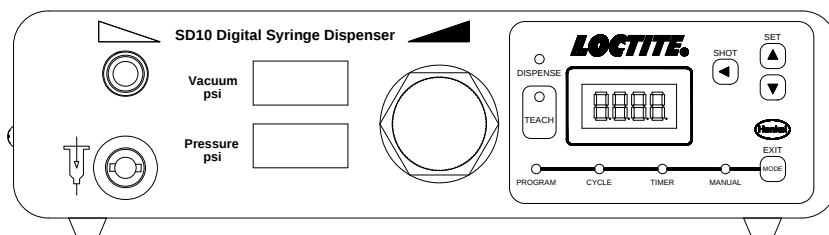
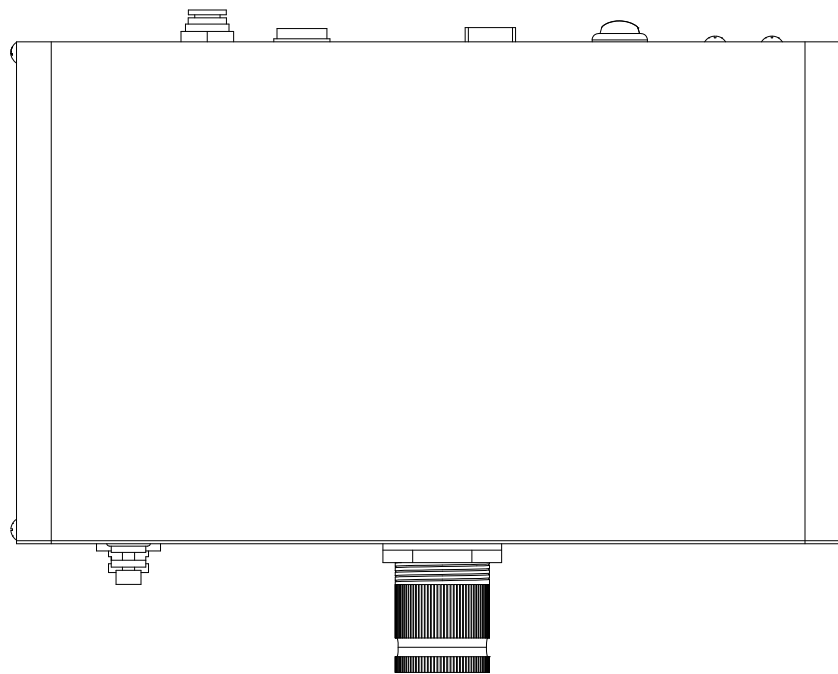




EQUIPMENT Operation Manual



Loctite® SD10 Digital Syringe Dispenser

Part Number 1514629

TABLE OF CONTENTS

1 Please observe the following	3
1.1 <i>Emphasized sections</i>	3
1.2 <i>Items Supplied</i>	3
1.3 <i>For your safety</i>	4
1.4 <i>Usage</i>	4
2 Description - Typical System Set-Up	5
2.1 <i>Operating Elements</i>	6
2.2 <i>Theory of Operation</i>	6
3 Technical Data	7
3.1 <i>Energy Requirements</i>	7
3.1.1 <i>Electrical</i>	7
3.1.2 <i>Pneumatics</i>	7
3.2 <i>Connections and Dimensions</i>	7
3.3 <i>Other Data</i>	7
4 Installations	8
4.1 <i>Environmental Conditions</i>	8
4.2 <i>Placement</i>	8
5 Dispensing	8
5.1 <i>Filling the Syringe</i>	8
5.2 <i>Set Up</i>	9
5.2.1 <i>Purging Air from the Syringe</i>	9
5.2.2 <i>Manual Mode</i>	9
5.2.3 <i>Programs</i>	10
5.2.4 <i>Timer mode</i>	10
5.2.5 <i>Cycle Mode</i>	11
6 Cares and Maintenance	12
6.1 <i>Care</i>	12
6.2 <i>Maintenance</i>	12
7 Troubleshooting	13
8 Replacement Parts and Accessories	14
9 Warranty	15

1 Please observe the following

1.1 *Emphasized sections*



Danger!

Refers to safety regulations and required safety measures that protect the equipment, operator, or other persons from injury.



Caution!

Emphasizes what must be done or avoided so that the unit or other property shall not to be damaged.



