Adhesion & Flexibility: Anti corrosion coatings /paints are today applied cyclically in industry (Every 6 months /12 months...). Due to inadequate adhesion & flexibility /ineffective surface prep, peeling **-** off takes place locally, corrosion begins & continues to grow till the next coating /painting cycle. Conventional coatings cannot be applied on such local corrosion areas without tedious surface preparation & therefore localised corrosion continues in most industries**,** despite regular outlay on coating /painting. This causes the corrosion problem.

(b) Indequate Duratbility: Conventional Coatings /paints have less than required salt spray resistance, humidity resistance, UV weathering resistance, acid & alka**l**i resistance and are thus unable to fully protect the surfaces against the environment during the coating /painting cycles... The barrier effect is inadequate & does not last the duration between the cycles.

Therefore either the coating /paint does not adhere well enough or is unable to withstand the environment for the desired time duration.

Result: Corrosion, despite regular coating/ painting.

Solution: #2050 POLYHYB, Hybrid Co - Polymer, **"Liquid Plastic"** single component, anti corrosion coating that exhibits excellent resistance to salt spray, humidity, UV weathering, acids & alkalies..... ready to use, can be applied directly to well prepared metal (primerless).... fast drying .... excellent adhesion & flexibilty... will not peel off or fail to protect for the desired duration unlike conventional coatings /paint... will strongly adhere to previously applied #2050 POLYHYB & is therefore ideal for maintenance touch up /re-fresh anti corrosion coating - therefore the ideal combination of adhesion, flexibility & durability... with ease of application.... at an affordable cost.

2050 POLYHYB

Single Component, Air Drying, Thermo Plastic Hybrid Co - Polymer **"Liquid Plastic"** Anti - Corrosion Coating.

A superior alternative to conventional paints, solvent based epoxies, PU's, alkyds...

2050 POLYHYB forms a tough co - polymer plastic laminate through intermolecular cross inkages & takes a very strong bonding with clean metal surfaces. The resultant coating is impermeable to fluids, fair & gases.

High Spread, instant wetting & plastic tentacle formulation ensures excellent bonding. The fibro - elastic properties of the material keep the laminate non - brittle with no self peelingtendencies, Subsequent.

Unique Features

- ★ Self priming, ready to use.
- ★ Fast drying.
- ★ Superior corrosion & UV resistance **-** Excellent durability, gloss & color retention.

(A) Salt Spray Resistance - ASTM B117

Comparative Data

Primer + Alkyd Enamel	Primer + Epoxy Intermediate + PU Top Coat	Coaltar Epoxy /Chlorinated Rubber Paint / Polymide	Powder Coating	POLYHYB
<100 Hours	300 - 500 Hours	200 - 300 Hours	1000 - 1200 Hours	>1500 Hours

(B) UV Weathering Test ASTM G154 (4H UV /4H condensation cycles)

Comparative Data

Primer + Alkyd Enamel	Primer + Epoxy Intermediate+ PU Top	Coaltar Epoxy /Chlorinated Rubber Paint /Polyamide	Powder Coating	POLYHYB
100 Hours with 10% Gloss reduction	500 Hours with 10%	<100 - 200 Hours	500 Hours with upto 30% /Gloss reduction	500 Hours with NO Gloss reduction

(C) Humidity testing ASTM D 2247 >1500 Hours.

(D) Water Immersion test (28 Days): Passes No Change.

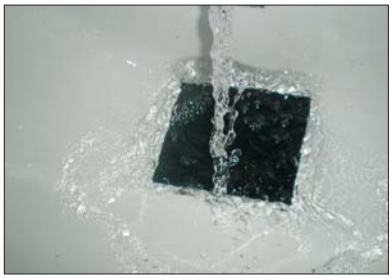
★ Superior mechanical properties - Very high adhesion & flexibility. No self peeling tendencies. Strongly grips & bonds on the substrate.

(a) Scratch resistance : passes 3 - 4 Kg weight.

