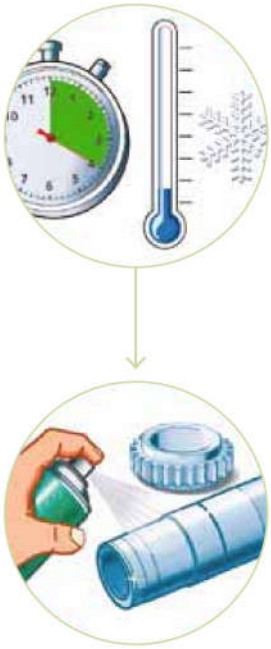


Why Use a LOCTITE activator or primer?

Henkel offers a complete range of activators and primers providing solutions for the following LOCTITE adhesive technologies:

1. LOCTITE activators / primers for instant bonding (cyanoacrylates)
LOCTITE primers are used for improving adhesion to substrates. They are applied before the adhesive. For low surface energy plastic substrates, e.g. polyolefin, PP, PE, best adhesion will be achieved with LOCTITE 770 / 7701.

LOCTITE activators are used to increase cure speed. Loctite activators are mostly applied before the adhesive. Heptane-based activators have good "on-part life" and provide for a good aesthetic appearance of the bondline. They are also suitable for use on plastics which are sensitive to stress cracking. Activators can also be applied after the adhesive, e.g. for curing residual adhesive. They provide for an excellent cosmetic appearance by avoiding white staining of instant adhesives.

2. LOCTITE activators for modified acrylics
LOCTITE activators for modified acrylics are needed to initiate the curing process. Usually, the activator is applied to one surface and the modified acrylic to the other surface. The curing process starts when the two parts are assembled. Fixture time is dependent on the adhesive, on the substrate and on the cleanliness of the surfaces.

3. LOCTITE activators for threadlocking, pipe and thread Sealing, gasketing, retaining and anaerobic acrylics
LOCTITE activators for this group of adhesives are used to increase the cure speed of the products. They are recommended for applications on passive metals such as stainless steel, plated or passivated surfaces. Activators are available as solvent-based or solvent-free formulations.

Why use a LOCTITE surface preparation product?

The LOCTITE portfolio of surface preparation products offers solutions for all types of surface treatments or preparations. All products are easy to use and thus ideal for maintenance and line production.

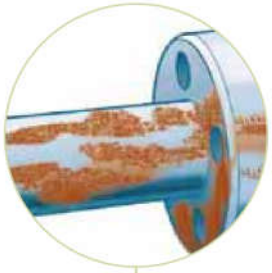
1. Protection of Welding Equipment
Protect shroud and contact tip from welding spatter and ensure uninterrupted welding for a complete shift.

2. Belt Dressing
Prevent slippage and increase friction for all types of belts.

3. Rust Treatment
Conversion of rust into a stable base – treated surface can be overpainted.

4. Corrosion Protection
Protect surfaces against corrosion – drying and non-drying product available.

5. Tamper Proofing
Visually detect movements in adjusted parts.



Why use a LOCTITE emergency repair product?

Whatever your working environment, unpredictable and emergency situations can happen and in most of the cases need to be sorted out within a very short timeframe. Our range of emergency repair products helps you to avoid unnecessary downtime and costs. All of them are easy to apply, enabling you to deal with emergencies quickly. More than this, some will also help you to increase the reliability of your industrial equipment.

1. O-Ring Replacement
O-rings can be made as and when required, avoiding the need to stock.

2. Freeing of Corroded Parts
Releasing rusted, corroded and seized components using the shock freeze effect.

3. Detection of Pipe Leaks
Easy-to-apply system for location of small leaks in iron, copper and plastic pipes.

4. Sealing of Leaks
For emergency sealing of tanks, pipes and castings without the need to replace components.

5. Taping
For immediate fixing and protection of various materials.

Surface Protection
Product Table

	Rust treatment	Corrosion protection	
		Short-term	Long-term
		Flash rust prevention	Ferrous metals
			Finish
Solution	**LOCTITE SF 7500**	**LOCTITE SF 7515**	**LOCTITE SF 7800**
			