Notice

Gives recommendations for better handling of the unit during operation or adjustment, as well as for service activities.

The numbers printed in bold in the text (**xx**) refer to the corresponding position numbers in the illustration in Section 2 & 2.1.

As a result of technical development, the illustrations and descriptions in this instruction manual can deviate in detail from the actual unit delivered.

1.2 *Items Supplied*

- 1 SD10 Digital Syringe Dispenser
- 1 Foot switch
- 1 User manual
- 1 Power Supply
- 1 Syringe Barrel Stand
- 1 30/55 cc Syringe Air Line Adapter
- 1 Syringe Test Kit

1.3 For your safety



For safe and successful operation of the unit, read these instructions completely.
If the instructions are not observed, the manufacturer can assume no responsibility.



Damage to the power cord or the housing can result in live voltage.

- Check the power cord and the unit before each use.
If the power cord or the unit is damaged, do not operate!
Replace a damaged power cord with a new one.
- The unit may be opened and repaired only by an authorized Henkel service representative.



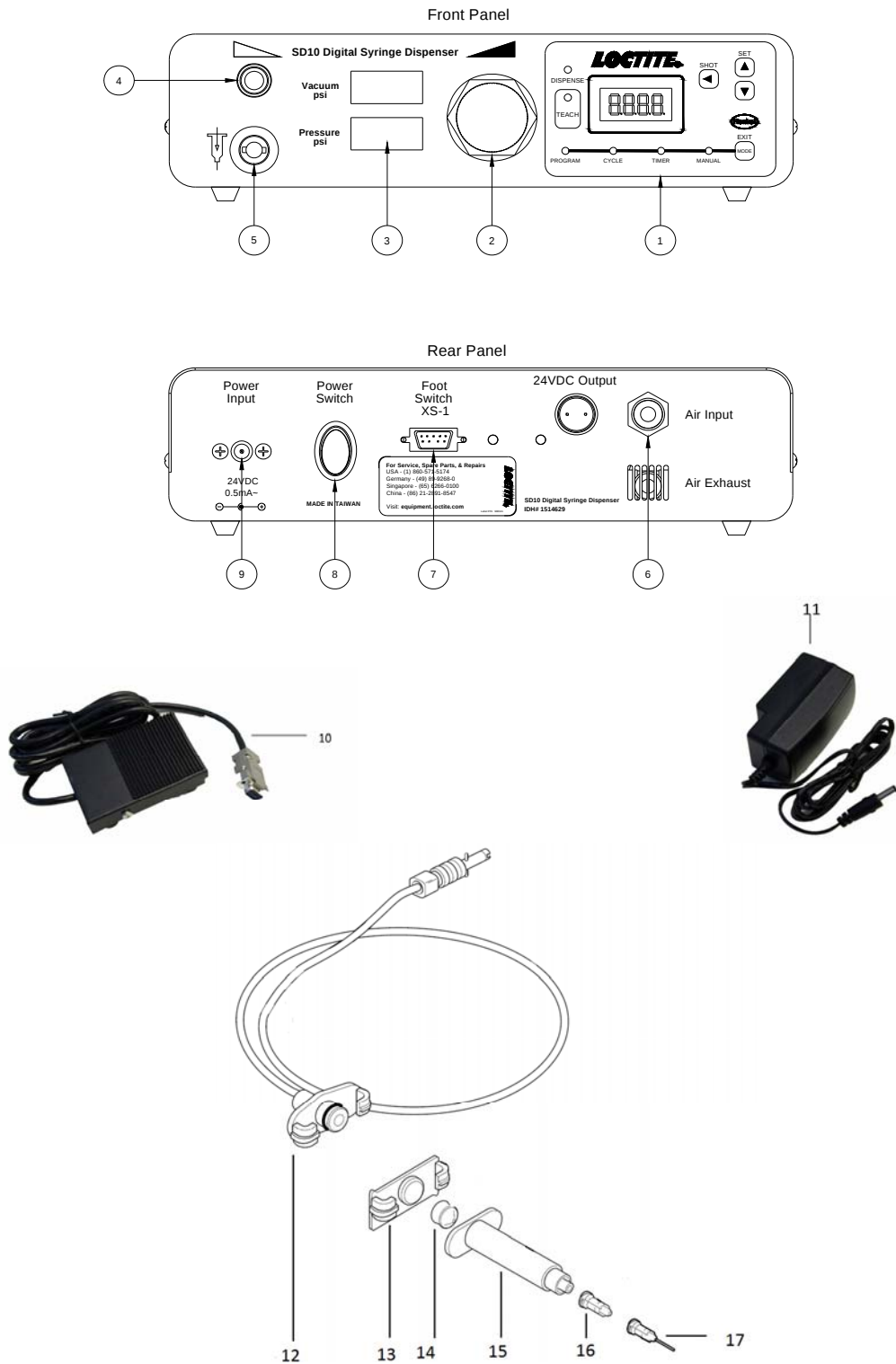
Improper handling of Loctite® brand products may be hazardous to ones health!

