Integrated Polymer Industries, Inc.
9741 Irvine Center Drive, Irvine, CA 92618-4324 USA
Tel: 949/788-1050
Fax: 949/788-1051

MT-500 IPI-Gel Ceramic™

- ***A zero-VOC, two-component, RT-cure, IPN-based, thixotropic, gray polymer paste,***
- ***Formulated as a high-performance, non-corroding, non-machinable ceramic repair compound,***
- ***For rebuilding worn, damaged, or broken pumps, valves, pipes, tanks, and***
- ***Protecting equipment subject to turbulent fluid flow against erosion, corrosion, cavitation, impingement, and chemical attack.***

- **Surface Preparation: Metal surfaces** must be properly prepared to comply with the standards as set by the Steel Structures Painting Council (S.S.P.C.) or National Association of Corrosion Engineers (N.A.C.E.). All loose dirt, rust, unsound material and old paint shall be removed via abrasive blasting to expose white or near-white metal. The final metal surfaces shall be clean, rust free, dry, rough and sound.

Contents of the kit	***Base***	**Solidifier**	***Kit*** *(When Base & Solidifier are mixed)*
MT-500 IPI- Gel Ceramic™	Gray thixotropic, polymer paste, in a plastic tub, 455g	Off-white, thixotropic, polymer paste, in a plastic tub, 65 g	Gray thixotropic, polymer paste, about half a kg

- **Premix Base component:** Make sure the product is not exposed during storage to temperature extremes and that there is no visible crystallization. If in doubt, warm and premix the components to re-liquefy any hardened segment back into a uniform consistency paste. Use indirect and safe heat (20-30 minutes at 130-140^{o}F) for warming.

- **Mixing & Application**: Scoop out Base and Solidifier onto a clean mixing surface and mix with a spatula for 2-3 minutes until a uniform color and consistency are achieved. Spread this mix using spatula and/or templates cut out of IPI-Mixing Board™, following the contours of the interiors of the equipment, to deposit a uniform thickness of mixed IPI-Gel ceramic™.

- **Recoat:** After a 30-60 minute cure at 65-85^{o}F, inspect the application carefully and apply a second coat, if necessary, to those areas where the substrate is still exposed or seems only thinly covered.

- **Topcoat:** After a 1-2 hours cure at 65-85^{o}F, coat the entire surface that is already covered with IPI-Gel Ceramic™ with IPI-Fluid Ceramic™ at 16 mils thickness (+/- 2mils). Iinspect the application carefully and apply a second coat, if necessary, to those cover pinholes, drags, thinned out areas, and other such inconsistencies to create a perfectly smooth, seamless surface on the repair job.

- **Cure:** Allow the two-product repair system to cure for at least 1 day for dry service or 5-days for wet service. Cure properties at 75^{o}F; Potlife: 60 min; Initial Cure: 16h; Dry Service: 24h; Wet service: 5 days. If in doubt, allow more time for cure for good measure. For more information, please contact IPI.

- **Heat cure (post cure or accelerated cure)**: Alternatively, heat cures may be used if long downtimes cannot be afforded: 3h @ ambient followed by 6h @ 140^{o}F (such a high temperature can be maintained around

applications by erecting make shift tents or boxes and properly placing hot air blowers in them. Caution: Do not cause fires, explosions, burns, or other injuries during heat cures!)

- **Coverage:** Depends on the type of substrate, repair size, application thickness,tools and other factors. Coverage can be more realistically calculated after coating a sample area which is representative of the entire surface. Always allow some extra kits to account for waste and/or errors.

Features	***Benefits***
Excellent Chemical Resistance	Will withstand chemical attack and corrosion
Superior Abrasion Resistance	Resists turbulent fluid flow with suspended solids in it
Designed for toughest fluid flow problems	Such as cavitation, impingement, implosion,
Advanced non-rusting formula	Resistant to corrosion
Highest Rockwell hardness in the industry	R 123, M 88
Elevated temperature service	400^{o}F dry; 200^{o}F wet
Phenomenal bond strength to steel	1 ton per square inch
Negligibly small cure shrinkage	2 mils per inch (build up thicker then grind down if needed)
High modulus: 370,000 psi	Resistance to deformation under sustained loads; no creep.
Suitable coefficient of thermal expansion	1.9 x 10^{-5} in/in ^{0}F; thermal cycling will not cause delamination
High heat distortion temp: 135^{0}F @ RT or 208^{0}F @ high-temp cure	Will retain its mechanical properties at elevated temperature service
Zero VOC	No flammability; no fire or explosion risks; no health concerns due to VOCs; no solvent problems (bubbles, pinholes, etc.)
Factory proportion packaging	Easy to use: No weighing or proportioning in the field
Excellent success history	Since 1985

Caution: Do not apply if the ambient temperature is expected to drop at or below 55F during mixing, application or curing. Once properly cured, the material can take lower temperature service. Do not use IPI-Fluid Ceramic™ beyond its shelf life. None of the components can be used by itself; they must be mixed together prior to application. Due to reactive nature of the product, there may be batch-to-batch and even within the same batch slight color variations. All formulations and prices are subject to change without notice. These materials are for trained, qualified technical people, not for general public. Do not cause fires during heat cures. Wear gloves, goggles, aprons, and hardhats for personal protection during installations. For safety reasons, always pay attention to what is happening around you: moving forklifts or cranes, ongoing welding or sandblasting, erecting beams, etc., and stop your work using IPI-Fluid Ceramic™ until other trades finish their tasks. Safety first! Keep away from the children!

Warranty Disclaimer: *There is no warranty, expressed or implied, as to the fitness of any product for any particular purpose; nor as to anything else unless contained on the face hereof. We give no warranty, express or implied, as to merchantability, fitness for purposes sold, description, quality, productiveness, or any other matter, of any product sent out and will be in no way responsible for the outcome of the application of the product. Seller does not warrant any of the product specified herein to meet the requirements of any code of any state, municipality or other jurisdiction. Purchaser hereby waives the right of refusal and return of the goods that is usually connected with the non-warranty. There are no warranties that extend beyond the description on the face hereof. Seller disclaims any implied warranty of merchantability and buyer agrees that the goods are sold "as is."* Since the quality of substrates, application, cure, and service conditions are beyond IPI's control, IPI can accept no liability for the results obtained. IPI's liability shall be limited to replacing a defective product with a good one, if IPI establishes that its product is defective. No other warranties, express or implied, are given.