



*Saves Past...
Protects Future...*



Monarch Industrial Products (I) Pvt. Ltd.

(An ISO 9001 : 2008, ISO 14001 : 2004 & OHSAS 18001 : 2007 Certified Company)

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Metal Reclamation Putties



The down-time, shut down, profit loss, energy decline, safety hazards pose major threat to many Industries. Monarch's SavesPast range of Metal Reclamation Putties offers wide range of products and services during routine and unexpected maintenance to solve the maintenance issues that arise from machinery, process equipment & structural's break-downs and failures across wide spectrum of Industries. These 2 component epoxy putties containing Resin and Hardener which after mixing hardens to a firm metal like material, well adhering to almost any kind of surface. It rebuilds worn-out surface to the original specifications, in most of the cases in less than 2 hours down-time saving huge inventory / replacement costs. The surface of the base substrate is not altered as in case of welding and no thermal stresses are induced during repair. The cured mass can be painted, sanded, machined, tapped, ground, filed or drilled.

The key features are : Rehabilitation instead of replacement, Safety enhancement as no dangers of hot work, In-situ application - do jobs right on production line, fast and economical repairs, ease in application procedures, permanent solutions to countless applications, increased reliability, reduce the cost of plant shutdown, match metal color, excellent resistance to aggressive chemicals, high compressive strength for mechanical applications.

Cost Saving solutions for

Repair & Maintenance of aging assets and Protection & Improvement of new assets

Buildings & Civil Infrastructure Maintenance for Civil & Project Engineering

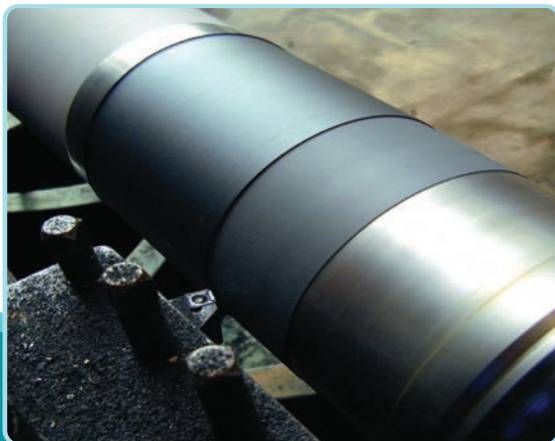
- ▶ Waterproofing ▶ Heat Reflective Coatings ▶ Construction Admixture ▶ Adhesives & Sealants ▶ Surface Protective Coatings
- ▶ Repair, Rehabilitation & Strengthening ▶ Grouts & Anchors ▶ Floor Screeds & Toppings
- ▶ ESD - Anti Static/Dissipative/Conductive Floor Coatings ▶ Surface Treatments ▶ Road Maintenance Coatings

Maintenance, Repair & Overhaul (MRO) for Mechanical & Electrical Engineering

- ▶ Metal Reclamation Putties ▶ Maintenance Coatings ▶ Pipe Repair & Strengthening Kits ▶ Metal Epoxy Sticks ▶ Energy Saving Coatings
- ▶ Crusher Backing Compound ▶ Industrial Maintenance Aerosols ▶ Oil, Grease & Lubricants ▶ Self Fusing Insulation Tapes
- ▶ Emergency Maintenance Kits ▶ Anti Corrosive Coatings ▶ High Temperature Coatings ▶ Thermal Insulation Coatings
- ▶ Fire Retardant Coatings ▶ Hand Cleaners & Barrier Creams

