

# **EQ RC40 Integrated Dispenser** IDH 2814025

**Operating Manual** 







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## 1 Please Observe the Following

## 1.1 Emphasized Sections

# **⚠** Warning!

Refers to safety regulations and requires safety measures that protect the operator or other persons from injury or danger to life.

## Caution!

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

#### Notice:

A notice gives recommendations for better handling of the unit during operation or adjustment as well as for service activities.

## 1.2 For Your Safety

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

 $oldsymbol{\Lambda}$  Do not expose the connecting cable to heat, oil, or sharp edges.

 $oldsymbol{\Lambda}$  Make sure the Unit stands stable and secure.

 $oldsymbol{\Lambda}$  Use only original equipment replacement parts.

 $oldsymbol{\Lambda}$  Always disconnect the power supply before servicing the unit.

⚠ Observe general safety regulations for the handling of chemicals such as Loctite® adhesives and sealants. Observe the manufacturer's instructions as stated in the Safety Data Sheet.

While under warranty, the unit may be repaired only by an authorized Loctite service representative.

## 1.3 Unpacking and Inspection

Carefully unpack the Loctite® EQ RC40 Integrated Dispenser and examine the items contained in the carton. Inspect the unit for any damage that might have occurred in

transit. If such damage has occurred, notify the carrier immediately. Claims for damage must be made by the consignee to the carrier and should be reported to the manufacturer.

## 1.4 Packing List

- 1.4.1 EQ RC40 Integrated Dispenser x 1
- 1.4.2 Equipment Manual x 1
- 1.4.3 Universal Power AC Adapter with Cord x 1
- 1.4.4 Reservoir Tank Fitting: ¼ inch NPT x ¼ Inch Tubing x 1
- 1.4.5 Bottle Holder x 1
- 1.4.6  $\frac{1}{4}$ " NPT to 6 mm inlet supply line connector x 1
- 1.4.7 Anti-Bubbler Fitting and Tubing Kit x 1
- 1.4.8 Footswitch x 1
- 1.4.9 Bottle spacer disc x 1

#### 1.5 Features

- 1.5.1 Two independent digital timing channels that provide control of 2 pneumatic outputs.
- 1.5.2 Low level sensor alarm provides warning for adhesive bottle replacement.
- 1.5.3 Easy-to-use keypad with LCD display screen for entering values.
- 1.5.4 Simple menu-driven commands.
- 1.5.5 Three running modes: Time, Continuous and Manual.
- 1.5.6 Equipped with a 0 to 7 bar (0-100psi) pressure regulator
- 1.5.7 Manual button for purging adhesives from valves.
- 1.5.8 Interface connections for customer's PLC to indicate reservoir low level condition and cycle complete signal.

## 1.6 Field of Application (Intended use)

The Loctite EQ RC40 Integrated Dispenser combines both a controller and a reservoir into a single unit. The controller provides 2 independent digital timing channels that provide control of 2 pneumatic outputs. These outputs can be used to control any Loctite automatic dispense valve or pneumatic hand-held applicator. The

controller can be actuated either by the start/stop button on the front touch panel, a footswitch(included), or external start signal. It is capable of operating in a timed or continuous mode for dot or bead dispensing applications. The reservoir can accommodate 50ml, 250ml, 500gram, 1 liter, and 2 kg adhesive packages which deliver adhesive to dispensing valves. The system is also equipped with a low level sensor which can notify the operator that the adhesive package needs to be replaced.

With the EQ RC40 Integrated dispenser, anaerobic, UV Curing and cyanoacrylate adhesive can be dispensed.

The capacity of the EQ RC40 Integrated dispenser is:

-500 gr. bottle for CA Products -1 lb. bottle -250 ml bottle for Anaerobics -1 Liter bottle

-Bottle with a  $\varphi$ 124mm and -2kg bottle

a height of 250mm

## 2 Description

#### 2.1 Theory of Operation

The Loctite EQ RC40 Integrated Dispenser is connected to an external electrical and pneumatic supply. The system is equipped with a 0 to 7 bar (0-100psi) pressure regulator that regulates the preset dispensing pressure of the reservoir and controls the dispensing during the selected dispensing time. An uncovered bottle of Loctite product is placed directly into the EQ RC40 Integrated Dispenser, the tube is inserted into the product, and the reservoir lid is clamped in place.

