

LOCTITE®

T-E-Klebertechnik

Anwendungs-, Verfahrens- und Dosiertechnik

40 Jahre Klebstoffherstellung



Wastewater Industry Solutions

Henkel



This brochure is designed to give you a detailed overview of our extensive product portfolio for wastewater industry solutions. To ensure that you get the best solution for your maintenance need, please contact a LOCTITE® Technical Customer Engineer for a consult.

Protecting industrial equipment and machinery is crucial for any kind of harsh industrial environments. Industrial parts are very often worn out by wear, abrasion, erosion, chemical attack, corrosion and mechanical damage. Not properly protecting parts can affect initial functionality, reduce efficiency, lead to work place safety concerns or even lead to the acquisition of new and additional repair parts.

HENKEL'S SOLUTION

At Henkel, we understand plant maintenance – and the challenge you face in ensuring reliability, safety and durability. We offer you an extensive network of experts, knowledge and innovative technologies to master this challenge.

Partner with us to benefit from our competencies and to achieve the best results for your maintenance and repair needs:



INCREASE RELIABILITY
of worn parts by restoring them to a serviceable condition



IMPROVE SAFETY
by preventing occupational accidents due to part failure



SAVE TIME
by minimizing downtime and extending part life



REDUCE COSTS
by avoiding part replacement and reducing spare-part inventories

CONTENTS

Influent Structures	3
Bar Screens	4
Clarifiers	5
Sludge Centrifuge Pumps in Blower Rooms	6
Grit Chambers	8
Need It Now Form	9
Notes	10

To learn more about LOCTITE® training or to schedule an in-plant training session, call **1-800-LOCTITE (562-8483)** to speak with your local LOCTITE® sales representative.

For answers to your technical questions or to access a Material Safety Data Sheet (MSDS) or Technical Data Sheet (TDS) on any LOCTITE® product, call **1-800-LOCTITE (562-8483)** or visit our website at www.loctite.com

INFLUENT STRUCTURES

- LOCTITE® PC 9410™ Magna-Crete™ and LOCTITE® PC 7204™ High Performance Quartz can repair concrete damaged by both high caustic influent and high usage, such as breaks around manhole covers.
- LOCTITE® sealants and coatings can permanently repair damaged couplings and seal various structures, such as this ductwork.



BEFORE



AFTER

Repaired with LOCTITE® PC 9410™



Ductwork being sealed with LOCTITE® SI 594™ Silicone Adhesive Sealant



Pipe coupling repaired with LOCTITE® MR Flex 80™ Urethane Repair

CASE HISTORY

CHALLENGE:

A wastewater treatment plant's staff found extensive concrete erosion beneath the settling pond aerator. Initial contractor estimates were in excess of \$13,000 and would have required up to two weeks of downtime to complete the repair.

LOCTITE® SOLUTION:

LOCTITE® PC 7204™ High Performance Quartz, chosen because of its exceptional resistance to acids, alkalis and other caustics. Easily mixed and troweled, and quick curing (24 hours). The settling pond was drained and scrubbed with LOCTITE® SF 7840™ Cleaner & Degreaser prior to application of the High Performance Quartz.

RESULTS:

The whole project took two days instead of two weeks and significantly reduced the project cost and downtime. The application was done by on-staff maintenance personnel with some guidance from Henkel engineers.

OTHER SOLUTIONS:

- LOCTITE® PC 9410™ Magna-Crete™
- LOCTITE® PC 9416™ Floor Fill



CASE HISTORY

CHALLENGE:

The clarifier wheel tracks of a wastewater treatment plant were being eroded because of the constant grinding of clarifier wheel rotation. Initial estimates to fix the problem were in the thousands of dollars and would require weeks of time to complete.

LOCTITE® SOLUTION:

LOCTITE® PC 7204™ High Performance Quartz, a two-component, high strength, rapid-setting concrete repair product that can be driven on in as few as 4 hours.

RESULTS:

The repair was done by maintenance staff, saving significant amounts of time and money.

OTHER SOLUTIONS:

- LOCTITE® PC 9401™ Magna-Crete
- LOCTITE® PC 9416™ Floor Fill



BAR SCREENS

- Repair tears in belts and maximize conveyor uptime by using LOCTITE® PC 7350™ Conveyor Belt Repair and LOCTITE® retaining compounds.
- Eliminate hazardous slips and falls using LOCTITE® Anti-Slip Floor coatings on the greasy bar screen room floor.