Description	Rust treatment	Flash rust prevention	Zinc spray
Colour	Matt black	Amber liquid	Grey
Service temperature range	–	–	-50°C to +550°C
Pack sizes	1 ltr can	5 ltr, 20 ltr	Not available in the U.K.
	LOCTITE SF 7500 **Rust treatment** • Converts existing rust into a stable base • Protects surfaces from corrosion • Cured product acts as a primer ready for painting • For metal pipes, valves, fittings, storage tanks, fences, guard rails, conveyors, construction and agricultural equipment	**LOCTITE SF 7515** • Pre-treatment on large surfaces, giving protection against flash rust for up to 48 hours	**LOCTITE SF 7800** **Zinc spray** • Excellent cathodic corrosion protection on ferrous metals • Restores protection to galvanised parts • Typical applications: Touching-up of metal parts after welding, long-term protection of metal assemblies

	Protection of welding equipment	Tamper proofing		Belt dressing
Long-term				
General purpose		General purpose	Electronic components	
Non-drying				
LOCTITE SF 7803	**LOCTITE SF 7900 Ceramic Shield**	**LOCTITE SF 7414**	**LOCTITE SF 7400**	**LOCTITE SF 8005**
				
Metal protection coating	Ceramic, silicone-free protective coating	Detect movements of parts	Detect movements of parts	Liquid spray
White	White	Blue	Red	Clear yellow
-30°C to +60°C	–	-35°C to +145°C	-35°C to +145°C	–
Not available in the U.K.	400ml aerosol	50ml	20ml, 500ml	Not available in the U.K.

LOCTITE SF 7803
Metal protection coating spray
- Non drying, tack free coating
- Provides long term corrosion protection
- For iron, steel, sheet steel, pipes, moulds, machines and installations that have to be stored outdoors

LOCTITE SF 7900
Ceramic Shield
- Prevents adhesion of welding spatter
- Provides long term protection to welding equipment and ensures reliable, uninterrupted processes
- Excellent adhesion to the surface
- Eliminates the need for cleaning processes

LOCTITE SF 7414
Tamper proofing
- Visually detect movement of adjusted parts
- Use for fittings, studs, nuts, etc.
- Good adhesion to metals
- Non corrosive
- Also for outdoor applications

LOCTITE SF 7400
Tamper proofing
- Visually detect movement of adjusted parts, mark adjustment points, or mark components that have been set or tested
- Use for electronic equipment
- Good adhesion to a wide range of substrates

LOCTITE SF 8005
Belt dressing
- Prevents slippage
- Increases friction for all types of belts
- Extends belt life

Surface Preparation
Product Table

What is your application?

Instant bonding

What do you want to do?

Improve adhesion | **Accelerate**

General purpose

Solution	LOCTITE SF 7239	LOCTITE SF 770/7701*	LOCTITE SF 7458	LOCTITE SF 7455
				
Description	Primer	Primer	Activator	Activator
Colour	Colourless	Colourless	Colourless	Colourless
Solvent	Heptane	Heptane	Heptane	Heptane
Application method	Pre-applied	Pre-applied	Pre or post applied	Post applied
Pack sizes	Not available in the U.K.	SF 770: 10g, 300g SF 7701: 454 g	500ml	25ml, 150ml, 500ml

LOCTITE SF 7239
- Plastic Primer
- General purpose
- Suitable for use on all industrial plastics
- Improves the adhesion of instant adhesives on polyolefins and other low surface energy plastics

LOCTITE SF 770
LOCTITE SF 7701*
- Polyolefin primer
- Only for difficult to bond plastics
- Provides (best) adhesion of instant adhesives to polyolefins and other low surface energy plastics

LOCTITE SF 7458
- General purpose
- For all substrates
- Good onpart life can be pre or post applied
- Low odour
- Minimises post cure white discolouring
- Provides good aesthetic appearance of the bondline

LOCTITE SF 7455
- General purpose
- For all substrates
- Fast fixturing between close fitting parts
- For post application

 *For medical applications

		Modified acrylics (329, 3298, 330, 3342)	Threadlocking, pipe and thread sealing, gasketing, retaining and anaerobic acrylics	
			What activator is preferred?	
Best cosmetic appearance	Ideal for plastics prone to stress cracking	Solvent-based	Solvent-based	Solvent-free
LOCTITE SF 7452	**LOCTITE SF 7457**	**LOCTITE SF 7386**	**LOCTITE SF 7471/7649**	**LOCTITE SF 7240**
				
