



AIRWATERGREEN
Dehumidifiers Made in Sweden

REX

MANUAL FOR REX BASIC, SMART, CLOUD AND INTEGRATE

- May 2017 -



 **AIRWATERGREEN**

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1. Important information

REX Basic, Smart, Cloud and Integrate are intended to dehumidify and heat air. All other use of the dehumidifier other than according to the instructions in this manual may give rise to harm to people and machinery.

The manufacturer is:

Airwatergreen AB
Bolandsgatan 15 G2
SE-753 23 Uppsala
E-mail: info@airwatergreen.com

The following climate restrictions apply to operation, shipping and storage:

Type	T max [°C]	T min [°C]	RH max [%]	RH min [%]	m.a.s.l. [m]
Operation	50	0	100	0	2000
Shipping	30	-20	60	0	-
Storage	30	-20	60	0	-

Table 1: Summary

NOTE! The knob (see Figure 1) is used to start and stop the dehumidifier. The knob is also used as an emergency stop. The knob must therefore not be blocked.



Figure 1: Picture of the knob on the dehumidifier

Airwatergreen AB certifies that the dehumidifier complies with the following directives:

- the MD (machinery directive) 2006/42/EU,
- the EMC directive 2004/108/EU,
- the LV directive 2014/35/EU,
- the RoHs directive 2011/65/EU,
- the R&TTE directive 1999/5/EC,
- the WEEE directive 2002/96/EC,
- Ecodesign and Energy Labeling directive 2009/125/EC and 2010/30/EU

The following harmonising standards have been used:

- EN 60204-1: 2006/A1:2009 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
- EN 61000-6-2:2005 – Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
- EN 50581:2012 - Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
- EN ISO 12100:2010 Safety of machinery - General principles for design - Risk assessment and risk reduction

The insurance only applies if the devices are installed in accordance with the written instructions from Airwatergreen and that no amendments have been made to the product.

1.1. Warranty

The warranty period applies as of the date the dehumidifier left our factory. The warranty covers free replacement of defect parts and components from manufacturing. For the warranty to apply, evidence must be presented that the dehumidifier has been used in accordance with the instructions

in this manual and that the fault has arisen within the warranty period. For the warranty to apply, the dehumidifier must be serviced and maintained in accordance with the recommendations and the instructions in Section 6. Service and maintenance shall be documented.

2. Introduction

REX Basic, Smart, Cloud and Integrate are heat condensation dehumidifiers intended for the regulation of humidity. REX condenses the moisture through Airwatergreen's patented method for heat condensation. This manual describes the installation procedures, operation, service, maintenance and final handling of the product.

3. Installation

The basic prerequisites as per below shall be met for all intended installations. If the installation deviates from these points, the device and surroundings can be harmed or the desired function may not be achieved. Contact a reseller or the manufacturer in the event of ambiguities regarding installation.

3.1. Basic prerequisites

1. REX Basic, Smart, Cloud and Integrate are intended to regulate the humidity in an indoor climate in an industrial environment.
2. The dehumidifier must be connected to a grounded electrical outlet with the voltage and frequency stated on the dehumidifier's rating plate. I.e. 400VAC 3 phase and 50Hz with a fuse-protected current of 16A per phase.
3. The dehumidifier's drainage nozzle shall be connected with a hose and a ring clamp to a drainage hole. Make sure that the hose is securely connected and is not at risk of leaking. Use a ½" hose. The pressure altitude is max 2 metres. Ensure that the hose output is not blocked or that the hose is at risk of kinking. The hose must be secured and there must be markings to make the hose visible. There is no check valve, so the hose must therefore be installed to ensure no backflow.
4. The dehumidifier must be stable on the ground. Objects may not be leaned against the dehumidifier or used so that the dehumidifier is at risk of tipping over.
5. Hot air, up to 50 degrees Celsius, may blow from the dehumidifier. This air must not be directed at objects that are sensitive to hot, humid or dry air.
6. Ensure that the dehumidifier is not placed on ground that is sensitive to water.
7. The dehumidifier must be accessible for servicing.