BEFORE

Damaged sludge conveyor belt



AFTER

Repaired sludge conveyor belt



BEFORE

Floor surface after years of water and chemical attack



AFTER

Same floor resurfaced with LOCTITE® PC 6261™ Heavy Duty Pedestrian Grade

CASE HISTORY

CHALLENGE:

A U.S.-based wastewater treatment plant was continuously experiencing extensive downtime of its bar screen conveyor due to worn and torn belts. Material and labor costs to replace the belts were becoming too prohibitive. The plant needed a time and labor-saving option to minimize the impact to their operations.

LOCTITE® SOLUTION:

LOCTITE® PC 7350™ was used for repairing the belts and getting them back in service in as little as 2 hours.

RESULTS:

Plant was able to extend the operational life of the conveyors and reduce expense of new belts and related labor.

ADDITIONAL SOLUTIONS:

- LOCTITE® 243™ Medium Strength Threadlocker
- LOCTITE® 648™ Retaining Compound



CASE HISTORY

CHALLENGE:

Operators of a wastewater plant thought they needed to repair/replace a decant gate. The gate has a rubber hinge that is in a constant state of degradation. Quotations obtained showed that fixing and/or replacing the hinge assemblies would cost thousands of dollars and require up to three weeks time to complete.

LOCTITE® SOLUTION:

After some training from Henkel engineers, the plant staff used a LOCTITE® PC 7350™ to repair the hinge, putting the gate assembly back in service within 48 hours.

RESULTS:

The plant personnel were able to perform the repairs in-house, eliminating the need for a contractor, and saving \$90,000 and 13 days of downtime.



A close-up of the damaged hinge

Applying LOCTITE® PC 7350™ Conveyor Belt Repair



Completed repair



CLARIFIERS

- Prevent loosening of threaded assemblies in the clarifier scraper and throughout the facility by using removable and high strength threadlockers and pipe sealants.
- Lubricate the clarifier motors with long-lasting LOCTITE® synthetic lubricants.
- Repair and coat worn or damaged scrapers with LOCTITE® PC 7227™ Brushable Ceramic wear coating or LOCTITE® MR Flex 80™ Urethane Repair Putty.



LOCTITE® 243™ Threadlocker – Medium Strength/Primerless



LOCTITE® 268™ Threadlocker Stick – High Strength



LOCTITE® QuickTape® 249™ Threadlocker Tape



LOCTITE® 567™ Thread Sealant

CASE HISTORY

CHALLENGE:

A wastewater treatment plant was continuously replacing nuts and bolts on the clarifier scraper assemblies. The loosening and ultimate failure of these assemblies can cause the clarifiers to operate inefficiently and in some cases cause catastrophic failure resulting in unscheduled downtime.

LOCTITE® SOLUTION:

The use of both LOCTITE® 243™ Medium Strength and LOCTITE® 268™ High Strength threadlockers on the clarifier scraper assemblies, replacing expensive star washers and split-ring washers that can fail.

RESULTS:

The use of LOCTITE® threadlockers reduced or eliminated downtime due to fastener loosening and failure, reduced inventory of star and split-ring washers and saved thousands in unscheduled downtime repair costs.



CASE HISTORY

CHALLENGE:

Corrosion and assembly seizure are common throughout the wastewater facility, but they don't have to be. A U.S.-based facility was troubled by the cost associated with stud replacement due to backing out and stripping of a housing unit assembly bolt. On each occasion, maintenance personnel would need to re-drill holes and re-sleeve to replace the assemblies.

LOCTITE® SOLUTION:

LOCTITE® 263™ Threadlocker, a high-strength threadlocker, was used in the blind hole stud application to keep the housing unit studs in place, while the use of the serviceable LOCTITE® 243™ Threadlocker allowed the assembly to stay "on torque" until removed with hand tools.

RESULTS:

The use of LOCTITE® threadlockers saved this facility 69% on rework costs of this assembly, due to reduction in maintenance labor costs and assembly material replacement costs.

OTHER SOLUTIONS:

- LOCTITE® 249™ Threadlocker, the innovative threadlocker in tape form
- LOCTITE® 248™ Threadlocker Stick, a semisolid, serviceable strength threadlocker in stick form

SLUDGE CENTRIFUGE PUMPS IN BLOWER ROOMS

- Prevent loosening and costly misalignment by securing pumps and blowers to floor using LOCTITE® PC 9626™ Deep Pour and LOCTITE® PC 9422™ Super Grout
- Repair and protect worn and damaged pumps and components with LOCTITE® Nordbak® Brushable Ceramic and metal rebuilding products.