Activator	Activator	Activator	Activator	Activator
Transparent, light amber	Colourless	Transparent	Transparent, green	Blue-green
Acetone	Heptane	Heptane	Acetone	Solvent-free
Post-applied	Pre or post applied	Pre-applied	Pre-applied	Pre-applied
500ml	150ml, 500ml	500ml	150ml, 500ml, 15.8kg	90ml
LOCTITE SF 7452 • Cures excess adhesive • Provides excellent cosmetic appearance avoiding white discolouring of instant adhesive • Not recommended on plastics prone to stress cracking	**LOCTITE SF 7457** • Good on part life – can be pre or post applied • Recommended for use on plastics prone to stress cracking	**LOCTITE SF 7386** • Initiate the cure of modified acrylic adhesives • Fixture time and cure speed depend on adhesive, bonded substrate and surface cleanliness	**LOCTITE SF 7471** **LOCTITE SF 7649** • Speed up cure on passive and inactive surfaces • For large bond gaps • On-part life of: LOCTITE 7649: ≤ 30 days, LOCTITE 7471: ≤ 7 days	**LOCTITE SF 7240** • Increase cure speed on passive and inactive surfaces • For large bond gaps • For low (< 5°C) temperature curing

Emergency Repair
Product Table

What is your application?

	Free corroded parts	Leak detector	O-ring replacement
Solution	**LOCTITE LB 8040**	**LOCTITE SF 7100**	**LOCTITE O-RING KIT**
			
Colour	Amber	Colourless	–
Base	Mineral Oil	Mixture of surfactants	–
Viscosity cup 4	5 mPa·s	10 mPa·s	–
Service temperature range	–	+10°C to +50°C	–
Pack sizes	400ml aerosol	400ml aerosol	Set containing 20g LOCTITE 406 and tools

LOCTITE LB 8040
- Shock freezing (-40°C)
- Releases rusted, corroded and seized components
- Wicks directly into the rust by capillary action
- Released parts remain lubricated and protected from corrosion

LOCTITE SF 7100
- Produces bubbles at leakages
- For all gases and gas mixtures except oxygen
- Non toxic / non flammable
- Suitable for iron, copper and plastic pipework

LOCTITE O-RING KIT
- Replacement of stationary O-rings
- Eliminates the need for an inventory of different sized O-rings
- Water and oil resistant

Seal pipe leaks		Taping	
LOCTITE EA 3463	**LOCTITE PC 5070**	**LOCTITE SI 5075**	**TEROSON VR 5080**
			
Grey	–	Red, black	Silver
Epoxy	Epoxy, GRP	Silicone	–
–	–	–	–
-30°C to +120°C	–	-54°C to +260°C	up to +70°C
114g	Set containing LOCTITE EA 3643 and GRP tape	2.5 cm x 4.27 m	25m

LOCTITE EA 3463
- Steel filled kneadable stick
- Ideal for emergency sealing of tanks and pipes

LOCTITE PC 5070
- Easy to use repair kit for temporary repair of weak areas on pipes

LOCTITE SI 5075
- Non sticky, self fusing multi purpose wrap
- Resistant to salt water, fuels and acids
- Stretches to three times its length
- Seals instantly
- Tensile shear strength 50kg/cm^2
- UV resistant
- Dielectric strength up to 400 volts per mil

TEROSON VR 5080
- Fabric reinforced tape
- Easy to tear by hand
- Repair, reinforce, fix, seal and protect

Why use BONDERITE pre-treatment or functional coating solutions?

The BONDERITE M-NT and M-PP product ranges comprise innovative corrosion protection products for metal pre-treatment and coating.

Technology Features

New generation BONDERITE M-NT solutions solve your specific metal pre-treatment challenges beyond your expectations.

