



# CERTIFICATE



## Management system as per EN ISO 9001:2015

In accordance with TÜV AUSTRIA CERT procedures, it is hereby certified that



**AQUAPOL International GmbH**  
Griesleiten 3  
A-2654 Prein an der Rax

applies a management system in line with the above standard for the following scope

**masonry diagnostics, sales, installation and start-up  
of a wall drying out system**

Certificate Registration No. 20100112006198

Valid until 2020-06-29

Initial certification: 2011-06-30

Certification Body  
at TÜV AUSTRIA CERT GMBH

Vienna, 2019-01-22

This certification was conducted in accordance with TÜV AUSTRIA CERT auditing and certification procedures and is subject to regular surveillance audits.

TÜV AUSTRIA CERT GMBH Deutschstraße 10 A-1230 Wien [www.tuv.at](http://www.tuv.at)





# CERTIFICATE

For a  
**TÜV audited process**  
according TÜV AUSTRIA standard  
for the following scope

**determination of the moisture content according to the standard  
ÖNORM B 3355-1:1999  
by means of initial, intermediate and final measurements  
logging and evaluating the results of the check measurements**

It is hereby certified that



**AQUAPOL International GmbH  
Griesleiten 3  
A-2654 Prein an der Rax**

applies a process in line with the above standard.

This certification was conducted in accordance with TÜV AUSTRIA auditing and certification procedures and is subject to regular surveillance audits.

Valid until 29.06.2020  
Initial certification: 30.06.2011

Certificate Registration No.: TA290112006199

Vienna, 22.01.2019

Head of the certification body  
of TÜV AUSTRIA CERT GMBH

# ATTACHMENT TO DOCUMENTATION REQUIREMENTS TÜV RHEINLAND – DRIWAY DEHYDRATION SYSTEM

## TO 1.3: EQUIPMENT UNDER TEST

### THE PARTS OF THE AQUAPOL WALL-DEHYDRATION-SYSTEM FOR MODEL: BIODISC, DISC2000, INKA

This Generator for Dehydrating walls consists as his main parts of the Receiving Unit (a kind of a double-sided printed circuit board with copper spirals), a Polarization Unit and a Sending Unit (single sided PCB with copper spirals) The two PCBs have a distance of 5.1 cm and are connected together with 3 polyamid-spacers and in the middle there is a copper rod for energy transmission.

### THE PHYSICAL MODE OF OPERATION

The natural left- or righthand polarized gravomagnetic hydrogen-field is sucked in by the receiving unit in the form of a funnel.

This energy will then be polarized from the polarization unit clock-wise and from the sending-unit emanated into the working space. The acting field towards the ground causes a reorientation of the water molecules in the damp masonry and will dehydrate the walls in the working area.

The types BIODISC, DISC2000 and INKA have similar innerparts, different housings, but act technically in the same way, the differences in practice are the size of the field of action (working area), where the dehydration effect on walls will be observed. BIODISC covers about 1000 square foot, DISC2000 about 2000 square foot, INKA about 5000 square foot.

### THE PARTS OF THE DRIWAY – WALL-DEHYDRATION-SYSTEM FOR MODEL: DW10.000

The generator essentially consists of a receiving unit (a flat spiral coil construction), a polarisation unit (a cylindrical coil with selective receiving characteristics) and a transmitter unit. This in turn consists of three tetrahedron-shaped transmitter coils (cylindrical air coil design) offset by 120 degrees. Rod-shaped antennas run centrally through the transmitting coils.

### THE PHYSICAL MODE OF OPERATION OF THE AQUAPOL APPLE

The natural left- or right-polarized gravomagnetic hydrogen field is sucked in by the receiving unit in the form of a funnel.

The received energy is now polarized clockwise by the polarization unit for the dehumidification effect and is transferred via the transmitter unit in clockwise polarized form into the working space directed to the ground. The gravomagnetic hydrogen field acting towards the ground causes a reorientation of the water molecules in the damp masonry. The effective range of the APPLE is about 10.000 square foot.

General Statement for all types of model:

This dehydration-device does not actively emanate any electro-magnetic-radiation, it is a passive antenna-system which instead uses naturally existing energy forms from the environment to polarize it in a certain way to resonate with the water molecules in the capillary system of walls to solve the problem of capillary rising damp in walls.

