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PHYSICAL & MECHANICAL PROPERTIES

Hunter Rainwater Systems



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Physical and Mechanical Properties

Description

1.01 COMPOSITION

All gutters, pipes and fittings, unless otherwise specified, are manufactured in unplasticised polyvinyl chloride (PVCu). All seals used within Hunter fittings are produced in a rubber material to BS EN 681: 1996 or manufactured in accordance with relevant British Standards.

The major advantages of PVCu rainwater systems are:

- Minimal maintenance
- Self-coloured - no painting required
- Does not support combustion
- Economical and easy to fix
- Lightweight and easy to handle
- Corrosion free

Other materials used are as follows

Joint seals: Synthetic rubber

Rise and fall brackets: Galvanised steel

PRODUCT DIMENSIONS

Refer to drawings and tables on pages 9 to 23.

FINISH

All PVCu products in the system have a smooth, easy-to-clean surface finish.

COLOURS

| SYSTEM | WHITE | GREY | VAN DYKE | BLACK BROWN |
|---|-------|------|----------|-------------|
|  HALF ROUND | ● | ● | ● | ● |
|  SQUAREFLO | ● | ● | ● | ● |
|  125 | ● | ● | ● | ● |
|  REGENCY | ● | ● | ● | ● |
|  OGEE | ● | ● | ● | ● |
|  HIGHFLO | ● | ● | ● | ● |
|  STORMFLO | ● | ● | ● | ● |

Colour samples are available on request.

1.02 PERFORMANCE AND PROPERTIES

MECHANICAL

PVCu has good flexural and tensile strength characteristics, but, as with all types of gutter, ladders should be held off gutters and brackets to avoid damage.

SNOW LOADING

All systems have been extensively tested to withstand heavy snow loads in accordance with BS EN 1462 & BS EN 12056-3, however, in areas subject to heavy snow fall it is recommended that Hunter Heavy Duty Brackets are used. When fixing beneath a steeply pitched roof or in areas subject to heavy snow, it is also recommended that fixing centres of brackets are reduced to 750mm 500mm for Ogee gutters and 600mm for Stormflo.

Consideration may also be given to fitting snow guards to eaves of pitched roofs to prevent sliding snow or ice causing damage to persons or structures below (as recommended in BS EN 12056-3).

THERMAL MOVEMENT

Gutter joints have been designed to accommodate normal thermal movement without leakage, distortion or displacement from fittings. Particular care is necessary to ensure that gutters are assembled to the insertion lines engraved inside each fitting.

The coefficient of thermal expansion of PVCu is 0.05mm/metre/°C.

CHEMICAL PROPERTIES

PVCu has good resistance to most solutions of acids, alkalis and salts, and to solvents miscible with water. However, it is not resistant to aromatic and chlorinated hydrocarbons.

The incorporation of high quality pigments in Hunter products affords outstanding durability and help to prevent degradation by air pollution and U.V. light.

Polluted atmospheres may affect all plastic rainwater systems.

It is essential that fascia boards treated with preservatives such as creosote are left for at least 48 hours to dry before fixing commences.

DURABILITY

Given proper maintenance, Hunter rainwater systems have a life expectancy of over 50 years. A planned cleaning programme is essential to maintain the gutters appearance. We recommend twice yearly cleaning by washing down with a solution of soapy warm water, in severe cases a non-abrasive cleaner should be used.

FLOW CHARACTERISTICS

The unique ribbed profile of Hunter gutters and the computer designed fastflo outlets impart excellent flow characteristics to the systems. More detailed information and calculation methods are given on the following pages.

EFFECT OF WIND

To prevent the wind from blowing rainwater behind the gutter and creating potential water damage to property, ensure that roofing felt is fitted and extended to below the gutters' rear edge.

STORAGE

Block bundles - Store block bundles, loose gutter or pipe on a reasonably flat surface free from sharp projections. Block bundles can be stored up to three high without extra side supports or bearers. In addition, block bundles will remain free standing when cut. Care should be taken when gutter or pipe straps are removed from bundles as the straps are under considerable tension and may flail when cut.

Do not store any wrapped products in direct sunlight.

HANDLING

Always be careful to avoid damage when handling gutter or pipe. Excessive scratching or scoring of gutter and pipe not only affects the appearance but can also affect the joint sealing.

Cold weather affects the impact strength of most plastics so extra care should be taken when handling gutter and pipe in wintry conditions.

For full details on Handling and Storage - please refer to section 8.00.

LUBRICANTS

The use of silicone lubricant on Hunter rainwater systems will assist assembly and prevent juddering noises caused by gutter movement across dry joints.

Never use washing up liquid or similar substances to lubricate gutter seals.

MAINTENANCE

Regularly clearing gutters of leaves, silt or other debris will extend the life of the gutters and ensure continuing efficient performance.

FURTHER INFORMATION

For further information on any of the above, please contact Hunter Technical Design Services on (020) 8855 9851 or Fax on (020) 8854 7446.