4. Operation

The dehumidifier operates constantly. It has two chambers - in the first chamber, the moisture is taken up and stored in the dehumidifier. In the second chamber, the moisture is condensed. On the front of the dehumidifier is the display, knob and membrane keypad. The display shows the relative humidity (RH), temperature (T), set point (RHs) and other information such as service codes. Below the display is a membrane keyboard with three buttons for setting set points and other functions. Below the buttons is the start/stop knob.

The dehumidifier must be used as follows:

1. Turn the knob from the 0 position to the 1 position to start the dehumidifier.
2. Use “+” and “-” on the membrane keypad to set the desired target value that the dehumidifier shall regulate to. The standard setting is a relative humidity of 55%.
3. Press “Set” to scroll between “Cool down” and “Advanced Menu”. The “Cool down” option is used to cool down the dehumidifier for service or before shut-off, for example. Under “Advanced menu” are the advanced settings described in Section 5.
4. The dehumidifier is stopped by turning the knob to the 0 position.

4.1. Setting up WiFi

If a REX Cloud is to be installed, the configuration in most cases needs to be adjusted to fit the existing network. The name of and password to the local router or AP should be identified before installation is begun. The antenna input on the machine has a female SMA connection (Note: not RP-SMA).

Setting SSID:

1. Turn the knob from the 0 position to the 1 position to start the dehumidifier.
2. Push “Set” until “Advanced menu” is displayed. Choose “Yes”.
3. Click to “Handle WiFi” using “+”. Push “Set”.
4. The display now shows “Enable WiFi?”. Push “+” to reach “Set SSID”. Push “Set”.
5. The display now shows the basic setting: AWG_CONNECT.
6. Push “+” or “-” to move the marker to the value to be changed.

7. Push “Set”. Once the marker blinks, the value can be adjusted using the “+” or “-” buttons.
8. When the desired value is reached, push “Set”.
9. Repeat points 6-8 if more values are to be changed.
10. Once the adjustment is finished, move the marker to the edge of the display and then one more step, confirm with the “Set” button, then push “+” to implement the change.

Setting PSK:

1. Turn the knob from the 0 position to the 1 position to start the dehumidifier.
2. Push “Set” until “Advanced menu” is displayed. Choose “Yes”.
3. Click to “Handle WiFi” using “+”. Push “Set”.
4. The display now shows “Enable WiFi?”. Push “+” to reach “Set PSK”. Push “Set”.
5. The display now shows the basic setting: 4WDMollier8283
6. Push “+” or “-” to move the marker to the value to be changed.
7. Push “Set”. Once the marker blinks, the value can be adjusted using the “+” or “-” buttons.
8. When the desired value is reached, push “Set”.
9. Repeat points 6-8 if more values are to be changed.
10. Once the adjustment is finished, move the marker to the edge of the display and then one more step, confirm with the “Set” button, then push “+” to implement the change.

Setting IP address:

1. Turn the knob from the 0 position to the 1 position to start the dehumidifier.
2. Push “Set” until “Advanced menu” is displayed. Choose “Yes”.
3. Click to “Handle WiFi” using “+”. Push “Set”.
4. The display now shows “Enable WiFi?”.
5. Push “+” to go to “Set static IP”, “Set gate IP” or “Set DNS IP”.
6. Choose the IP to be set and then push “Set”.
7. The first group of three digits begins to blink; change the value by pushing “+” or “-”.
8. When the desired value is set, push “Set”.
9. The next group of three digits blinks; repeat the setting and push “Set”.
10. Repeat point 9 until the IP address is as desired.
11. Finish the setting by pushing “Set” until the menu returns to the IP address selection.

Starting up WiFi:

1. Turn the knob from the 0 position to the 1 position to start the dehumidifier.
2. Push “Set” until “Advanced menu” is displayed. Choose “Yes”.
3. Click to “Handle WiFi” using “+”. Push “Set”.
4. The display now shows “Enable WiFi?”.
5. Push “Set”.
6. If the settings are correct, the dehumidifier should be connected.

Check the status and MAC address:

1. Go to “WiFi status”; push “Set”.
2. Read off the MAC address when necessary.
3. Push “+” to see the status of WiFi, Signal and Internet.
4. Under both WiFi and Internet, it should say “Yes” for the machine to be connected to the Internet.