- Broader operation window
- Few process steps
- Short contact times
- Less maintenance

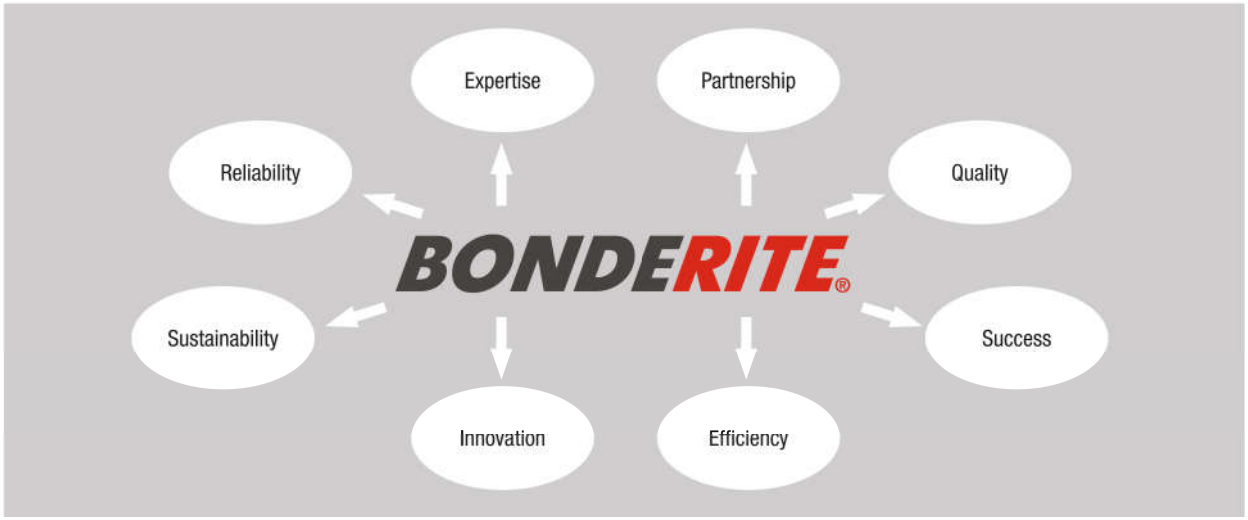
BONDERITE M-PP is the only organic coating solution able to provide outstanding steel corrosion protection on sharp metal edges and inside tubes or box sections. Unlike electrocoating and powder coating, BONDERITE M-PP has no throwing power limitations.

- Coats fully assembled parts
- Inside and outside part protection
- No electrical contacts required
- No special rack stripping required

Process Cost Reduction

By using BONDERITE, you will generate significant process cost savings derived from both low investment costs (shorter processes than conventional methods) and low running costs (reduced energy, manpower, maintenance, waste disposal and water consumption). Capitalising on recognised values such as reliability and high quality standards, our know-how will help you to optimise your individual metal pre-treatment processes. We will support you in utilising the advantages of the BONDERITE solutions and integrating them into your own production facility. These solutions are supported by advanced equipment technologies.

Advantages of using BONDERITE metal pre-treatment and functional coating solutions at a glance

