

AQUAFORCE PRO

Chemical resistance of the materials

	PC	PMMA		PC	PMMA
Acetic acid <10%	■	■	Hydrochloric acid (HCL) <10%	■	■
Acetic acid >10%	—	□	Hydrochloric (HCL) >10% <20%	■	■
Acetone	—	—	Hydrogen peroxide <10%	■	■
Aliphatic hydrocarbons	■	■	Hydrogen peroxide >10% <30%	■	■
Ammonia <25%	—	■	Hydrogen sulphide	—	—
Aniline	—	—	Isopropyl alcohol	■	—
Aromatic hydrocarbons	—	—	Ketones	—	—
Beer	■	■	Lime milk	□	■
Benzene	—	■	Methanol	—	—
Benzine (cleaning spirit)	■	■	Methylene chloride	—	—
Blood	■	■	Nitric acid <20%	—	—
Bromic acid	—	—	Nitric acid >10% <20%	□	■
Carbon dioxide gas	■	■	Nitric acid up to 10%	■	■
Carbon monoxide gas	■	■	Petroleum ether	□	■
Carbon tetrachloride	—	■	Phenol	—	—
Chlorine (concentration in indoor bath air)	□	□	Potassium hydroxide <30%	—	■
Chloroform	—	—	Pyridine	—	—
Chlorphenol	—	—	Regular petrol	—	—
Cresol	—	—	Seawater	■	■
Diesel fuel	—	—	Saline solution	■	■
Dioxane	—	—	Soapsuds	■	■
Ethanol <30%	■	□	Soda (sodium carbonate)	■	■
Ethanol >30%	■	—	Sodium hydroxide solution <10%	—	■
Ether	—	—	Spirit of turpentine	■	■
Ethyl acetate	—	—	Sulphuric acid (H ₂ SO ₄) <30%	■	■
Fats: animal	—	■	Sulphuric acid (H ₂ SO ₄) >30% <50%	■	—
Fats: mineral	—	■	Sulphuric acid (H ₂ SO ₄) >50%	—	—
Fats: vegetable	—	■	Toluene	—	—
Fuel oil	—	—	Trichloroethane	—	—
Glycerol	□	■	Water up to 60°C	■	■
Glycol	■	■	Xylene	—	—

CLEANING AGENTS, DISINFECTANTS AND COOLANTS

	PC	PMMA
ACMOSIL 37-5504	—	—
Coolants QUAKERCOOL 7200 HBF	—	□
Coolants QUAKERCOOL 7200 BFF	—	□
Coolants QUAKERCOOL 7100 HD	—	□
GORAPUR LI 2920-40 E	—	—
MV Quartacid plus from Schülke	■	■
MV Quartasept plus from Schülke	□	■
MV perform classic alcohol IPA from Schülke	■	■
P3-topactive OKTO (desinfectant; acid solution with peroxide) from ECOLAB	□	■
P3-topax 66 (cleaner/desinfectant; alkaline with chlorine) from ECOLAB	—	■
P3-topactive 200 (cleaner, alkaline with tenside) from ECOLAB	□	■
P3-topactive 500 (cleaner, acid solution with tenside) from ECOLAB	□	■
P3-topax 990 (neutral disinfectant; basic alkylaminacetat) from ECOLAB	□	■
PU-5408H, PU-1706M, PU-5421H, PU-4111M from Chem-Trend	—	—
PU-HS-Antiblock 6291/21, A-PU-Antiblock 6/428-5 from Bomix	—	—

■ resistant □ conditioned resistant — not resistant

DISCLAIMER: our recommendations concerning the chemical resistance of the materials are based upon information from material suppliers, careful examination of available published documents and our experience in different industry applications. However, since the resistance of metals, plastics and elastomers can be affected by the concentration, temperature, presence of various chemicals and other factors, the above datasheet should be considered as a general guide rather than an unqualified guarantee. Ultimately, the customer must determine the suitability of the luminaires in various solutions and applications.

AQUAFORCE PRO

Suitable materials and temperature ranges



	PC	PMMA
Resistance to ageing of the material	very good	good
Flammability according to UL94 (ISO 60695)	not applicable	not applicable
Requirements for the new parking standard met (DIN 67528: 2018-04)	yes (AQFPRO L WB 4300 lm)	yes (AQFPRO L WB 4300 lm)
FOOD INDUSTRY: Food suitability (FOOD DESIGN) Chemical resistance against cleaning agents in food industry	yes, HACCP, EU VO 852/2004	yes, HACCP, EU VO 852/2004
Glow wire test	850 °C	650 °C
Halogen-free	yes	yes
Suitability for use in agriculture (livestock farming – DLG cert.)	no	yes
Impact resistance (IK rating)	IK08	IK03
Silicone-free	yes*	yes*
Temperature resistance	-20 °C - +45 °C	-10 °C - +35 °C

* Not for types with through wiring

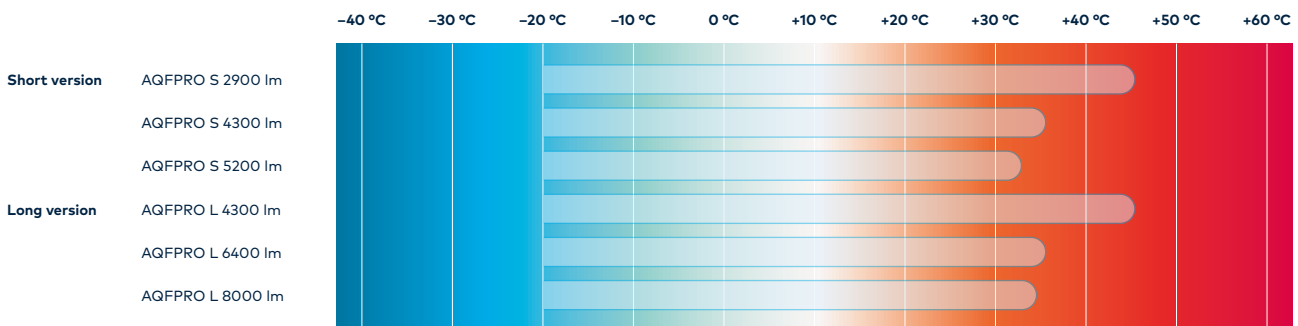
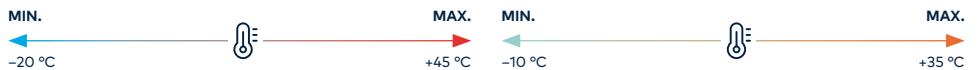
DISCLAIMER: the above is not showing all available variants (for example, variant with emergency, variant through wiring), therefore for more details please consult the full product datasheet.

POLYCARBONATE (PC)

- the most mechanically robust luminaire in the portfolio
- UV-stable and high impact resistant
- chemical resistant against alcohol, ethanol or hydrogen peroxide

POLYMETHYL METHACRYLATE (PMMA)

- highly transparent
- resistant against impacts, weather and UV-radiation
- minimised risk of tension cracking
- chemical resistant against a variety of acids, alkalis, halogens, mineral oils, fats and oils



Aquaforce Pro S (short version): 2900 lm, 4300 lm, 5200 lm
 Aquaforce Pro L (long version): 4300 lm, 6400 lm, 8000 lm

HACCP/Food: the HACCP Food Product Certificate guarantees the suitability of luminaires as food safe and suitable for use in facilities or environments where food is produced or traded.

The certificate can be downloaded from thornlighting.com