4.2. Setting up modbus

When a control system is to control the dehumidifier through Modbus, it is connected either through RS485 or through WiFi. For a wire Modbus, **RS-485+** (D1) (A-Line) is connected to **pin 1** and **RS-485-** (D2) (B-Line) to **pin 2**. The maximum cable length for a wire modbus is 30 m. The cable must be shielded in both ends. To set parameters and begin using the control, follow the instructions below:

Activating the modbus:

1. Turn the knob from the 0 position to the 1 position to start the dehumidifier.
2. Push “Set” until “Advanced menu” is displayed. Choose “Yes”.
3. Click to “Handle MODBUS” using “+”. Push “Set”.
4. The display now shows “Set mode”; push “Set”.
5. Under this menu, the following languages can be chosen: RTU, ASCII, TCP/IP
6. Click to the desired language and push “Set”; the chosen language is marked with a “star”.
7. Push “+” to reach “Set slave ID”. Push “Set”.
8. Choose “ID” by using “+” or “-”. Then push “Set”.

Deactivating the modbus:

1. Go to “Handle MODBUS”; push “Set”.
2. The display shows “Set mode”; push “Set”.

3. Push “+” until the display shows “Inactive”. Push “Set”.
4. A “star” marks that the inactivation is complete.

4.3. Operating messages

When the dehumidifier is in operation, messages can be shown on the display. These indicate the operating status; see below:

- **Cooling** – The dehumidifier is cooled down.
- **Heating** – The dehumidifier is condensing water.
- **Please change granula** – The granulate needs changing. See Section 6.3.

5. Menu system

The following section describes the menu system. “Advanced menu” is circular; this makes it possible to access the menu both through right and left rotation. E.g. if the user is at the “Energy” menu, “Back” can be reached by pushing once on “-”, or “Tot.time” can be reached by one push on “+”.

To move deeper into the menus, the “SET” button is used on the desired menu, but to go up in the menus, “Back” must be chosen and then “SET” pushed.

This way to move in the menu selections applies when there is more than one option for the user to choose. An alternative way of moving in the menus is to push “-” or “+” under the desired option when e.g. “No” or “Yes” is shown on the display.

5.1. “Cool Down”

Used to cool down the dehumidifier before shut-off or service. This menu is reached by pushing “SET” from the start menu. Choose between the options “Yes” and “No”. If “No” is chosen, the menu jumps to “Advanced menu”, see 5.2, and when “Yes” is chosen, the cool down of the dehumidifier begins. Cool down begins when the display shows “Cooling” and ends when the display shows “Cooling complete, press Set” for 10 seconds before it returns to the start menu.

5.2. “Advanced menu”

Under “Advanced menu”, the user can set various parameters that handle options such as network, external signals and operating mode. This is done by clicking through the menus with “+” and “-”. To go deeper into the menu selections or to set a value, the “SET” button is used.

What menus are available depends on which product the customer has purchased; see below.

The following submenus are under “Advanced menu” for all models:

- “Energy” - The dehumidifier’s total energy consumption.
- “Tot. time” - The dehumidifier’s total operating time.
- “Function tests” – Handles the function tests for the machine and signal statuses.
- “Handle WLAN” - Handles the wireless network.
- “WLAN status” - Shows the MAC address, signal strength and if the machine has access to the internet.
- “REBOOT machine” - Used to do a software restart of the machine.
- “Handle service” – Used to handle service when changing granulate.

The following are under “Advanced menu” for Smart, Cloud and Integrate:

- “Set fan speed” - Set the fan speed between 10 and 100%.
- “Use mould curve” – Used to regulate the relative humidity 10% points under the mould curve LIM I.

The following are under “Advanced menu” for Integrate:

- “Handle modbus” – Handles the functions for modbus

The menu gives the user access to function tests that are to be carried out at intervals according to the maintenance schedule in Section 6.1. Use “Set” to start the chosen function test; then follow the instructions on the display.

