

**GF HAKAN AQUASYSTEM®
UV RESISTANT PP-R PIPES**

GF HAKAN PLASTİK is one of the world's largest plastic piping systems manufacturers. The company develops, produces and markets a comprehensive range of piping systems and components in a variety of materials used worldwide to transport water and gas at the highest quality, service and the right price. GF HAKAN PLASTİK operates in three core segments of piping systems; Building Technology, Utility and Agriculture. Its certified products are used in more than 70 countries in 5 continents worldwide.

With more than 10.000 products, GF HAKAN PLASTİK manages a land and maritime transport operation seamlessly and is able to meet the needs of its clients fully wherever they may be in the world.

■ HISTORY

HAKAN PLASTİK was founded in 1965 by the Karadeniz family. Since its foundation, Hakan Plastik has continuously expanded its presence in the manufacturing and sales of plastic piping systems with a focus on innovation.

In 2002, the company invested in a state of art modern facility in Çerkezköy Industrial Zone (ÇOSB), one of the three largest industrial zones in Turkey. To increase its production capacity, HAKAN PLASTİK opened up its second facility in 2012 in Şanlıurfa. Both facilities totally cover an area of 170.000 m².

In 2013, the leading plastic pipe manufacturer of Europe and the Middle East, HAKAN PLASTİK and the world's leading manufacturer of piping systems, Swiss-based Company, GEORG FISCHER joined forces under the name of "**GF HAKAN PLASTİK**" to provide a unique platform for further growth worldwide.

GEORG FISCHER, founded in 1802 is headquartered in Switzerland and has 125 companies, 48 of which are production facilities, in 32 countries with a workforce of 13,500 employees. The company generated sales of 3.6 billion Swiss francs in 2012. Georg Fischer operates in three core businesses GF Piping Systems, GF Automotive and GF Machining Solutions.

GF Piping System Division is a global supplier of plastic piping systems for the conveyance of liquids and gases in industry, building technology and utility applications. With over 5,000 employees, GF Piping Systems generated sales of about CHF 1.3 billion in over 100 countries in 2012.

■ ABOUT GF HAKAN PLASTİK

GF HAKAN PLASTİK operates in 2 production facilities equipped with the latest manufacturing technologies in Çerkezköy and Şanlıurfa with a workforce of 730 employees. Its headquarters is in Çerkezköy. The company has 6 regional directorates, offices and warehouses in Turkey.

The company has taken its place among the top 500 Enterprises in Turkey according to the worldwide known, prestigious Fortune 500 ranking and also one of the Top 500 Largest Companies in Turkey according to "Istanbul Chamber of Industry (ISO)."



GF Hakan Plastik Çerkezköy Factory

The system quality of GF HAKAN PLASTİK has been certified by BVQI, ISO 9001 and ISO 14001. As a result of a meticulous quality control approach and continuous research and development, product quality of GF HAKAN PLASTİK is confirmed by its international quality certificates.



The company gives top priority to using the highest standards of technology to manufacture user-friendly products with the highest quality and service.

GF HAKAN AQUASYSTEM UV RESISTANT PP-R PIPES

GF Hakan Aquasystem UV Resistant PP-R Pipe consists of two layers where the inner layer is produced PP-R and the outer layer is produced of the special mixture of PP-R and UV stabilizer raw material of the properties shown.

GF HAKAN AQUASYSTEM UV RESISTANT PP-R Pipes are available in 2 different types depending on the application fields and customer expectations:

- **UV RESISTANT STANDARD PP-R PIPES**
- **UV RESISTANT STABLE ALUMINUM FOILED PP-R PIPES**

The main advantages of GF HAKAN Aquasystem UV Resistant Pipes are the following:

- The outer layer which is UV Stabilized prevents cracks when the pipes are exposed to UV radiation and sun rays and higher temperatures.
- The outer layer ensures an effective UV light protection, so there will be no sun effect on the pipe.