It is then pressurized using clean, filtered dry air. Air within the reservoir will push down on the liquid in the bottle and force it through the product feed line to the dispensing valve.

The amount of product dispensed is controlled by four main factors:

- -Amount of pressure in the reservoir
- -Length of time the dispensing valve remains open
- -Valve stroke
- -Dispensing needle size

#### Time Mode:

- 1. Press the footswitch to activate the system.
- 2. The dispense timer will be activated and start to dispense with preset time.
- 3. After the dispensing timer has reached the preset dispensing time, the dispensing will be stopped.

#### Continuous Mode:

- 1. Press the footswitch to activate the system
- 2. The system will start to dispense, and the dispensing timer will start to count the dispensing time.
- 3. Once the footswitch is released, the dispensing will stop.

#### Additional Features:

#### **EMPTY Signal:**

If the reservoir is empty the contact of the level sensor opens. Three different types of Empty Signal can be selected.

Mode 1: Digital Only

Mode 2: Digital + Lamp

Mode 3: Digital + System Stop

#### **READY Signal:**

If the dispensing cycle is finished and unit is not dispensing, a contact is closed and a <READY> signal is communicated. The ready signal only indicates that the dispensing is either ON (busy) or OFF (ready). This signal is independent of any other conditions.

Both EMPTY and READY signals are available as dry contacts at the XS1 start interface for optional connection to an external PLC. Any external sources need to be programmed to suit end user requirements.

In Mode 3, the ready signal will be communicated even though an Empty signal may be communicated, however, the system will not dispense.

## . Caution!

Pay attention if cyanoacrylate is dispensed – Air in the feed line results in curing of the product!

## 2.2 Control Panel (Front & Back of controller)





- 1. Valve Pressure Relief
- 2. Reservoir/Lid Fitting
- 3. Display
- 4. Mode Switch
- 5. Right Arrow Switch
- 6. Manual Switch for Channel A
- 7. Set Switch
- 8. Up Arrow Switch
- 9. Manual Switch for Channel B
- 10. Low Level Error LED Light
- 11. Enter Switch
- 12. Air Pressure ON/OFF Switch
- 13. Main Power ON/OFF Switch

- 14. Tank Pressure Gauge
- 15. Tank Pressure Regulator
- 16. Channel A ON Output
- 17. Channel A OFF Output
- 18. Channel B ON Output
- 19. Channel B OFF Output
- 20. XS1 Channel A (Master)
- 21. XS1 Channel B
- 22. Air Pressure In
- 23. 24VDC Power In
- 24. Silencer
- 25. Low Level Sensor
- 26. Reservoir

## 3 Technical Data

Dimensions (W x H x D): 214x363x357 mm

Total weight: Kg (lbs.) 11 (24)

Power Supply: 110~240 VAC 50/60Hz

Internal control voltages: 24VDC

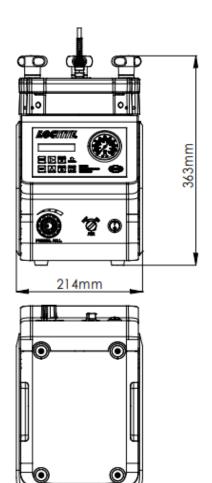
Power consumption: Approx. 25 Watts

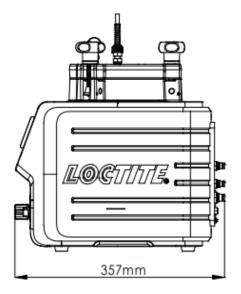
Pneumatic Supply: Clean, dry air not to exceed 125psi (8.5bar). and

filtered with a maximum of 50 micron.

Operating Temperature:  $+10 \degree C \text{ to } +40 \degree C (+50 \degree F \text{ to } +104 \degree F)$ 

Storage Temperature:  $-10^{\circ}$  C to  $+60^{\circ}$  C ( $+14^{\circ}$  F to  $+140^{\circ}$  F)





## 4 Installation

Before using the equipment for the first time check it carefully for signs of external damage. If any shipping damage is found DO NOT USE THE EQUIPMENT – return it to your supplier immediately.