- Observe general safety regulations for the handling of chemicals!
- Observe manufacturer's instructions! Request a safety data sheet for the product used!
- Always wear goggles, when operating with pressurized air!

1.4 Usage

The Loctite® SD10 Digital Syringe Dispenser (1514629) is a self-contained dispenser system and suitable for the precise application of Loctite® brand products at manual workstations such as in workshops, laboratories and industrial installations. It is designed for a small volume applications of Loctite® brand anaerobic, UV curing and gel cyanoacrylate adhesives as well as Loctite® brand chipbonder® adhesives or soldering flux.

2 Description - Typical System Set-Up



2.1 Operating Elements

- 1 Control panel
- 2 Adjustable air regulator
- 3 Digital air output/vacuum display
- 4 Suck back regulator
- 5 Air output for syringe air line adapter
- 6 Air input
- 7 XS-1, foot switch connector
- 8 Power switch
- 9 Power input (24VDC)
- 10 Foot switch
- 11 Power supply
- 12 Syringe air line adapter
- 13 Syringe end cap
- 14 Syringe piston



The syringe piston ensures emptying of the syringe barrel and prevents air from permeating the product as well as preventing the product from running back out of the syringe barrel and into the control unit.

- 15 Syringe barrel
- 16 Luer lock tip cap
- 17 Dispense needle

2.2 Theory of Operation

The Loctite® SD10 Digital Syringe Dispenser (1514629) is connected to an external pneumatic supply.

The control unit of the SD10 Digital Syringe Dispenser regulates the dispensing pressure and dispense time in order to dispense a repeatable volume of product. The built-in vacuum regulator prevents dripping of the product during pauses in dispensing.

3 Technical Data

3.1 Energy Requirements

3.1.1 Electrical

Power supply	110 – 240 VAC; 50 – 60 Hz
Power consumption	Approx. 40 W
Internal control voltages	5 VDC; 24 VDC

3.1.2 Pneumatics

Pneumatic supply	min. 2 bar (29 psi); max. 12 bar (174 psi)
Quality	Filtered 10 µm, oil-free, non-condensing
If the required quality is not achieved, install a Loctite® brand filter regulator.	Accessory Order No. 985397
Range of the Pressure regulator	0.00 – 7.00 bar (0.00 – 100 psi)
Pressure indicator	0.00 – 7.00 bar (0.00 – 100 psi)

3.2 Connections and Dimensions

Power connection	Cold appliance coupl. IEC 320 acc. to VDE 0625
Pneumatic hose size	External dia. - 6 mm or 1/4"
Dimensions W x H x D:	265mm W x 211mm D x 72mm H 10.4" W x 8.3" D x 2.8" H

3.3 Other Data

Protection level	IP 33
Operating temperature	+10 °C to +40 °C (+50 °F to +104 °F)
Storage temperature	-10 °C to +60 °C (+14 °F to +140 °F)
Weight	3.0 kg (6.6 lbs)
Continuous sound pressure level	< 65 dB(A)