The following are under “Function tests”:

- ”Enable test mode” – Puts the machine in function test mode.
- ”Enable fan” – Starts the fan

- "Enable Wat. pump" – Starts the water pump
- "Enable Air comp" – Starts the air compressor
- "Enable Left chamber" – Sets the left chamber as active.
- "Enable heater" – Starts heating in the active chamber
- "Enable vacuum" – Starts the vacuum pump
- "RH Temp" – Displays RH and temperature of incoming air
- "RH Temp" – Displays RH and temperature of dry and hot air
- "1: " and "2: " – Displays temperature in the granulate.
- "w0 v0 c1 a0 f0" – shows the status, 0 is off and 1 is on, for the water pump "w", vacuum pump "v", which chamber is active, "c0" for left and "c1" for right, "a" air compressor and "f" for the fan. The fan shows a value between 0 and 100, where 0 is off and 100 is max power.
- "Power" – Shows the current power of the heater.
- "State: ES:0" – Shows the state of the dehumidifier, and ES shows the total fault.

5.3. "Granula cycles"

The number of cycles since the last granulate change is shown here. If the number of cycles exceeds 1,500, the display shows "please change granula". The granulate must then be changed. The granulate is changed according to the instructions in Section 6.3.

5.4. "Handle WiFi"

Under this menu, settings for connection over WiFi are adjusted.

The following are under "Handle WLAN":

- "Enable WiFi"/"Disable WiFi" - Start and stop WiFi.
- "Enable DHCP"/"Disable DHCP" - Settings for whether the dehumidifier is to be assigned an IP address by a DHCP client.
- "Enable TCP/IP"/"Disable TCP/IP" - Settings for whether the dehumidifier shall be able to receive commands over a TCP/IP protocol. It is recommended that this setting is on.
- "SET SSID" - Set which SSID the dehumidifier connects to.

- “SET PSK” - Set the password. Pre shared key (PSK).
- Reset SSDI/PSK – Resets SSDI and PSK to the basic settings.
- “Set static IP” - Set the dehumidifier’s local IP address. Can be used if there is no DHCP server.
- “Set gate IP” - Set the gate IP. If a static IP is used, the router’s local IP address shall be entered.
- “Set DNS IP” - Set the IP address for the DNS server. Normally, the IP address for the gate and DNS are the same.
- Set FUSE group – Setting two dehumidifiers to the same group enables operation of them on the same 10A fuse through alternating power consumption.
- Reboot WiFi – Restarts the WiFi connection.

For help installing WLAN and Internet monitoring, contact Airwatergreen on +46 (0)18 800 44 00 or email support@airwatergreen.com.

5.5. “Handle Modbus”

This menu option only exists under the modbus variants and enables settings to control the dehumidifier from an external monitoring system.

The following are under “Handle Modbus”:

- “Set mode” – Used to change between inactive, RTU, ASCII and TCP/IP.
- “Set slave ID” – Used to set what slave ID the machine shall have.
- “Set baud rate” – Used to change the baud rate
- “Set stop bits” – Used to set the stop bits
- “Set parity” – Used to set the parity

6. Service

A normal service includes changing the granulate, filters, cassettes, damper motor and a functional inspection. All other service may only be done by trained personnel due to the risk of electric shock. These are described below. The service intervals depend mainly on the operating conditions and working environment. It is recommended that Airwatergreen be contacted in the event of service.

Incorrect service can cause operating faults. The dehumidifier displays “Time for service See manual” after 1,500 cycles or after one year’s active operation.

6.1. Maintenance schedule

The following schedule for maintenance is recommended. In harsh environments, such as those with a large amount of dust or soot, the service intervals should be shortened.

ServiceInterval	6 months	12 months or upon signalling	36 months
Air filter	Inspect the air filter. Change filter as necessary.	Clean the filter housing and change the filter.	
Granulate		Clean the condensation housing and change the granulate.	
Condenser pump		Check function and replace when necessary.	Change the condenser pump
Heater core	No action.	Check the heater core. Change if necessary.	Change the heater core.
Functional inspection	No action.	Make a complete functional inspection. Replace worn parts as necessary.	
Compressor		Functional test. Change if necessary.	Change the compressor

After service at **12 months or upon signalling**, the service is acknowledged by resetting the counter in “Advance menu” -> “Handle Service” -> “Reset service”, or by pushing “Yes” under “Service complete”.