Repair and Protection of Machinery & Process Equipments

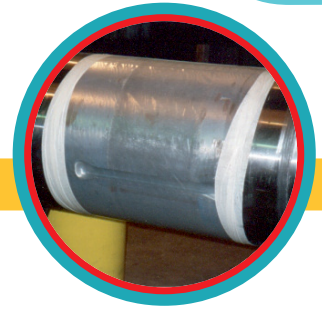
Name	Code	Packsize	Description
General Purpose			
SavesPast TP	21101	1 Kg	Multi-Purpose Reclamation Putty for precision critical jobs
SavesPast SP	21102	1 Kg	Extended Pot Life repair applications
SavesPast CP	21103	1 Kg	Rebuilding putty for tough wear and abrasion resistance
SavesPast CCP	21104	1 Kg	Ceramic Carbide Putty against fine particle abrasion
SavesPast FP	21105	500 gms	Tough rubber like urethane repair compound for wear and impact resistance
Special Purpose			
SavesPast AP	21111	500 gms	Repair of Aluminum parts/castings
SavesPast BP	21112	500 gms	Repair of Bronze parts/ castings
SavesPast CUP	21113	500 gms	Repair of Copper parts/castings
SavesPast SSP	21114	500 gms	Repair of Stainless Steel parts/castings and food processing equipments
High Temperature Putties Till 220°C			
SavesPast HTCP	21121	1 Kg	Rebuilding putty for tough wear and high temperature resistance till 230°C
SavesPast HTTP	21122	1 Kg	Multi-Purpose Reclamation Putty for high temperature resistance till 230°C
Under Pressure Leak Arrest Putties			
Zero-Down-Time ETP	21131	1 Kg	Rapid Setting putty for sealing active leakages
Zero-Down-Time UWP	21132	1 Kg	Under water repair putty for chronically wet/damp environments
Accessories			
SavesPast ACR	21141	1 Kg	For Cleaning of surfaces before Epoxy Putty Application - Cleaner
SavesPast ART	21142	5.5 mtr (Roll)	Glass Fibre Cloth for Additional Strength - Reinforcement Tape
SavesPast ARA	21143	114 gms	Prevents Bonding of Epoxy Putty - Release Agent
SavesPast AMK	21144	1 No's	Mixing & Application tool for Putty Application - MonKit
SavesPast AMP	21145	114 gms	For Priming of Metal Surfaces before SavesPast FP Application - Metal Primer
SavesPast ARP	21146	114 gms	For Priming of Rubber Surfaces before SavesPast FP Application - Rubber Primer
SavesPast AFA	21147	50 gms	For Accelerating Cure time of SavesPast FP - Flex Accelerator



SavesPast TP

Multi-Purpose Reclamation Putty for precision critical jobs

A two component paste, engineering grade system based on a ferro-silicon filled epoxy system. The non-rusting putty extensively used for repairing and rebuilding worn-out surfaces in machinery & equipment and precision critical applications in less down-time.



SavesPast SP

Extended Pot Life repair applications

A two component paste, general purpose repair system based on a steel filled epoxy system. The metal putty is extensively used for extended working life repairing and rebuilding worn-out surfaces in machinery & equipment.



SavesPast CP

Rebuilding putty for tough wear and abrasion resistance

A two component paste general purpose ceramic-filled epoxy system. The ceramic putty is used to repair high wear areas against sliding abrasion / erosion of processing equipment's, interfacing metallic, low-friction surfaces and extends wear life. It is ideally suited to be over coated with XtraLife CEC- 21202 (Ceramic Brush able) to ensure long lasting performance.



SavesPast CCP

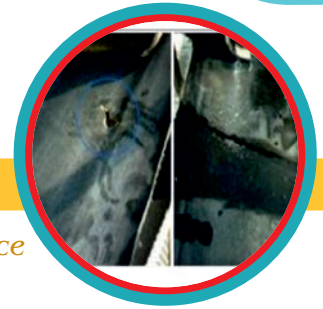
Ceramic Carbide Putty against fine particle abrasion

2 pack non-sagging, trowel applied epoxy putty is extensively used for repairing and protecting surfaces against abrasive attack. SavesPast CCP is containing maximum load of high alumina ceramic beads and silicon carbide designed to give maximum abrasion resistance. The product offers maximum performance against entrained particulate abrasion, constant vibration, and wearing surface abrasion.

SavesPast FP

Tough rubber like urethane repair compound for wear and impact resistance

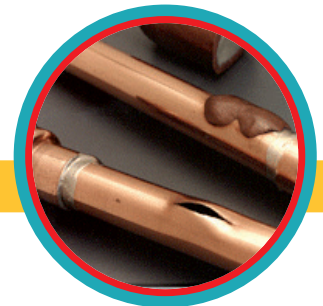
SavesPast FP combines the properties of rubber and urethane in a trowel able repair compound. It is ideal for repairing metal, rubber, and urethane surfaces that are subject to wear and impact. The product cures to a tough, flexible rubber compound that exhibits excellent resistance to wear, tear and abrasion



SavesPast AP

Repair of Aluminum parts/castings

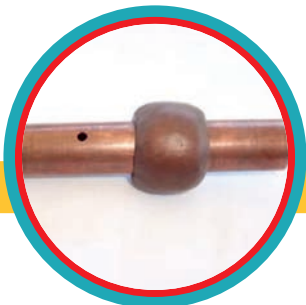
A two component paste, based on a aluminum powder filled epoxy system. The non-rusting, non-magnetic dependable inert putty extensively used for fairing, repair or patching of aluminum castings and equipment where aluminum finish is desired.



SavesPast BP

Repair of Bronze parts/ castings

A two component paste, based on a bronze powder filled epoxy system. The non-rusting, nonmagnetic dependable inert putty extensively used for fairing, repair, filling or patching of bronze castings and equipment where bronze finish is desired and where brazing is undesirable or impossible.