4 Installations

4.1 Environmental Conditions

- ! – No condensing humidity
- No splashing water

4.2 Placement

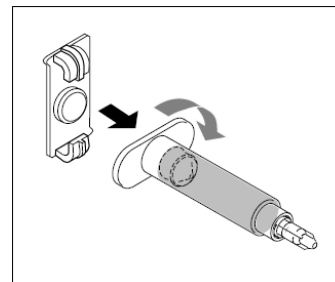
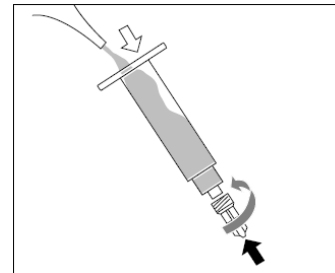
- ! When the syringe piston is missing and the syringe is handled in an improper manner, the product can enter and contaminate the dispenser.
 - Place the control unit in an elevated position above the syringe!
 - Do not hold the syringe **(15)** in an elevated position above the dispenser or with the tip pointing upward!
 - In work pauses, press the hose clamp closed on the syringe air line adapter!
 - Hold the syringe correctly for uniform application of the product!
 - When setting the vacuum, start with the vacuum in the full off position and increase slowly to ensure product is not sucked back into the unit.

5 Dispensing

5.1 Filling the Syringe

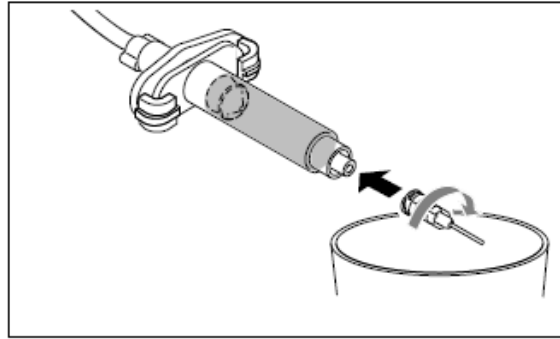
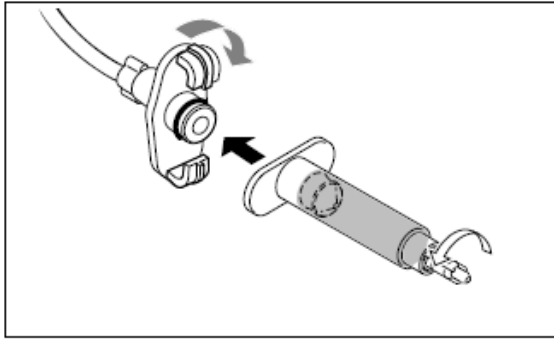
- ⚠ Improper handling of Loctite® brand products may be harmful to ones health!
 - Observe general safety regulations for the handling of chemicals!
 - Observe manufacturer's instructions! Request a material safety data sheet for the product used!
 - Close the tip of the syringe with the luer lock tip cap.
 - Hold the syringe at an angle to prevent air bubbles during filling.
 - Slowly add product into the syringe.
 - Insert the syringe piston into the syringe barrel.
- 👉 Depending on the dispensing task, fill several syringes at the same time.

- ! **Store filled syringes with syringe piston, luer lock tip and syringe end caps in place.**



5.2 Set Up

5.2.1 Purging Air from the Syringe



 To avoid air bubbles during dispensing, the tip of the syringe must be purged of air.

- Hold the syringe over a container since product will flow out!
- Press the power switch to the position I (ON).
- Using the pressure regulator **(2)**, set the dispensing pressure to 0.50 bar (approx. 7.00 psi). The set dispense pressure will show on the digital display.

- Press the  button until the display reads MANUAL.
- Press and hold the  button (or foot switch) until the product flows free of bubbles from the dispense needle

 If the product drips out of the dispense needle:

- Slowly turn the vacuum regulator **(4)** counter clockwise until the dripping stops.

 Do not continue turning after the dripping has stopped. When air is sucked in, the syringe must again be purged of air and curing of the product can occur! This can also cause the product to be sucked back into the unit and will damage it.

5.2.2 Manual Mode

This mode gives the operator full control of each dispense cycle.

- Press the  button until the display reads MANUAL.
- Using the pressure regulator **(2)**, set the dispensing pressure to 0.50 bar (approx. 7 psi).
- Press and hold the  button (or foot switch) until the desired dispense quantity is achieved.

If the dispense quantity is achieved too slowly, increase the dispense pressure and check the dispense quantity again.

Repeat this sequence until the desired dispense quantity is achieved in an acceptable amount of time.

5.2.3 Programs

This mode of operation is used for precise repeatable dispensing.

- Press the  button until the LED above PROGRAM is lit.
- Press the  button to setup the program number. The number on the display will flash. Press the  button and the  button to change numbers, press the  button to move the cursor.
- Press the  button to save the data.

 You can set a program number to record dispense and interval time in Timer and Cycle mode. The program number can be 00-39.