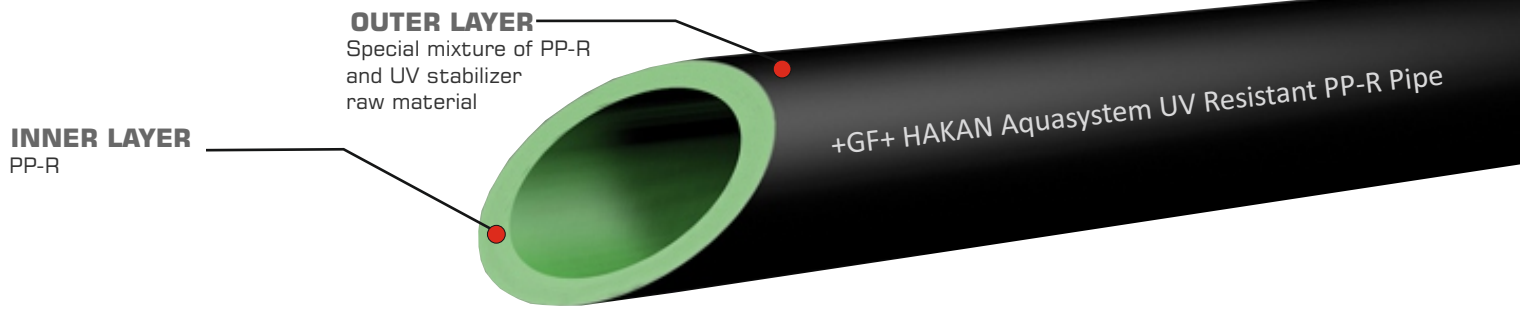


Application Areas:

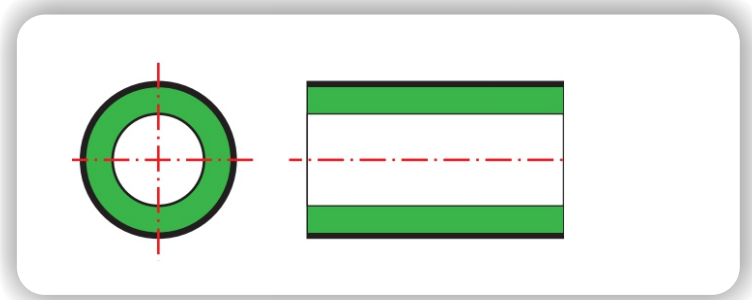
- Outside installations in coastal places.
- Industrial plants.
- Outside installations for hot and cold water.
- Sun collectors.
- Solar energy systems.

GF HAKAN AQUASYSTEM UV RESISTANT PP-R PIPES

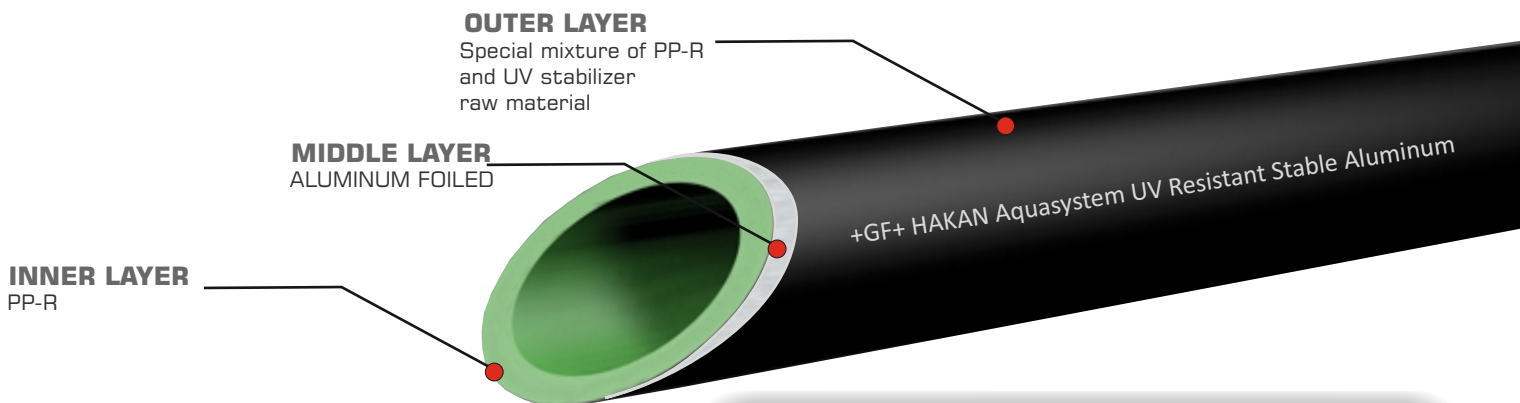
GF Hakan Aquasystem UV Resistant Standard PP-R Pipe