## TO 1.6: GENERAL PRODUCT INFORMATION:

- **BIODISC** H: 15.5cm, WxL: 29.5x29.5cm, 1.4 kg
- **DISC2000** H: 17.0cm, WxL: 32.5x32.5cm, 1.6 kg
- **INKA** H: 35.0cm, WxL:36.0x36.0cm, 1.8 kg
- **APPLE** H: 51.0cm, WxL: 55.0x55.0cm, 7 kg

## TO 1.8: EUT MODES OF OPERATION

The AQUAPOL devices will be installed on the ceiling at a central point in a house. It is fixed with a threaded rod in a metal dowel, which is fixed on the ceiling. The distance from the top of the device to the ceiling should be at least 20 cm. Around 2-3 m from the device should not be any metallic object or any EM-emitting devices, so to make sure, no disturbances will occur. For the operation of this device no batteries or external power source is needed, as it works with existing natural energy from the environment.



Health	1
Fire	0
Reactivity	0
Personal Protection	B

## Material Safety Data Sheet Aluminum MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Aluminum

**Catalog Codes:** SLA4735, SLA2389, SLA3895, SLA1549, SLA3055, SLA4558, SLA2212, SLA3715

**CAS#:** 7429-90-5

**RTECS:** BD0330000

**TSCA:** TSCA 8(b) inventory: Aluminum

**CI#:** Not applicable.

**Synonym:** Aluminum metal pellets; Aluminum metal sheet; Aluminum metal shot; Aluminum metal wire

**Chemical Name:** Aluminum

**Chemical Formula:** Al

**Contact Information:**

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Aluminum	7429-90-5	100

**Toxicological Data on Ingredients:** Aluminum LD50: Not available. LC50: Not available.

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Slightly hazardous in case of skin contact (irritant). Non-irritating to the eyes. Non-hazardous in case of ingestion.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

**Skin Contact:** Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

**Serious Skin Contact:** Not available.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Serious Inhalation:** Not available.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available.

### Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Some metallic oxides.

**Fire Hazards in Presence of Various Substances:** Not available.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

### Section 6: Accidental Release Measures

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

### Section 7: Handling and Storage

**Precautions:**

Do not ingest. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Moisture sensitive.

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Safety glasses. Lab coat. Gloves.

**Personal Protection in Case of a Large Spill:** Safety glasses. Lab coat. Gloves.

### Exposure Limits:

TWA: 5 (mg(Al)/m) from ACGIH (TLV) [United States] Inhalation (pyro powders, welding fumes) TWA: 10 (mg(Al)/m) from ACGIH (TLV) [United States] Inhalation (metal dust) Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid.

**Odor:** Odorless.

**Taste:** Not available.

**Molecular Weight:** 26.98 g/mole

**Color:** Silver-white

**pH (1% soln/water):** Not applicable.

**Boiling Point:** 2327°C (4220.6°F)

**Melting Point:** 660°C (1220°F)

**Critical Temperature:** Not available.

**Specific Gravity:** Density: 2.7 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Not available.

### Solubility:

Insoluble in cold water, hot water. Soluble in alkalies, Sulfuric acid, Hydrochloric acid. Insoluble in concentrated Nitric Acid, hot Acetic acid.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials, exposure to moist air or water.

**Incompatibility with various substances:** Reactive with oxidizing agents, acids, alkalis.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:**

Moisture sensitive. Aluminum reacts vigorously with Sodium Hydroxide. Aluminum is also incompatible with strong oxidizers, acids, chromic anhydride, iodine, carbon disulfide, methyl chloride, and halogenated hydrocarbons, acid chlorides, ammonium nitrate, ammonium persulfate, antimony, arsenic oxides, barium bromate, barium chlorate, barium iodate, metal salts

**Special Remarks on Corrosivity:**

In moist air, oxide film forms which protects metal from corrosion. Aluminum is strongly electropositive so that it corrodes rapidly in contact with other metals.