6.2. Filter

After a certain period of time, the filter needs to be changed. This is done after a visual assessment of how dirty the filter is or after 12 months' operation. The filter change is to be done as follows:

1. Push the button "Set" until "Cool down?" is shown on the display. Then push "+". The dehumidifier will now cool down.
2. When the display shows "Cooling complete", turn the knob to the 0 position.
3. Unscrew the plate on the front. The screws are located above and underneath the dehumidifier.
4. Loosen the screws to the filter housing.
5. Remove the filter.
6. Put in a new filter.
7. Close the filter box.

6.3. Granulate

After a certain amount of time, the granulate needs to be changed or refilled due to ageing. The granulate is the media that captures the water vapour in the air. Granulate change or refilling is to be done as follows:

1. Push the button "Set" until "Cool down?" is shown on the display. Then push "+". The dehumidifier will now cool down.
2. When the display shows "Cooling complete", turn the knob to the 0 position.
3. Pull out the plug so that the dehumidifier is completely dead.
8. Unscrew the plate on the front. The screws are located above and underneath the dehumidifier.
4. Remove the 9 screws on the plate behind the front. Lift the plate away.
5. Unscrew the connections to the temperature sensor on both the left and right sides.
6. Pull out the white contacts.
7. Remove the two boxes.
8. Remove the lid on the boxes and loosen the grommet for the temperature cable and the black unit for the supply feed.

9. Pull up the cassettes and empty the granulate.
10. Refill with 2NPS-HP granulate.
11. Reinsert the cassettes and connect the black unit in the box and feed through the temperature cable.
12. Replace the boxes in the dehumidifier.
13. Connect the temperature cable in the screw terminal and connect the white unit.
14. Re-affix the plate with the 9 screws.
15. Screw the front plate back on. Connect the screws both above and under the dehumidifier.
16. Under 'Advance menu', reset the granulate counter by pushing "Set" until "Granulas cycles" is shown. Push "+" to reset the counter.

6.4. Cassette

After a certain amount of time, the cassette needs to be changed due to ageing. This shall take place when necessary or after three years' operation. The cassette is the container inside the dehumidifier that holds the granulate. Replacement of the cassette shall take place according to the following instructions:

See Section 6.3. Carry out all points 1 to 8.

Replace the old cassettes for new ones.

Carry out points 11 to 16 in section 6.3.

6.5. Functional inspection

To ensure functionality, an operating inspection shall be done. This takes place according to the following instructions.

- **Check sensors and display** - Check that relative humidity and temperature are shown on the display and that they are within reasonable limits.
- **Check keypad** - Change the target value with "+" and "-". Click between "Cool Down" and "Advanced menu".
- **Check fan** - Push the button "Set" until "Cool down?" is shown on the display. Then push "+". The dehumidifier will now cool down. When the display shows "Cooling complete", turn the knob to the 0 position. Start the dehumidifier again by turning the knob to the 1 position.

After a certain amount of time, the fan starts. Check that the fan is not set to low speed by checking “Set fan speed” under “Advanced menu”.

- **Check leakage** – Check that all moulding and seals are functional. When necessary, replace moulding and seal the machine.

6.6. Service codes

This section is to facilitate maintenance. The dehumidifier has a self-diagnostic. On the display's lower right side, a service code is shown "SC X". For example, "SC 4". The following service codes are given by the dehumidifier and the following maintenance must be carried out:

Service code	Fault	Action
0 or 1	No contact with the temperature sensor in the cassette.	1. Check that the temperature contacts under the condensation cover for the moisture filter are properly connected.
2	Too high heat in the cassette.	1. Check that all cassette connections are correctly attached. In the event of a fault in the temperature sensor or heaters, replace the cassettes.
3	No heat upon heating.	1. Check that the water pump works properly. 2. Test the function of the heater. In the event of faults in the heater, replace the cassette as per instructions in 6.4. 3. Check the damper.
4	Damper does not close	1. Check that the compressor works. 2. Check that the condenser box is correctly in place. 3. Check that all other components work.
5	The damper does not open	1. Test the function of the damper. 3. Test the function of the fan. In the event of faults with the fan, contact support@airwatergreen.com for information.
6	RH sensor in not responding	Check the connections to the RH sensor. Replace the RH sensor if needed.
7	RH sensor out not responding	Check the connections to the RH sensor. Replace the RH sensor if needed.
8	Both RH sensors out of order.	Contact support@airwatergreen.com for information.
9	Surrounding air temperature is too cold.	