SavesPast CUP

Repair of Copper parts/castings

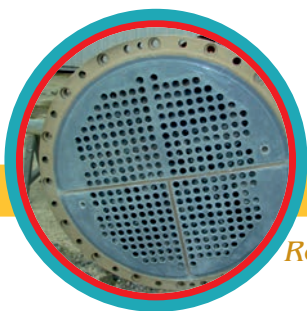
A two component paste, based on a copper powder filled epoxy system. The non-rusting, non magnetic dependable inert putty extensively used for fairing, repair, filling or patching of copper castings and equipment where copper finish is desired.

SavesPast SSP

Repair of Stainless Steel parts/castings and food processing equipments



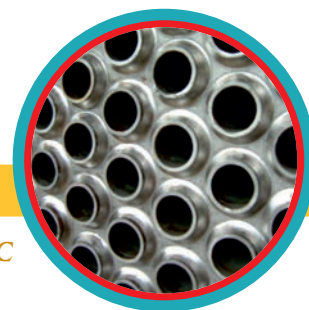
A two component paste, based on a stainless steel powder filled epoxy system. The non-rusting, non-magnetic dependable inert putty extensively used for fairing, repair, filling or patching of stainless steel fittings, components, castings and equipment especially at hygiene conscious facilities or chemical processing applications.



SavesPast HTCP

Rebuilding putty for tough wear and high temperature resistance till 230°C

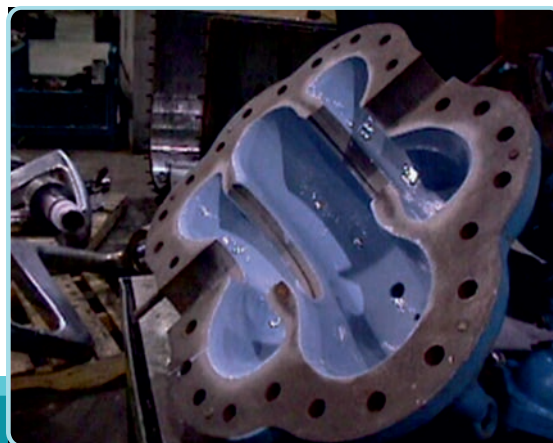
A two component paste general purpose ceramic-filled epoxy system based on high temperature resistance special resin. The ceramic putty is used to repair high wear areas against sliding abrasion /erosion of processing equipment's, interfacing metallic, low-friction surfaces and extends wear life for high temperature service conditions. Ideally used for scrubbers, cyclones, dust collectors, and fan housings. The high temperature putty requires post-curing for proper performance and temperature resistance



SavesPast HTTP

Multi-Purpose Reclamation Putty for high temperature resistance till 230°C

A two component paste, engineering grade system based on a ferro-silicon filled epoxy system on high temperature resistance special resin. The non-rusting putty extensively used for repairing and rebuilding worn-out surfaces in machinery & equipment and precision critical applications in less down-time for high temperature service conditions. The high temperature putty requires post-curing for proper performance and temperature resistance



Zero-Down-Time ETP

Rapid Setting putty for sealing active leakages



A rapidly solidifying repair system containing Resin and quick setting Hardener which after mixing sets within 5 minutes. The fast curing putty is oil surface tolerant and moisture surface tolerant. In general the metal surfaces are susceptible to the leakages due to corrosion or faulty weld or porous structures.

Zero-Down- Time ETP suites for use in emergency applications to cold seal and stems the active, potential and catastrophic fluid and oil leakages, in-situ, without the need to take process offline and make expensive drain down procedures, in the cases such as transformer oil, SF₆ gas from circuit breakers and switch gear, Porcelain and Steel CT bushings, water, leaking pipes, leaking tanks, leaking radiator fins, unions, couplings, fastener assemblies and drain plugs.

Besides sealing the live leakages the emergency putty can be used for repair applications like Scored Hydraulic rams, Stripped threads, Holed casings etc.,



Zero-Down-Time UWP

Under water repair putty for chronically wet/damp environments

The moisture surface tolerant epoxy putty makes effective repairs to metal, concrete, wood surfaces in wet and damp environments. The product is used extensively for chronically underwater repairs, underwater patching, filling cracks, leaks, holes and the applications where dampness is present such as boat hulls, tanks, pipelines, valves, pumps, concrete vessels etc. The putty is unaffected by chlorinated or salt water and is ideal for plumbing, irrigation and marine where applications are underwater.