(b) Impact resistance : passes 1.7 Kg, 3 -4 feet height.

(c) Conical bend tests passes 270 °C / 3 Cycles.

★ Superior chemical resistance - resistant to concentrated acids (Sulphuric, Nitric...) & alkalies (Sodium Hydroxide...)



30 minutes acid immersion & washed in tap water

After 30 minutes acid immersion - No affect.

★ Resists temperature upto 200°c.

★ Abrasion & scratch resistance both on metals as well as concrete.

★ Good resistance to hot oils, alkalies, acids (20% HCL, 18% H_2So4...).

★ Excellent immersion resistance -hot water, sea water, lube oils, vegetable oils, kerosene.

★ Available in various industrial shades.

★ Suitable for protecting both ferrous as well as non ferrous surfaces.

★ Prevents growth of fungus, moss, algae & other vegetative as well as bacterial life.

★ Economical High coverage, low application cost (no need for primer, thinners...), long life.

★ Re- coatable onto itself without surface preparation Easy refresh coats - ideal for mtc.

★ **Fire Resistant.**

5 Minutes Kept in Gas Torch Flame

After Burning

Enamel Paint Starts Burning within 30sec

Applications

For use over prepared substrates both ferrous & non - ferrous (cement, concrete, GI, aluminium, plastic, wood...) in industrial environments, commercial buildings....

- Interior /exterior
- Pre - engineered steel structures
- Railings
- Machinery
- Structural steel
- Steel door
- Power transmission equipment, transformers, towers.....
- Steel decking
- Concrete flooring & machinery foundations
- Dams, sluice gates, valves, irrigation structures.
- Chemical plants
- Concrete /RCC structures
- Primer /finish
- Repaints
- Storage tanks
- Bar joists
- Railway equipment - signalling, track, coaches...
- Piping
- Fire escapes
- Conveyors, cranes, earth moving machinery...
- Reconditioning Equipment
- Bridges - Beams, guirders, pillars...
- TV & microwave transmission towers
- HVAC, AC chiller plants, cooling towers.....
- Road building, mining and construction equipment.

Technical Specifications

1.	DFT ASTM D-1440		
	(a) Sprayable Grade	:	60 - 70 microns DFT in Two Passes
	(b) Brushable Grade	:	110 -115 microns DFT in Two Passes
2.	Touch dry - recoatibility		
	(a) Sprayable Grade	:	10 -15 minutes per pass
	(b) Brushable Grade	:	15 - 20 minutes per pass
3.	Conical bend test ASTM D-1185 (270°C/ 3 cycles)	:	Passes 3 Cycles. No damage or detachment of the film.
4.	Salt spray resistance ASTM B117	:	Passes 1500 Hours
5.	Temperature resistance ASTM D-2243	:	Upto 200°C
6.	Scratch resistance (3 - 4 kg weight)	:	No such scratch as to show bare metal.
7.	Impact resistance (1.7 kg, 3 - 4 feet height)	:	No detachment, cracks or any damage of coating observed around the impact area. :
8.	Cross hatch adhesion test	:	100 /100. No material detachment from cross hatch marks.
9.	Immersion test Acids (IS 158 - 1981) Resistance to 5% Sulphuric acid / nitric (at room temperature for 24 hours)	:	Passes 1:20 sulfuric acids & 1 : 20 Nitric acid immersion - 24 hours
10.	Alkali (IS 157 - 1950) Resistance to 5% sodium hydroxide (at room temperature for 24 hours)	:	Passes 1:20 sodium hydroxide immersion - 24 hours

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.

Iron & Steel:- Minimum surface preparation is Hand Tool Clean per SSPCSP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC - SP6, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). Coat any bare steel within 8 hours or before flash rusting occurs.

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 products 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.
Non - ferrous : Special primer would be needed for GI & aluminum. Concrete surfaces, should be clean, dry, dust free & firm.