10	Relay card not responding.	Check the connections to the relay card. Replace the relay card if needed.
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6.7. Reset service code

When a service code is shown on the display and the cause of the error message is resolved, the dehumidifier is reset as per below for continued operation.

1. Hold in “-” and “Set” for five seconds. Release both buttons at the same time. ”Reset error code” is shown on the display. Push “+” to reset the service code.

6.8. Fault codes

When the dehumidifier is equipped with WiFi, some fault codes can arise. They are:

- **Error 254** - The network name is right, but with the wrong password.
- **Error 251** - The machine has not found the network with the given name.
- **Error 18** - The machine cannot find the network card. It may be loose or does not work.

7. Final handling

Airwatergreen’s dehumidifiers are made to cope with many years’ operation. When the dehumidifier is no longer usable, it must be disposed of as electronic waste at the nearest recycling station for electronics.

Appendix 1 - Modbus overview

Modbus overview

Config

Baud rate 9600 to 115200
Parity none, odd or even
Databits 7 for ASCII and 8 for RTU
Stopbits 1, 1.5 or 2.
Port 502 (TCP)

Input registers

Address	Data	Range	Comment
1	Phase	0-8	The current phase the machine is in
2	T_in	-300 to 600	The temperature in 10*Temp
3	RH_in	0-1000	The relative humidity in 10*RH
4	Error code	0-9	Shows the error code
5	PT100	0-211	Temperature in granulate
6	RH_out	0-1000	The relative humidity in 10*RH
7	T_out	-300 to 600	The temperature in 10*Temp
8	Power	0-2000	The current power
9	Total energy	0-65535	The total energy
10	Program version	0-65535	Program version
11	Error sum	0-65535	The sum of the error bits*.
12	Is float used	0-1	If external float is used
13	Stopped by float	0-1	If the machine is stopped by the float or not
14	Is water limit used	0-1	If the water limit is used by the machine
15	Stopped by water limit	0-1	If the machine is stopped by water limit
16	Current water	0-65535	Estimated water production since reset

17	Water limit	0-65535	Limit for the produced water
18	Stopped by external signal	0 or 1	If the machine is stopped by the external signal or not
19	Service flag	0 or 1	If the machine signals that it is time for service or not
20	Service counter	0 to 255	The number of services that have been carried out on the machine.
21	Total number of cycles	0 to 65535	The total number of cycles the machine has done
22	Cycles since service	0 to 65535	The number of cycles the machine has done since last service

* The sum of the error bits* and thus the combination of current errors. Each bit represents a different error defined in table 1 where the error number is which bit that is used. The error flag is numbered from the right side of the bit-sequence. For example 73 would be 00000000 01001001 and thus mean that error flag 1, 4 and 7 is on.

Holding registers

Address	Data	Range	Comment
1	RH_set	0-100	The set value for the relative humidity
2	Fan	10-100	The relative speed of the fan
3	Reset error	0-1	Reset if there is an error code
4	Pause machine	0-1	The machine is paused until it is un-paused
5	Reset error bit	0-17	Reset a specific error bit*
6	Set/Unset mould curve	0-1	Set or unset the mould curve
7	Set / Unset External signal	0 or 1	Set or unset the external signal feature

* Reset a specific error bit, i.e. 6 would reset bit number 6 in the sequence. If 17 is received all bits will be set to 0.