Clientele List



DEALERSHIP ENQUIRIES SOLICITED - Excellent Returns Assured

TYPICAL PROPERTIES

Properties	Standard	Unit	GENERAL PURPOSE										SPECIAL PURPOSE					HIGH TEMPERATURE PUTTIES TILL 220°C		UNDER PRESSURE LEAK ARREST PUTTIES	
			SavesPast IP	SavesPast SP	SavesPast CP	SavesPast CCP	SavesPast FP	SavesPast AP	SavesPast BP	SavesPast CUP	SavesPast SSP	SavesPast HITCP	SavesPast HITAP	Zero-Downtime EIP	Zero-Downtime UWP						
Color and appearance	ASTM D 11544	~	Thick paste & Metallic grey	Thick paste & steel black	Thick paste & Dark Grey	Thick paste & Dark Grey	Thick paste & Black	Thick paste & Aluminium	Thick paste & Bronze	Thick paste & Copper	Thick paste & Grey	Thick paste & Grey	Thick paste & Aluminium	Thick paste & Dark Grey	Thick paste & Black						
			2.08	2.0-2.5	1.75	2.1	1.05	1.58	2.23	2.1	2.24	1.94	1.58	1.3	1.5						
Specific gravity	ASTM D 1475-98	~	4(R):1(H)	4(R):1(H)	9(R):1(H)	4(R):1(H)	2(R):1(H)	9(R):1(H)	1(R):1(H)	2(R):1(H)	4(R):1(H)	3(R):1(H)	13.1(R):1(H)	13.1(R):1(H)	1(R):1(H)	1.4(R):1(H)					
Mix ratio by weight	Manual	~	7(R):1(H)	4.5(R):1(H)	4(R):1(H)																
Mix ratio by volume	Manual	~	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty					
Viscosity	ASTM D 1200	min	25	20-25	60	30	10	60	35	50	58	120	60	3	30						
Pot life @ 30°C	IS 101	min	24	24	16	16	16	16	16	24	16	16	16	6	16						
Functional cure	ASTM D 1640	Hrs	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent						
Chemical resistance	ASTM C 267	%	5000	5000	5000	6000	6000	6000	6000	6000	7000	5000	5000	5000	5000						
Soft Spary Test	ASTM B 117	Hrs	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil						
Voc content	ASTM D 1353	%	120	120	68	88	21	58.05	58.8	58.05	58	71	58.05	25	40						
Compressive strength	ASTM D 695	N/mm2	35	35	18	19	17	27	27	25.5	27	30	27	35	27						
Tensile strength	ASTM D 638	N/mm2	50	50	50	55	NA	46.61	42.6	46.61	36	45	46.61	50	48.2						
Flexural strength	ASTM D 790	N/mm2	14	14	18	16.5	16	17.9	18.4	18.2	16	15.85	17.9	14	19						
Adhesive shear strength	ASTM D 1002	N/mm2	120	125	85	70	140	100	100	120	135	90	90	150	140						
Abrasion resistance	ASTM D 4060	mg/1000 cycles	80	85	85	78	85	85	85	80	85	87	85	70	75						
Cured hardness	ASTM D 2240	Shore D	796 Cm2 / kg / 5 mm	770 Cm2 / kg / 5 mm	862 Cm2 / kg / 5 mm	800Cm2 / kg / 5 mm	1016 Cm2 / 0.5 kg / 2.5 mm	597 Cm2 / 0.5 kg / 5 mm	428 cm2 / 0.5 kg / 5 mm	597 Cm2 / 0.5 kg / 5 mm	428 Cm2 / 0.5 kg / 5 mm	624 Cm2 / kg / 5mm	624Cm2 / kg / 5 mm	1100 Cm2 / kg / 5 mm	862 Cm2 / kg / 5 mm						
Coverage @ 5mm thickness	~	cm2/pack size / thickness	0.001	0.001	0.005	0.005	0.3	0.005	0.002	0.002	0.001	0.001	0.002	0.001	0.005						
Cured shrinkage	ASTM D 2566	cm / cm	2.206	1.18	15.7	16.5	13.79	3.94	0.78	3.94	1.2	12	3.94	1.18	5.9						
Di electric strength	ASTM D 149	kV/mm	44.8	67.5	55	56	10	21.4	75	22	75	10	21.4	35	35						
Di electric constant	ASTM D 150	~	0.69	0.5	0.58	0.18	0.55	0.55	0.55	0.4	0.55	0.69	0.6	0.2	0.3						
Thermal conductivity	ASTM C 117	W/mk	170	120	120	121	80	121	121	120	121	230	230	37	120						
Temperature resistance	Dry	° C	85	60	60	49	40	60	60	60	60	115	115	17	60						