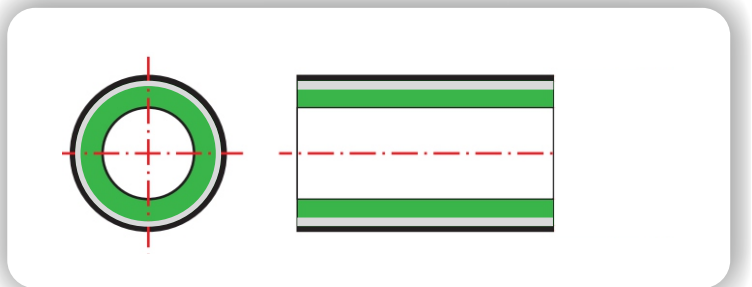
Raw Material : PP-R
Diameter : 20mm - 63mm
Pressure Nominal (PN) : PN 20
Standard Dimension Ratio (SDR) : SDR 6, SDR 7,4, SDR 11
Service Life : 50 years
Colour : White, Grey, Green
Temperature of Operating Media : 20°C - 70°C
Operation & Installation Temperature : 5°C - 45°C
Pipe Length : 4m
Connections : Fusion welding
Coefficient of Thermal Expansion : 0,15mm/mK



GF Hakan Aquasystem UV Resistant Stable Aluminum Foiled PP-R Pipe

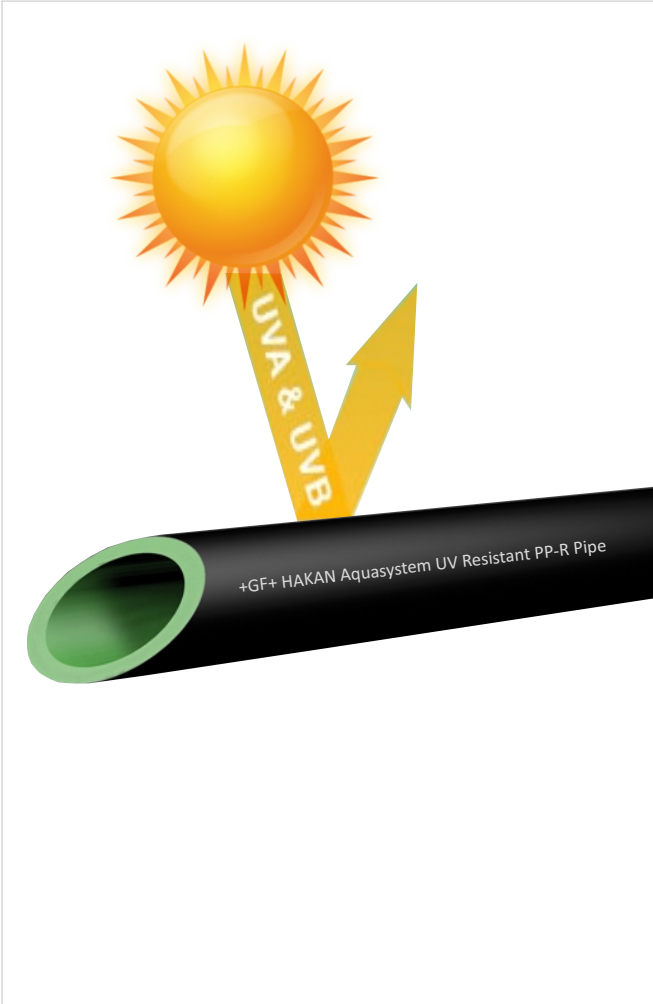


Raw Material : PP-R
Diameter : 20mm - 63mm
Pressure Nominal (PN) : PN 25
Standard Dimension Ratio (SDR) : SDR 6
Service Life : 50 years
Colour : White, Grey, Green
Temperature of Operating Media : 20°C - 95°C
Operation & Installation Temperature : 5°C - 45°C
Pipe Length : 4m
Connections : Peeling + Fusion welding
Coefficient of Thermal Expansion : 0,030mm/mK



COMPARISON

UV Resistant Standard PP-R Pipe



- Higher resistance to UV radiation.
- No insulation is required.

Standard PP-R Pipe



- PPR pipe insulation is required

PRODUCT RANGE

■ UV Resistant PP-R Pipe [PN20]



| CODES | | | | DIAMETER (mm) | PACKING (m) |
|---------------|---------------|------|---------------|------------------|----------------|
| WHITE | GREEN | BLUE | GREY | | |
| 4000002010021 | 4002002010021 | * | 4001002010021 | 20 | 100 |
| 4000002510021 | 4002002510021 | * | 4001002510021 | 25 | 80 |
| 4000003210021 | 4002003210021 | * | 4001003210021 | 32 | 60 |
| 4000004010021 | 4002004010021 | * | 4001004010021 | 40 | 40 |