Easy mix, pourable, self-leveling, non-shrinking, LOCTITE® PC 9458™ Fast Set Grout



Pump used in wastewater facility that has been secured to a LOCTITE® Grout base

CASE HISTORY

CHALLENGE:

A U.S.-based water treatment plant was having problems with degrading concrete resulting in crumbling of centrifuge bases caused by heavy operating vibration. Also, as a result of this operating vibration, the threaded rod and nut assemblies attaching the centrifuge to the concrete base were coming loose and failing.

LOCTITE® SOLUTION:

LOCTITE® Grout was used to rebuild the concrete centrifuge bases and anchor the threaded mounting bolts. LOCTITE® Grout products can be poured from a depth of one inch up to 18 inches and cure in 24 hours to a compressive strength of 14,500 psi. In addition, LOCTITE® 263™ High Strength Threadlocker was used to secure the threaded anchor bolt nut assemblies.

RESULTS:

Degradation and resulting crumbling of the machinery base and the loosening of the anchor bolt and nut assembly were eliminated after using LOCTITE® PC 9458™ Fast Set Grout and LOCTITE® 263™ High Strength Threadlocker. The result was longer and more efficient operating cycles and the elimination of unscheduled downtime repair, saving thousands of dollars and hours of labor time.





CASE HISTORY

MONROE COUNTY WATER AUTHORITY (MCWA), NEW YORK

Energy Savings and Increased Pump Performance on Horizontal Split Case Pumps

LOCTITE® PC 7227™ Brushable Ceramic – Grey NSF™ 61-Certified for potable water.

Research funded by New York State Energy Research and Development Authority (NYSERDA)

Nineteen pumps, ranging in size from 20 hp to 600 hp, were refurbished by sandblasting and coating the interior casing and, in some cases, the impeller. Results showed that sandblasting and coating the pumps increased overall efficiency by 6.2% and significantly increased pump head flow. The average increase from impeller coating as well was another incremental 1.5%.

Sandblasting and coating, along with any necessary mechanical refurbishment, can restore pumps to manufacturer specifications.

Subsequent inspections of the epoxy coatings on the inside of several of the first pumps coated have shown that the LOCTITE® PC 7227™ Brushable Ceramic material has adhered well and remained in good shape without any signs of failure even after being in service for four years or more!

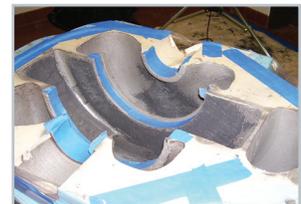
600 hp bottom suction pump
(installed mid-1980s)



After sandblasting



Pump interior after metal
filler application



Coated with two coats of LOCTITE®
PC 7227™ Brushable Ceramic



GRIT CHAMBERS

- Prevent highly abrasive grit from wearing pump impellers and housings using LOCTITE® Nordbak® Brushable Ceramic.
- Lubricate grit chamber paddle motors with long-lasting LOCTITE® synthetic greases. Repair damaged urethane paddles with LOCTITE® Nordbak® Brushable Ceramic or LOCTITE® PC 7383™.



LOCTITE® PC 7227™ Brushable Ceramic



LOCTITE® PC 7222™ Wear Resistant Putty



LOCTITE® MR Flex 80™ Urethane Repair Putty



LOCTITE® PC 7218™ Wearing Compound

CASE HISTORY

CHALLENGE:

A U.S.-based wastewater treatment plant was experiencing severe wearing and cavitations of its grit chamber pumps. Pump efficiency was reduced and replacement was being considered.

LOCTITE® SOLUTION:

LOCTITE® PC 7227™ Brushable Ceramic was used to rebuild the interior pump surface.

RESULTS:

Restored the interior pump surface to “like new” condition. Pump efficiency was increased; the pumps are still in operation today and scheduled for regular proactive maintenance that includes the application of LOCTITE® PC 7227™ Brushable Ceramic, if needed.



CASE HISTORY

CHALLENGE:

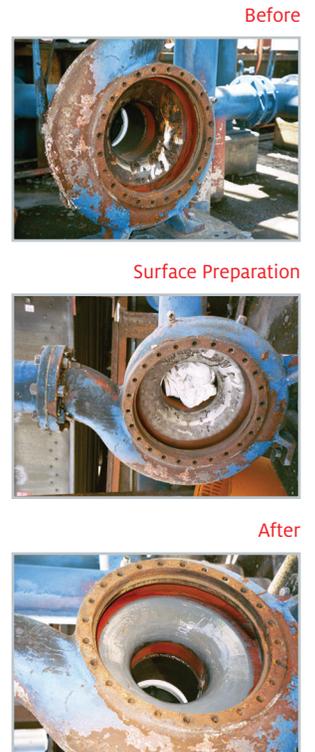
A 15-year-old potable water pump operated by a municipality in India had severe pitting and corrosion. The cost for a new pump was estimated at \$10,000.