**Polymerization:** Will not occur.

### Section 11: Toxicological Information

**Routes of Entry:** Not available.

**Toxicity to Animals:** Not available

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:**

Slightly hazardous in case of skin contact (irritant). Non-hazardous in case of ingestion. Non-hazardous in case of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Exposure to aluminum may cause skin irritation. Eyes: Not expected to be a hazard unless aluminum dust particles are present. Exposure to aluminum dust may cause eye irritation by mechanical action. Aluminum particles deposited in the eye are generally innocuous. Inhalation: Not expected to be an inhalation hazard unless it is heated or if aluminum dust is present. If heated or in dust form, it may cause respiratory tract irritation. Heating Aluminum can release Aluminum Oxide fumes and cause fume metal fever when inhaled. This is a flu-like illness with symptoms of metallic taste, fever, chills, aches, chest tightness, and cough. Ingestion: Acute aluminum toxicity is unlikely. Chronic Potential Health Effects: Skin: Contact dermatitis occurs rarely after aluminum exposure. Most cases of aluminum toxicity in humans are in one of two categories: patients with chronic renal failure, or people exposed to aluminum fumes or dust in the workplace. The main source of aluminum in people with chronic renal failure was in the high aluminum content of the water for the dialysate used for dialysis in the 1970's. Even though this problem was recognized and corrected, aluminum toxicity continues to occur in some individuals with renal who chronically ingest aluminum-containing phosphate binders or antacids. Inhalation: Chronic exposure to aluminum dust may cause dyspnea, cough, asthma, chronic obstructive lung disease, pulmonary fibrosis, pneumothorax, pneumoconiosis, encephalopathy, weakness, incoordination and epileptiform seizures and other neurological symptoms similar to that described for chronic ingestion. Hepatic necrosis is also a reported effect of exposure to airborne particulates carrying aluminum. Ingestion: Chronic ingestion of aluminum may cause Aluminum Related Bone Disease or aluminum-induced Osteomalacia with fracturing Osteodystrophy, microcytic anemia, weakness, fatigue, visual and auditory hallucinations, memory loss, speech and language impairment (dysarthria, stuttering, stammering, anomia, hypofluency, aphasia and eventually, mutism), epileptic seizures (focal or grand mal), motor disturbance (tremors, myoclonic jerks, ataxia, convulsions, asterixis, motor apraxia, muscle fatigue), and dementia (personality changes, altered mood, depression, diminished alertness, lethargy, 'clouding of the sensorium', intellectual deterioration, obtundation, coma), and altered EEG.

### Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.



### Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found. California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. Connecticut hazardous material survey.: Aluminum Illinois toxic substances disclosure to employee act: Aluminum Rhode Island RTK hazardous substances: Aluminum Pennsylvania RTK: Aluminum Minnesota: Aluminum Massachusetts RTK: Aluminum New Jersey: Aluminum New Jersey spill list: Aluminum California Director's List of Hazardous Substances: Aluminum TSCA 8(b) inventory: Aluminum SARA 313 toxic chemical notification and release reporting: Aluminum

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

**DSCL (EEC):**

**HMIS (U.S.A.):**

**Health Hazard:** 1

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:** B

**National Fire Protection Association (U.S.A.):**

**Health:** 1

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Not applicable. Safety glasses.

### Section 16: Other Information

**References:**

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. -Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec. -SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité international Ltée. 1986. 037 Waste manifest or notification not required.

**Other Special Considerations:** Not available.

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**C.I.F.***(Platina)***FR4 Data Sheet :-**

<u>Test/Specification</u>	<u>FR4 Laminate Typical Values</u>
Thermal Stress, Solder bath 288 deg. C	>60
Dimensional Stability, E-2/150	<0.04% Warp/fill <1.00% Bow/Twist
Flammability, Classification UL94	V0
Water Absorption E-1/105	0.10%
Peel Strength After Thermal Stress	11 lb./in After 10s/288 Deg. C
Flexural Strength	100,000 lbf/in <sup>2</sup> Lengthwise 75,000 lbf/in <sup>2</sup> Crosswise
Resistivity After Damp Heat Volume	10 <sup>8</sup> M ohms cm
Resistivity After Damp Heat Surface	10 <sup>8</sup> M ohms
Dielectric Breakdown. Parallel to laminate	>60KV
Dielectric Constant @ 1MHz	4.7
Dissipation Factor @ 1MHz	0.014
Q-Resonance @ 1 MHz	>75
Q-Resonance @ 50 MHz	>95
Arc Resistance	125 s
Glass Transition Temperature	135 Deg. C
Temperature Index	130 Deg. C
<b><u>A Few Other Relevant Facts from other Sources</u></b>	
Specific Gravity	1.8-1.9
Rockwell Hardness (M scale)	110
Coefficient of Thermal Expansion	11 microns/m/Deg.C Lengthwise 15 microns/m/Deg.C Crosswise
Thermal Conductivity	2.2-2.5 cal/h. cm Deg C