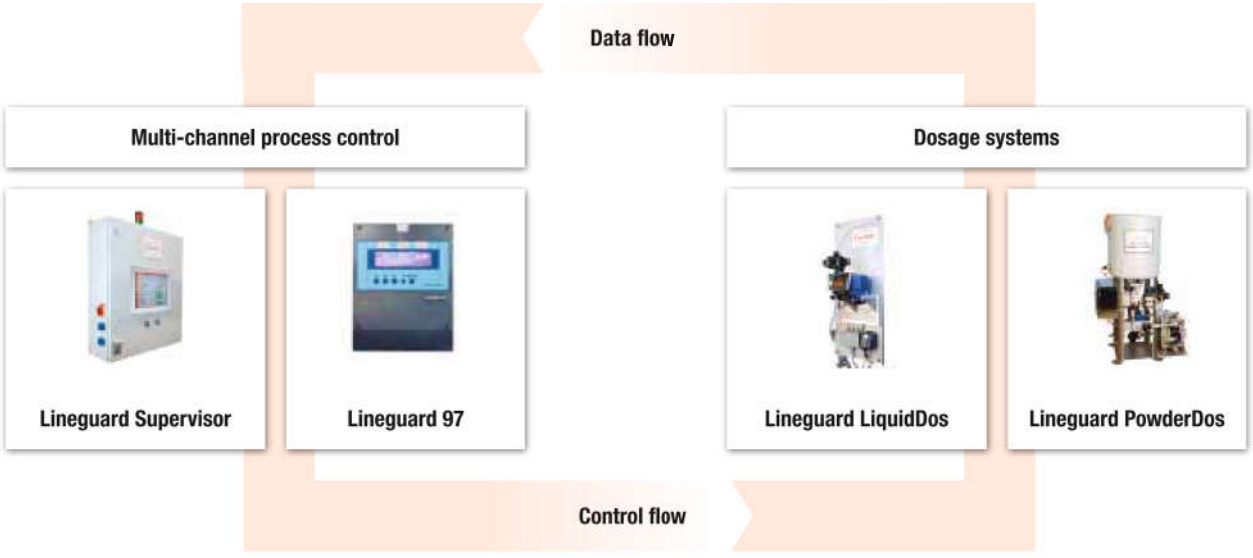


Process management systems

Henkel can provide you with a customised multi-channel process control system for exact dosing of cleaners and surface treatment products:

- Fully automated handling of different chemical measurements and dosages
- One computer to control all the data
- Transfer of all data for the documentation to an internet-based database

For more information please contact your local sales engineer.



Benefits

- External communication and control
- Deep knowledge of your process parameters
- Assurance of consistently high quality
- Detailed documentation with regard to standards and specifications

Service

Profit from Henkel's market expertise and extensive support capability, which allow you to capitalise on complete solutions that go beyond the mere supply of chemicals for the pre-treatment process. Henkel laboratories carry out all kinds of analytical services or corrosion tests to guarantee that your process always meets the highest quality standards should you need personal assistance, we are always available at the local level via our recognised international technical and sales service team.

Design

We are keen to share our extensive experience with you – whenever processes have to be re-engineered, optimised or adapted to new materials, machine equipment, specifications or legislation. Our R&D team is permanently engaged in developing cutting edge technologies to take the efficiency and profitability of our metal pre-treatment processes to the next level.

Minimum Ecological Impact

All our products are solvent free, water based and free from regulated heavy metals. Gas and electricity resources are conserved since less equipment is needed and bath and oven curing temperatures are lower. As a result, our products deliver more value at a reduced ecological footprint.

Metal Pre-Treatment and Functional Coatings
Product Table

Solution	PVDC coating
	BONDERITE M-PP 866
	
Application	Dip
Appearance	Black
Process temperature	+20°C
All BONDERITE M-PP products mentioned exhibit significant saving opportunities in greenfield versus traditional processes, plus uniform coating thickness without Faraday cage effect.	**BONDERITE M-PP 866** • Outstanding barrier properties • Low temperature curing (+90°C) • Flexible coating with high impact resistance • Water based • Top coatable with liquid paints

Corrosion protection, auto-deposition coating

Epoxy-acrylic coating

BONDERITE M-PP 930

Dip
Black
+20°C

BONDERITE M-PP 930
- Tough and chemical resistant
- Curing at 180°C
- Energy efficient process
- Water based
- Hard coating
- Heat stability
- Top coatable with liquid or powder paint

BONDERITE M-PP 935G

Dip
Grey
+20°C

BONDERITE M-PP 935G
- Tough and chemical resistant
- Curing at 180°C
- Energy efficient process
- Water based
- Hard coating
- Heat stability
- Top coatable with liquid or powder paint

BONDERITE M-PP 930C

Dip
Black
+20°C

BONDERITE M-PP 930C
- Tough and chemical resistant
- Curing at 180°C
- Designed to coat cast iron
- Energy efficient process
- Water based
- Hard coating
- Heat stability
- Top coatable with liquid or powder paint

Metal Pre-Treatment and Functional Coatings

Product Table

	Multi-metal phosphating	
	Tricationic zinc phosphate	Manganese phosphate
Solution	**BONDERITE M-ZN 952/958**	**BONDERITE M-MN 117**
		
Application	Spray/dip	Dip
Appearance	Clear liquid, green	Clear liquid, green
Concentration	–	–
Process temperature	+48°C to +55°C	+50°C to +60°C
	BONDERITE M-ZN 952/958 • Generates a fine crystalline coating as excellent foundation for subsequent paint coatings • Provides excellent adhesion and corrosion resistance properties • Robust process • Suitable for multi-metals and automatic control	**BONDERITE M-MN 117** • Black manganese phosphate layers on iron and steel • Reduces frictional resistance and shortens the running-in period of machine parts • Low temperature application • Combined with anticorrosion oils and waxes, the phosphate layers provide excellent corrosion protection • Nickel free conversion coating

For traditional processes and special applications, please contact our sales staff or our technical service people.