For detailed operation please check chapters 5.2.4 and 5.2.5.

5.2.4 Timer mode

- Select a program number following the setup in section 5.2.3.
- Press the  button until the LED above TIMER is lit.
- Press the  button, to set the the dispense time, followed by the  button and the  button to change numbers, and the  button to move the cursor.
- Press the  button to save the data.
- Press the  button or foot switch to dispense.

Using the Teach Mode to set the dispense time.

- Press the  button until the LED above TIMER is lit.
- Press the  button until the light above it flashes.
- Press the  button or foot switch for the desired amount of time.
- Press the  button to save the data.
- Press the  button or foot switch to dispense.

5.2.5 Cycle Mode

After following the steps in 5.2.3 to set the dispense time, follow the steps below to set the delay between cycles.

- Press the  button until the LED above CYCLE is lit.
- Press the  button to setup the interval time. Press the  button and the  button to change numbers, and the  button to move the cursor.
- Press the  button to save the setting.
- Or press the  button until the light above flashes.
- Press the  button or foot switch to set the dispense time.
- Press the  button to save the data.
- Press the  button or foot switch to dispense. The unit will run at the preset dispense and interval times.
- Press the  button or foot switch to stop the cycle.

6 Cares and Maintenance

6.1 Care

- Occasionally the o-ring of the syringe adaptor **(12)** should be lubricated with silicone grease. This will prolong the life of the o-ring.
- Occasionally the o-ring inside the air output female connector **(5)**, located on the front panel of the SD10, should be lubricated with silicone grease (Loctite 997569). This will prolong life and allow the air line adapter to easily fit into the connector without resistance. This is accomplished by lightly greasing the male plug on the syringe air line adapter **(12)** and inserting it into the female air output port on the front panel of the SD10.

 Clean hands after application of grease to assure surfaces to be bonded are clean. Otherwise bonding might fail.

Failure to properly handle cleaning agents may be hazardous to your health!



- **Observe general safety regulations for the handling of chemicals!**
- **Observe manufacturer's instructions! Request a material safety data sheet for the product used!**

Recommended cleaning agents for:

– Anaerobic, UV curing, and Chipbonder® adhesives:

There are currently no recommended solvents for removing cured Loctite® brand adhesives. Fluid adhesive residues can be removed with various solvents.

ACETONE is well suited for this application.

– Cyanoacrylate adhesives:

The best solvent is ACETONE for both cured and fluid cyanoacrylates.

6.2 Maintenance

The unit requires no special maintenance.

7 Troubleshooting

Type of malfunction	Possible causes	Correction
The digital display does not light.	– No power voltage present.	Check the power voltage.
	– Power switch (8) is in position O (OFF).	Switch power switch (8) to position I (ON).
	– Power fuse has failed.	Check/replace fuse.
	– Control unit is defective.	Contact Henkel Equipment Service.
No change in the value on the digital display.	– No air pressure is present.	Check pneumatic supply.
	– Control unit is defective.	Contact Henkel Equipment Service.
No product, too little or too much product.	– Dispense pressure is not set correctly.	Adjust dispense pressure setting.
	– Pressure hose is not properly connected.	Connect air pressure hose correctly.
	– Syringe (15) is not properly connected.	Attach syringe (15) correctly.
	– Luer lock tip cap (16) is not removed.	Replace Luer lock tip cap (16) with a dispense needle (17) .
	– Dispensing needle (17) is clogged, too small or too large.	Replace dispense needle (17) .
	– Control unit is defective.	Contact Henkel Equipment Service.
Product drips.	– Vacuum regulator (4) is set too low.	Turn the vacuum regulator (4) counter clockwise until the dripping stops.
No start signal.	– Plug on the socket XS1: Start (7) is loose.	Switch the power switch (8) to the position O (OFF). Tighten the screws of the plug. Switch the power switch (8) to the position I (ON).
	– Foot switch (10) is defect.	Replace the Foot switch (10)
	– Control unit is defective.	Contact Henkel Equipment Service.

8 Replacement Parts and Accessories

Description	Loctite Item No.
10 ml Clear Syringe Package	97207
30 ml Clear Syringe Package	97244
10 ml Air Line Adapters	97208*
30 ml Air Line Adapters	97245*
Foot Switch	97201
Filter Regulator	985397

*see section 6.1 (**Care**) of manual before inserting replacement air line adapters into the female connector **(5)** on the front panel of the SD10.