Degreasing :- Nace SSPC SP -1 : Cleaning of oil, grease, dirt, soils, salts... use # Z101 ALPHA 3 degreasing solution.

Paint Removal:- Existing paint if needing removal, may be removed using # Z82 PAINT STRIPPER (BULK). Post paint removal ensure surface is clean & dry without any paint stripper chemical residue.

Rust Removal :-. Use our # Z77 RUST & SCALE - REMOVER (RTU). Post cleaning ensure surfac e neutralisation via alkali wash

Application Methods & Coverage

(a)Sprayable : Standard air compressor line. “HVLP” (High Volume Low Pressure) spray gun to be used. Air should be clean & oil /moisture free. Air line pressure should be between 2.5 - 3.5 kgs max. Adjust air pressure knob, spray pattern knob & paint qty flow knob as per need.

Coverage in two passes: 30 - 35 sqft /Ltr approx.

(b)Brushable : Standard short hair stiff brush. Slow application.

Coverage in two passes : 20 - 25 sqft /Ltr approx.

Caution

- Do not mix with any other thinners /solvents. Dilute if required using **" POLYHYB DILUENT "** ONLY.
- Stir well before use. Use within prescribed shelf life .
- Apply in cross coats (I^{st} up/down & 2^{nd} left to right. After I^{st} coat is touch - dry)
- Clean HVLP Guns & brushing using "POLYHYB DILUENT".
- Product is highly flammable. Do not use or store near spark /flame or heat source. Use Safety PPE to protected eyes, hands....

EQUIPMENT RECONDITIONING WITH # 2050 POLYHYB

FRONT END LOADER – CEMENT-MINES, PRIOR TO COATING

PAINT BEING REMOVED & SURFACE BEING CLEANED

#2050 POLYHYB - BEING SPRAYED - ON USING HVLP GUN

FRONT END LOADER - POST 02 COATS

#2050 POLYHYB:- "BRAND - NEW" LOOK TO AN OLD EQUIPMENT

TECHNICAL COMPARISON - 2050 POLYHYB Vs Single component alkyd enamel paints, two component multi - layer (primer + basecoat + top coat) epoxy /PU paints :-

S.No		Alkyd Enamel Paints	Two Component Epoxy /PU Coatings	2050 POLYHYB
1.	Type	Alkyd Resin Base	Thermosetting Polymer	Thermoplastic HYBRID Copolymer "Liquid Plastic"
2.	Grade	Single Component	Two component	Single Component
3.	Thinner	Thinning with the help of thinner necessary	Correct Mixing of two components is very critical	Ready to use system
4.	Primer	Red oxide primer necessary	Primer necessary	Primer less
5.	Drying time	4 - 5 hours	48 - 96 hours	10-20 Min. for touch dry
6.	Acid, alkali and chemical resestance	No resistance	Good chemical resistance	Excllent acid, alkali, chemical resistance
7.	U. V. Resistance	Poor	Fair	Excellent
8.	Heat Resistance	Poor	Fair	Up to 200° C
9.	Adhesion, abrasion, bend & scratch resistance	Good	Good	Excellent
10.	Durability	6 Month	4-5 year (Two Component when used together with primer & top /base coats)	4 - 5 Years
11.	Shades	All I.S. Shades	Limited shades	All I.S.,RAL Shades
12.	Salt spray resistance	Non performance; decorative paint	300-500 hours	1500 hours
13.	Fire Resistance	Flammable	Flammable	Resistant to fire post full cure.

Marketed Under Licence In India By:

Stanvac™

India's Widest Range Of World Class Maintenance Consumables

Industrial Aerosols, Environment Friendly Cleaners, High Build Solvent Free Anti-Corrosion Epoxy Coatings & Linings, Repair & Reclamation Epoxies, Anaerobics, Silicones, PUF...., Engineered Adhesives, Self-Fusing Electrical Tapes, Fire Suppression Coatings, EN Approved PPE Safety....

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