LOCTITE® SOLUTION:

LOCTITE® PC 7227™ Brushable Ceramic, a low-friction, wear-resistant protective coating, was used to help protect all interior surfaces of the pump, and LOCTITE® EA 3472™, a pourable, high steel content product, was used to fill voids and pitting caused by the excessive corrosion.

RESULTS:

The repair eliminated the need for the capital investment of a new pump and saved five weeks downtime.





NEED IT NOW!

Name _____

Department _____ Date _____

Quantity	Item No.	LOCTITE® Product	Pkg. Size
----------	----------	------------------	-----------

METAL REBUILDING & SHAFT REPAIR

_____	209681	LOCTITE® EA 3463™ 10-minute Repair Epoxy.....	4 oz. stick
_____	235617	LOCTITE® EA 3472™ Steel Filled Castable Epoxy.....	1 lb kit
_____	235618	LOCTITE® EA 3472™ Steel Filled Castable Epoxy.....	4 lb kit
_____	209822	LOCTITE® EA 3478™ Superior Metal.....	1 lb.kit
_____	831721	LOCTITE® EA 3478™ Superior Metal.....	4 kg. kit
_____	219292	LOCTITE® PC 3471™ Steel Putty.....	1 lb kit
_____	235642	LOCTITE® PC 3471™ Steel Putty.....	4 lb kit
_____	235641	LOCTITE® PC 3471™ Steel Putty.....	25 lb. kit
_____	219293	LOCTITE® EA 3473™ Fast Set Steel Putty.....	1 lb. kit
_____	235614	LOCTITE® PC 3466™ Aluminum Liquid.....	1 lb. kit
_____	235615	LOCTITE® PC 7254™ Aluminum Putty.....	1 lb. kit
_____	209669	LOCTITE® PC 7204™ High Performance Quartz.....	42 lb. kit

PROTECTIVE COATINGS & COMPOUNDS

_____	209816	LOCTITE® PC 7319™ Nordbak Chemical Resistant Coating.....	12 lb. kit
_____	1324008	LOCTITE® PC 7218™ Nordbak Wearing Compound.....	50 ml
_____	1323940	LOCTITE® PC 7218™ Nordbak Wearing Compound.....	50 ml
_____	209826	LOCTITE® PC 7227™ Nordbak Brushable Ceramic.....	2lb. kit grey
_____	209825	LOCTITE® PC 7227™ Nordbak Brushable Ceramic.....	6lb. kit grey
_____	209821	LOCTITE® MR Flex 80™ Urethane Repair Putt.....	1 lb. kit
_____	235611	LOCTITE® MR Flex 80™ Urethane Repair Putt.....	6 lb. kit

ANTI-SEIZE LUBRICANTS

_____	1999556	LOCTITE® LB 8023™ Marine Grade Anti-Seize.....	7 oz. brush-top tube
_____	299175	LOCTITE® LB 8023™ Marine Grade Anti-Seize.....	8 oz. brush-top tube

THREADLOCKING

_____	1329837	LOCTITE® 243™ Threadlocker.....	Medium Strength 10 ml
_____	1329467	LOCTITE® 243™ Threadlocker.....	Medium Strength/Primerless 50 ml

RETAINING

_____	1835922	LOCTITE® 648™ Retaining.....	Compound 10 ml
_____	1835920	LOCTITE® 648™ Retaining.....	Compound 50ml

FLOOR & CONCRETE REPAIR

_____	235572	LOCTITE® PC 9410™ Concrete Repair Material.....	1 gallon kit
_____	235573	LOCTITE® PC 9410™ Concrete Repair Material.....	5 gallon kit

CONVEYOR BELT REPAIR

_____	2073202	LOCTITE® PC 7350™ Belt Repair Fill-Ins.....	400 ml cartridge
_____	2084201	LOCTITE® PC 7350™ Belt Repair Fill-Ins.....	1 kg kit

NOTES:

Ihr Lieferant:

T-E-Klebertechnik

Anwendungs-, Verfahrens- und Dosiertechnik

Großer Kolonnenweg 3
Tel.: 0511 - 353982 - 0
internet: www.t-e-klebertechnik.de

30163 Hannover
Fax.: 0511 353982 - 40
mail: infotek@t-e-klebertechnik.de