9 Warranty

WARRANTY

Henkel expressly warrants that all products referred to in this Instruction Manual for (1514629) Henkel SD10 Digital Syringe Dispenser) (hereafter called "Products") shall be free from defects in materials and workmanship. Liability for Henkel shall be limited, as its option, to replacing those Products which are shown to be defective in either materials or workmanship or to credit the purchaser the amount of the purchase price thereof (plus freight and insurance charges paid therefor by the user). The purchaser's sole and exclusive remedy for breach of warranty shall be such replacement or credit.

A claim of defect in materials or workmanship in any Products shall be allowed only when it is submitted in writing within one month after discovery of the defect or after the time the defect should reasonably have been discovered and in any event, within (12) months after the delivery of the Products to the purchaser. This warranty does not apply to perishable items, such as (indicate items: fuses, filters, lights, etc.). No such claim shall be allowed in respect of products which have been neglected or improperly stored, transported, handled, installed, connected, operated, used or maintained. In the event of unauthorized modification of the Products including, where products, parts or attachments for use in connection with the Products are available from Henkel, the use of products, parts or attachments which are not manufactured by Henkel, no claim shall be allowed.

No Products shall be returned to Henkel for any reason without prior written approval from Henkel. Products shall be returned freight prepaid, in accordance with instructions from Henkel.

NO WARRANTY IS EXTENDED TO ANY EQUIPMENT WHICH HAS BEEN ALTERED, MISUSED, NEGLECTED, OR DAMAGED BY ACCIDENT.

EXCEPT FOR THE EXPRESS WARRANTY CONTAINED IN THIS SECTION, HENKEL MAKES NO WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCTS.

ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND OTHER WARRANTIES OF WHATEVER KIND (INCLUDING AGAINST PATENT OR TRADEMARK INFRINGEMENT) ARE HEREBY DISCLAIMED BY HENKEL AND WAIVED BY THE PURCHASER.

THIS SECTION SETS FORTH EXCLUSIVELY ALL OF LIABILITY FOR HENKEL TO THE PURCHASER IN CONTRACT, IN TORT OR OTHERWISE IN THE EVENT OF DEFECTIVE PRODUCTS.

WITHOUT LIMITATION OF THE FOREGOING, TO THE FULLEST EXTENT POSSIBLE UNDER APPLICABLE LAWS, HENKEL EXPRESSLY DISCLAIMS ANY LIABILITY WHATSOEVER FOR ANY DAMAGES INCURRED DIRECTLY OR INDIRECTLY IN CONNECTION WITH THE SALE OR USE OF, OR OTHERWISE IN CONNECTION WITH, THE PRODUCTS, INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS AND SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER CAUSED BY NEGLIGENCE FROM HENKEL OR OTHERWISE.

Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067-3910
USA

Henkel Canada Corporation
2515 Meadowpine Boulevard
Mississauga, Ontario L5N 6C3
Canada

Henkel Corporation
Automotive/ Metals H.Q.
32100 Stephenson Hwy,
Madison Heights 48071
USA

Henkel Capital, S.A. de C.V.
Calzada de la Viga s/n Fracc.
Los Laureles
Loc. Tulpetlac, C.P. 55090
Ecatepec de Morelos, MEXICO

Henkel Singapore Pte Ltd
401, Commonwealth Drive
#03-01/02 Haw Par Technocentre
SINGAPORE 149598

Henkel (China) Company Ltd.
No. 928 Zhang Heng Road,
Zhangjiang, Hi-Tech Park, Pudong,
Shanghai, China 201203

Henkel Loctite Korea
8F, Mapo Tower, 418,
Mapo-dong, Mapo-gu,
Seoul, 121-734, KOREA

Henkel Japan Ltd.
27-7 Shin Isogo-cho, Isogo-ku
Yokohama, 235-0017
JAPAN

www.equipment.loctite.com

Loctite is a trademark of Henkel Corporation, U.S.A. © Copyright 2006. Henkel Corporation
Teflon is a registered trademark of E.I. DuPont de Nemours Co., Inc.
All rights reserved. Data in this operation manual is subject to change without notice.
Manual P/N: 8903234 Rev A, Date: 07/18/2014