Appendix 3 - Safety data sheet Silica Gel, 2NPS-HP

Safety data sheet Silica Gel, 2NPS-HP

1. Name of substance/mixture and company:

Name: Silica gel

Trade name: 2NPS-HP

Chemical family: Silica gel

Usage: As desiccant in Airwatergreen dehumidifiers

Further details of the company providing the safety data sheet:

Airwatergreen AB

Bolandsgatan 15 G2

753 23 Uppsala

Sweden

Further information can be obtained from: info@airwatergreen.com

Telephone: +46 (0)18 800 44 00

Email: info@airwatergreen

Emergency telephone: +46 (0)18 800 44 00

2. Hazardous properties:

Other dangers: The product is adsorbent and may cause a drying effect to eyes and skin.

3. Composition:

Molecular form: $\text{SiO}_2 \times \text{H}_2\text{O}$

CAS No. : 7631-89-9 Silicon dioxide, synthetic

EINECS: 231-545-4

4. First aid information:

General reference: Follow the instructions carefully

If breathed in: Provide fresh air. If there are difficulties breathing, get medical help.

In the event of skin contact: Generally, the product does not cause skin irritation. Rinse with water.

In the event of eye contact: Flush the eyes, open, with running lukewarm water for at least 5 minutes and get medical help.

If swallowed: If there is any discomfort, get medical help.

Key symptoms and effects, both acute and chronic: No further relevant information available.

Immediate medical treatment and specific treatment that may be required: No further relevant information available.

5. Firefighting measures

Suitable fire extinguisher: Use the correct fire fighting method for the surroundings.

Specific hazards that the substance or mixture can create: No further information available

Advice for firefighters:

Special protective equipment: Wear personal protective clothing

Additional information Fire remains must be handled in accordance with the local authority regulations

6. Action to be taken in the event of unintentional discharge

PPE, and action in emergency situations: Wear personal protective clothing

Environmental protection measures: No special action required

Methods and materials for containment and decontamination: Mop up spillages, avoid creating dust clouds.

7. Handling and storage

Cautionary measures for safe handling: Avoid creating hazy clouds. Containers must be kept closed. If a haze cloud is created, ensure spot extraction. Prevent sparking from static electricity.

Advice for fire and explosion protection: Take action against electrostatic charges.

Storage and containers: No particular requirements

Reference for storage with other materials: Must be kept separately from foodstuffs

Additional details for storage: Container must be kept dry and sealed. The product is hygroscopic.

Specific end usage: No further relevant information available.

8. Exposure control/personal protection

Further advice for design of technical facilities: No other information

General protection and hygiene requirements: Use common sense precautionary measures when handling chemicals.

Breathing protection: To be used when handling

Hand protection: Use stable material gloves, such as nitrile. Use skincare to prevent against drying of the skin.

Glove material: Recommended thickness >0.11 mm.

Unsuitable gloves: Fabric gloves.

Eye protection: Protective glasses

Body protection: Work clothes

9. Physical and chemical properties

Shape: Spherical granulate

Colour: White or translucent

Odour: Odourless

pH value at 20°C: 4.0 - 9.0

Melting point: >1710°C

Boiling point: >1700°C

Flammable point: Not applicable

Ease of combustion: The substance is not combustible

Self-ignition: The product is not self-igniting

Risk of explosion: The product is not explosive

Bulk density: approx 750 kg/m³

10 Stability and reactivity

Chemical reactivity No decomposition if used properly

Risk of hazardous reactions: No known hazardous reactions

Situations which must be avoided: No further relevant information available.

Incompatible material: No further relevant information available.

Hazardous decomposition products No known hazardous decomposition products.

11. Toxicology information

Primary irritation effect:

to skin: irritating to skin

to eyes: irritating to eyes

12. Ecological information

Silicon dioxide is chemically and biologically inactive and has no known impact on the environment.

13. Handling waste

Recommendation: Waste should be handled in accordance with the local authority provisions.

14. Transport information

Not classified as hazardous goods.

15. Applicable regulations

WHMIS classification: Not a controlled product

16. Other information

The information is based on our current knowledge. However, it is no guarantee of the product's properties and does not constitute a basis for a contractual legal relationship.

Appendix 4 - Documentation operating parameters

Documentation operating parameters

The following table is used to document operating settings of the dehumidifier.