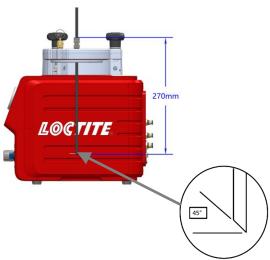
## **4.1 Environmental and Operating Conditions**

- Keep the pneumatic hose to the dispense valve as short as possible for optimum dispense control.
- Keep product feedline as short as possible. The shorter the feedline the smaller the specific resistance and lower the dispensing pressure can be. Avoid kinking of the feedline.

- Use flexible pneumatic hoses and Loctite supplied product feedlines to prevent unnecessary loads on the fitting and to ensure compatibility.
- Keep all fittings tight.
- No direct sunlight; no UV light.
- No condensing humidity.
- Avoid direct connect with water.

## 4.2 Connecting the Unit

- Use only the cable and hose sets supplied.
- Connect Air pressure supply to pneumatic connection (22).
- Connect power adapter with cord supplied to 24VDC power in connection (23).
- For manual operation, plug the footswitch into the required 9 pin D-sub connector marked XS1 (see section 5.2), located on the rear panel.
- Insert feedline through the reservoir lid to the dimension shown below. Alternatively use the reference line shown on the housing to set the feedline length. Cut the end of the feedline at an angle as shown below.



Connect dispensing valve(s).



If two dispense valves are used, remove blanking plug from the reservoir lid and replace with additional reservoir/tube fitting.

## 4.3 Filling and Refilling the Product Reservoir

## ⚠ Warning!

Never fill the product directly into the reservoir!

The pneumatic and safety devices would become clogged and therefore ineffective!

## ⚠ Warning!

Before loosening the reservoir locking knobs (6), the EQ RC40 Integrated Dispenser must be depressurized (pressure-free)!

When dispensing cyanoacrylate and an empty signal is shown, refill the product reservoir immediately, since air in the product line results in curing of the product!

The reservoir is depressurized when the depressurizing valve (12) is in "OFF" position and pressure gauge (14) indicates no pressure.

- Loosen the reservoir knobs and remove the lid.
- Check that there is no condensed moisture at the bottle or the sensor surface.
- Place the bottle in the bottle holder (see the right figure).
- Check that the product bottle inserted in the bottle holder is pressed again the level sensor.
- Insert the product feedline into the bottle and put on the lid.
- Uniformly tighten the reservoir knobs by hand.
- Set the depressurizing valve (12) to "ON" position (pressurize).



## 5 Operation

#### 5.1 Function of the Control Panel:



Switch (4):

Switching different mode as below cycle.

Press the 'Mode' button to scroll through configuration selections:

Run: Auto > Run: Manual > Run: Continuous > Set: Time (Auto) > Set: Delay (Auto) > Set: Output > Set: Low Level > Set: Lock-Out

Detailed description of each function is described in sections 5.4 to 5.11



Switch (7):

Set the data in all "SET: XXXX" mode.



Switch (5):

For parameter digit position change. Digit position will move 1 digit to the right.



Switch (8):

For numbering change. Change from "0-9" or switching each option by each press.



To confirm the setting and save.



In "Run: Manual" mode, press and hold for manual purging the adhesive for Channel A without displaying or changing parameters.



In "Run: Manual" mode, press and hold for manual purging the adhesive for Channel B without displaying or changing parameters.



Light to show when the adhesive is in low level.

## 5.2 XS1 Start Signal:

The system auto detects when the footswitch(s) is connected to the system.

## Operate two channels from a single start signal (Timed mode only)

Only XS1 Channel A (Master) Footswitch connected:

The footswitch can control both output of Channel A and Channel B and start at the same time.

## Operate one channel from a single start signal (Timed/Continuous mode)

Only XS1 Channel B Footswitch connected (Timed mode):

The footswitch can only control the output of Channel B.

XS1 Channel A or XS1 Channel B Footswitch connected (Continuous mode)

The footswitch controls the output of selected Channel.

# Operate two channels from two independent start signals (Timed/Continuous mode)

Both XS1 Channel A (Master) and XS1 Channel B Footswitch connected:

The footswitch will control their own channel and can be started at different times.