New generation coating

Cleaner-coater	Standard lines	High performance	
BONDERITE M-NT 40043*	**BONDERITE M-NT 20120/2011**	**BONDERITE M-NT 1200**	**BONDERITE M-NT 30001/30002**
			
Spray/dip	Spray/dip	Spray/dip	Spray/dip
Colourless with golden hues	Colourless with golden hues	Colourless with golden hues	Colourless
5 – 25 g/l	–	–	–
+20°C to +55°C	+20°C to +40°C	+20°C to +40°C	+20°C to +40°C
BONDERITE M-NT 40043*	**BONDERITE M-NT 20120/2011**	**BONDERITE M-NT 1200**	**BONDERITE M-NT 30001/30002**
• Substitute for iron phosphating • Good compatibility with powder and liquid paints • Simple, robust, short process • Free of toxic, regulated heavy metals • Zirconium based chemical conversion for steel, galvanised steel and aluminium	• Substitute for iron phosphating • Free of phosphates, COD, BOD and toxic regulated heavy metals • Extremely fast process with very little chemical sludge • Low temperature application • Good compatibility with powder and liquid paints • Efficient flash-rust inhibition • No frost sensitive material • 2 years shelf life • Conversion coating for steel, zinc and aluminium surfaces	• Substitute for zinc phosphating • Free of phosphates, COD, BOD and toxic regulated heavy metals • Very fast process with very little chemical sludge • Low temperature application • Conversion treatment for steel, galvanised steel and aluminium	• Free of phosphates, COD, BOD and toxic heavy metals • Low temperature application • Good compatibility with liquid, powder and electropaints • Conversion coating for zinc, steel and aluminium surfaces.

*Part of the cleaner-coater range

Metal Pre-Treatment and Functional Coatings
Product Table

Solution	Electro ceramic coating
	BONDERITE M-ED ECC
	
Application	Dip
Appearance	Light to dark grey
Concentration	–
Process temperature	+15°C to +50°C

BONDERITE M-ED ECC
- Exceptional protection against corrosion, extreme temperatures and abrasion
- Weight reduction – allows replacement of steel with protected aluminium, magnesium and titanium
- Low coefficient of friction

Light metal finishing

Conversion coating

BONDERITE M-NT 4XXX

Spray/dip

Liquid, translucent, light yellow

5 – 10 g/l

+20°C to +35°C

BONDERITE M-NT 4XXX

- Excellent corrosion resistance and adhesion properties for subsequent paint coatings
- Low temperature application
- Rinse and no rinse process
- Ti/Zr based system
- Generates colourless conversion coating layer on aluminium and its alloys
- Aluminium substrates and multi-metal substrates in lower share

Chrome free conversion of light metals and post passivation of phosphate layers

BONDERITE M-NT 5XXX

Spray/dip

Changes from colourless to light green

30 – 250 g/l

+30°C to +50°C

BONDERITE M-NT 5XXX

- Coating and pre-treatment solution free of Cr6+
- Inorganic chemistry, COD-free
- High corrosion protection on bare metal
- Low electrical contact resistance
- Coating colour depends on alloy and application parameters
- Ecological alternative to MIL–C–5541 applications

Approval: GSB and Qualicoat

One product, two applications

Anodising

BONDERITE M-ED 11002

Spray/dip

Colourless, clear liquid

1 – 3 g/l

> +96°C

BONDERITE M-ED 11002

- Generates a slight buffering effect
- Produces an outstanding optical finish on electrolytically coloured parts
- Substantially extends sealing bath life
- Fulfils all required short-time tests
- Zr-based system
- Prevention of sealing smut during the hot water sealing of anodised aluminium

Approval: Qualanod