| 4000005010021 | 4002005010021 | * | 4001005010021 | 50 | 20 |
| 4000006310021 | 4002006310021 | * | 4001006310021 | 63 | 16 |

■ UV Resistant Stable Aluminum Foiled PP-R Pipe [PN25]



| CODES | | | | DIAMETER (mm) | PACKING (m) |
|-------|---------------|------|------|------------------|----------------|
| WHITE | GREEN | BLUE | GREY | | |
| * | 4102002015021 | * | * | 20 | 100 |
| * | 4102002515021 | * | * | 25 | 80 |
| * | 4102003215021 | * | * | 32 | 60 |
| * | 4102004015021 | * | * | 40 | 40 |
| * | 4102005015021 | * | * | 50 | 20 |
| * | 4102006315021 | * | * | 63 | 16 |

+GF+

hakan
PLASTİK

Quality Certificates

DVGW GERMANY - DVGW

ORGANIZED BY
SKZ GERMANY - SKZ

Fraunhofer IGB GERMANY
FRAUNHOFER INSTITUT

GOST-R RUSSIA, BELARUS,
UKRAINE GOST-r

SCANDINAVIAN COUNTRIES - SWEDCERT

BULGARIA BULGARKONTROLA

INSTA-CERT
SCANDINAVIAN COUNTRIES
INSTA-CERT

**SCANDINAVIAN COUNTRIES
NORDIC POLYMARK**

HUNGARY- EMI

AENOR SPAIN - AENOR

SABS SOUTH AFRICA
SABS

Hygiene-Institut der Bundesländer
GERMANY, RUSSIA
HYGIENE INSTITUT

EAOT GREECE
EBETAM

SP SWEDEN
SP REPORT

TSE TURKEY - TSE

TSEK TURKEY - TSEK

**TURKEY YILDIZ TECHNICAL
UNIVERSITY REPORT**

TURKEY HIFZISSIHA REPORT

POLAND REKOMENDACJA

UKRAINE UKR - SEPRO

Hoch GERMANY
HOCH

TURKEY AGRICULTURAL CREDIT REPORT

UKRAINE HYGIENE

WRAS UNITED KINGDOM
WRAS

GEORG FISCHER HAKAN PLASTİK BORU VE PROFİL SANAYİ TİCARET A.Ş.

Organize Sanayi Bölgesi, Gaziosmanpaşa Mh. 3. Cd. No:11-13 Çerkezköy/Tekirdağ/TURKEY
Phone: +90 282 726 64 43 Fax: +90 282 726 94 67 e-mail: info@hakan.com.tr

www.hakan.com.tr