## 5.3 Start Up the System:

- 1. Turn the "POWER" on (the position marked "I") (13). The display (3) will turn on.
- 2. If necessary, open the valve or regulator that controls the air inlet to supply pneumatic pressure to the system.
- 3. Turn the "AIR" on (the position  $\bigcirc$  ) (12).

**The Example of Solution 1** Caution: When adjusting the pressure via "Pressure Regulator", always adjust from Low-to-High. For example, to adjust from 4 bar to 2 bar, decrease the pressure to  $0\sim1$  bar, then increase to 2 bar.

#### 5.4 Run: Auto Mode

Engage the footswitch(s) to start the cycle. The dispensing will begin immediately and continue until the system times out.

## Notice:

Channel A and Channel B outputs are active only when the "OUTPUT" setting is set to "ON". (Refer to section 5.9)

#### 5.5 Run: Manual Mode

Press the or to purge the adhesive manually without displaying or saving parameters.

#### 5.6 Run: Continuous Mode

Engage the footswitch(s) to start dispensing and hold until the dispensing cycle is complete. When the footswitch is released, the dispensing will end immediately.

The display on the system will show the last dispensing time. If needed, press and to store the dispensing time to "Run: Auto" Mode.

#### Notice:

Channel A and Channel B outputs are active only when the "OUTPUT" setting is set to "ON". (Refer to section 5.9)

## 5.7 Set: Time (Auto) Mode

Set the dispensing time for Channel A and Channel B in "Run: Auto" mode.

- 1. Press to select Channel A, the left most digit for Channel A will start to flash.
- 2. Press for numbering change on the flashing digit (0.01 99.99).
- 3. Press to move the flashing digit 1 digit to right.
- 4. Press again to switch from Channel A and Channel B.
- 5. Repeat steps 2 & 3.
- 6. After completed setting, press to save and exit.

## 5.8 Set: Delay (Auto) Mode

Set the delay time of Channel A and Channel B after activating the footswitch in "Run: Auto" mode.

- 1. Press to select Channel A, the left most digit for Channel A will start to flash.
- 2. Press for numbering change on the flashing digit (0.01 99.99).
- 3. Press to move the flashing digit 1 digit to right.
- 4. Press again to switch from Channel A and Channel B.
- 5. Repeat steps 2 &3.
- 6. After completed setting, press to save and exit.

## 5.9 Set: Output Mode

Enable or Disable the output for each channel. Each channel will only operate if the Output is 'enabled'.

- 1. Press to select Channel A, Output mode will start to flash.
- 2. Press to switch between "ON" or "OFF".
- 3. Press again to switch from Channel A to Channel B.
- 4. Press to switch between "ON" or "OFF" for Channel B.
- 5. After completed setting, press to save and exit.

#### 5.10 Set: Low Level Mode

- 1. Press , the setting for Low Level mode start to flash.
- 2. Press for switching between "OFF", "LAMP" and "LAMP + STOP".
- 3. After completed setting, press to save and exit.

## Notice:

OFF: Only digital output from XS1

LAMP: Digital output from XS1 + LED Light on control panel

LAMP + STOP: Digital output from XS1 + LED Light on control panel + System Stop

#### 5.11 Set: Lock-Out Mode

- 1. Press , the setting for Lock-Out mode start to flash.
- 2. Press for switch between "ON" and "OFF".
- 3. After completed setting, press to save and exit.

## Notice:

Lock-Out Mode "ON" means all setting in the system can't be change by pressing button. Otherwise "Setting Locked Call Supervisor" will show on the display.

Press both + to change the setting when Lock-Out Mode is "ON".

## 5.12 Adjust the Level Sensor

## Notice:

The level sensor is set in manufacturing and can be adjusted according to the type of product used, the size of the bottle, and orientation of the basket with spacers if required. If small bottles are used the supplied Bottle spacer disc can be placed in the base of the reservoir to raise the height of the bottle to reduce the residual adhesive in the bottle when low level is used.

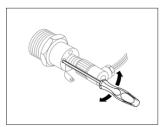
Before adjusting the Level Sensor

- 1. Remove the plastic cap from the backside of reservoir.
- 2. Empty a bottle of the product you use.
- 3. Leave as much residue in the bottle as is required in order to prevent air getting into the product feed line.
- 4. Insert the product bottle. For small bottles use the bottle holder. For 250ml product bottle, pay attention to ensure the bottle is aligned with the level sensor.
- 5. Check that the product bottle inserted into the bottle holder is pressed against the level sensor. Only then the correct adjustment of the level sensor is possible.



#### Procedure to Adjust the Level Sensor:

- 1. Turn power switch (1) "ON".
- 2. Remove the metal screw from the level sensor.
- 3. With an electrician's screwdriver, find the point at which the sensor switches to the condition inactive. The LED is OFF".



- 4. Check this adjustment with a full bottle and an empty bottle again.
- 5. Refit the metal screw to the level sensor.
- 6. Put the plastic cap back.

## Notice:

The correct adjustment is exactly the point when the sensor switches "OFF".

#### Do not go beyond that point!

## 6 Application Hints

As with all adhesives, performance depends on conditions of use. Suggestions or recommendations contained herein are for guidance only since actual conditions of use are outside the supplier's control.

## 6.1 Shutdown for Longer Periods of Non-use (>recommended idle time)

- Disconnect the pneumatic supply from the controller.
- Clean the product hose and dispensing valve.

Recommended maximum idle times for different products are shown below:

Adhesive	Maximum idle time for dispensing Systems	
Anaerobic	2 weeks	
Cyanoacrylate	1 week	
UV-acrylate	2 weeks	
Acrylate	1 week	
Ероху	2 weeks	
Activator	n.a.	
Primer	n.a.	

## 6.2 Returning to Operation after Longer Periods of Non-use

- Reconnect the pneumatic supply to the controller.
- Check the installation according to Chapter 4.
- Return to operation according to Section 5.1. ~5.12.

## 7 Troubleshooting

⚠ Before proceeding with any repair or maintenance operation disconnect the EQ RC40 Integrated Dispenser from the main electricity supply.

Malfunction	Possible Cause	Corrective
The digital display does not	No power voltage present.	Check the power voltage.
	Powers switch (13) in	Switch power switch to
	position O (OFF).	position I (ON).
	Power adaptor with cord is	Replace power adapter with
light.	defective.	cord.
	Fuse break	Check the fuse in power inlet.
	Control unit is defective.	Call Henkel Service.
	No air pressure present.	Check depressurizing valve 12 and pneumatic supply.
No needle movement on	Pressure gauge (14)	Replace gauge.
the pressure gauge.	defective.	Neplace gauge.
	Pressure regulator (15)	Replace regulator.
	defective.	Neplace regulator.
	LED defect.	When the controller is
LED does not light.		operational, the unit can be
LLD GOOD HOT HIGHT		used until repaired by Henkel
		Service.
	Plug on the socket XS1(20 or 21), Start signal is loose.	Switch the power switch to the
		position O (OFF). Tighten the
No start signal		screws of the plug. Switch the
Ü		power switch to the position I
		(ON).
	Footswitch defective.	Replace the Footswitch.
	Dispensing pressure not	Adjust dispensing pressure
	set correctly.	setting.
No product, too little or too	Pressure hose not properly	Connect air pressure hose
much product	connected.	correctly.
	Luer-Lock tip cap not	Replace Luer-Lock tip cap
	removed.	with a dispensing needle.
	Dispensing needle clogged,	Replace dispensing needle.
	too small or too large.	

	Dispensing valve not	Check the dispensing valve	
	correctly connected or	(see instruction manual for	
No product, too little or too	defective.	dispensing valve).	
much product	Product reservoir not	Oh a ali manada ak manaman'n	
	switched on.	Check product reservoir.	
	Product reservoir is empty.	Refill product reservoir.	
The desired pressure is not	Supply pressure inadequate.	Increase the supply pressure	
achieved.		(min 0.5 bar above reservoir	
acilieveu.		pressure).	
	Product reservoir is empty.	Refill product reservoir (see	
Air bubble in the product		section 4.3).	
	Product hose not correctly	Connect product hose	
	connected.	correctly.	
	Dispensing valve not	Check the dispensing valve	
	correctly connected or	(see instruction manual for	
	defective.	dispensing valve).	
	Product reservoir pressure	Lower pressure, longer	
	is too high	dispensing time.	
Pressurized air escapes	Reservoir Knob is not	Tightened the reservoir knob.	
between reservoir housing	tightened.	Hantened the reservoir knob.	
and reservoir lid.	O-ring leaky.	Grease or replace the O-ring.	
Pressurized air escapes at	Union nut on the product	Carefully tighten the union nut.	
the reservoir/lid fitting (2).	connection not tight.	Carefully lighten the union hut.	

## 8 Care and Maintenance

#### **8.1 Care**

-Occasionally the O-ring at the reservoir lid should be lubricated with silicone grease. This will prolong the life of the O-ring.

**Notice:** Clean hands after application of grease to ensure surfaces to be bonded are clean.

- -Clean the sensor surface as required.
- -Both the bottle surface and the sensor surface must be free of condensed moisture!

## 8.2 Cleaning

- -Prior to extended idle times or when changing of the product type, clean the product hose and the dispensing valve.
- -Loosen reservoir locking knobs and remove the reservoir lid.
- -Clean product residue from the outside of the feedline hose.
- -Remove the product bottle and insert a container with approx. 0.5 liter of cleaning agent.
- -Put on the reservoir lid and uniformly tighten the reservoir locking knobs.
- -Operate the dispenser continuously until dry air streams out of the dispensing valve (see operating instructions for the dispensing valve).
- -Remove the empty cleaning agent container.

#### 8.3 Maintenance

- -Check the reservoir knobs and the product feed line on the regular basis. If there is any sign of cracks, replace them!
- -Clean, dry, filtered air must be used. If it is not, the solenoids on the controller will be fouled over time.

Notice: If the required air quality is not achieved, install a Loctite® filter regulator. In the US order a 5 μm filter using Part Number 478603. In Europe or Asia, order a 10 μm filter using Part Number 88649.

# 9 Accessories and Spare Parts

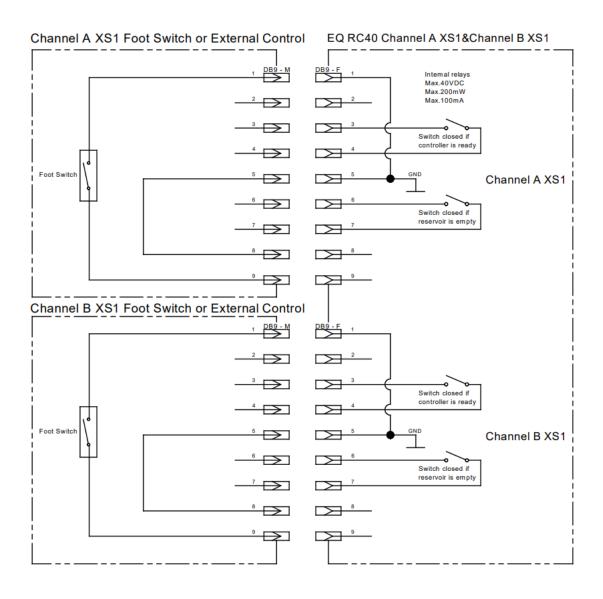
Item	Description	IDH#				
Spare Parts						
1	Reservoir/tube Tank Fitting, ¼ inch NPT x ¼ inch Tubing	360636				
2	Footswitch	88653				
3	¼ inch O.D. Black PE Teflon Lined feedline Tubing (10mtr/33ft length)	142646				
4	Tank Lid O-ring for Reservoir	478505				
5	Pressure Safety Relief Valve	360462				
6	Anti-Bubbler Kit, 2 Adapters & 2 Sleeves	478569				
7	Silicone Grease, 6 Gram Tube	88722				
Accessories						
1	Loctite Air Filter, Regulator, Gauge (Mechanical version) - US	478603				
	Loctite Air Filter, Regulator, Gauge (Mechanical version) – EU/Asia	88649				

## 10 Diagrams

XS1 Start via Footswitch, additional Empty Signal and Ready Signal.

# **⚠** Warning!

Never connect external voltage on pin1 or pin9! NEVER short pins 3 and 4, nor 6 and 7 together, permanent board damage will result.



## 11 Warranty

Henkel expressly warrants that all products referred to in this Instruction Manual for Loctite® EQ RC40 Integrated 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 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.

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## 12 Declaration of Conformity

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Manual P/N: n/a, Rev A, Date: 10/18/2021