

# 4.00

# PRODUCT CHARACTERISTICS

## Hunter Underground Systems



- 4.01** Handling
- 4.02** Storage
- 4.03** Material
- 4.04** Colour
- 4.05** Chemical Resistance  
(see Module 11.01 for full details)
- 4.06** Thermal Properties

# 4.01

## Product Characteristics

### 4.01 HANDLING

PVCu pipes are very strong, but having said that, care should be taken when handling to avoid damage, such as scratching or scoring - pipes should not be dropped, thrown or dragged along hard surfaces. Not only does this affect the look of pipework but can also affect the jointing of the push-fit or solvent weld fittings. In extreme cold conditions extra care should be taken, because extreme conditions reduce the impact strength of most plastics.

Pipes should be loaded by hand if possible, but if mechanical means are used then protected slings are recommended. In addition, when unloading block bundles use nylon belt type slings or fork lift trucks with smooth forks (metal hooks, slings or chains must not come into contact with the pipes).

### 4.02 STORAGE

The following recommendations relate to the storage of PVCu pipes under the normal climatic conditions of the United Kingdom.

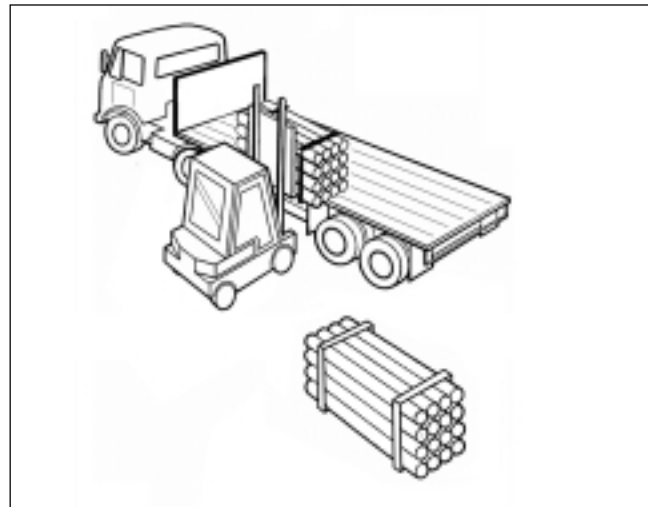
Pipes should be stacked on a reasonably flat surface free from sharp projections, stones and other protuberances. Side support should be provided at intervals of not more than 1.5m and these supports should preferably consist of battens not less than 75mm wide.

Pipes should be uniformly supported throughout their length. If this is not possible, timber battens at least 75mm wide, at spacings not greater than 1 m centres, should be placed beneath the pipes. Preferably, pipes of different size and wall thickness should be stacked separately, or where this is not possible, those with larger diameters and thicker walls should be at the bottom. It is preferable that pipes should not be stored one inside another.

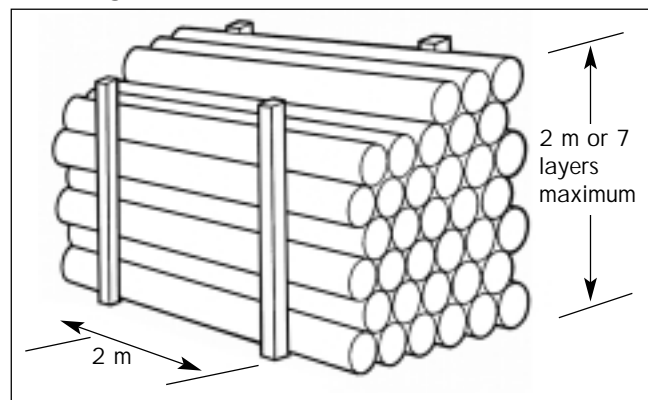
If spigot and socket pipes are stacked, sockets should be placed at alternate ends of the stack with sockets protruding so that pipes are evenly supported along their entire length. Pipe stacks should not exceed 7 layers, with a maximum height of 2m.

#### STORED IN THE OPEN

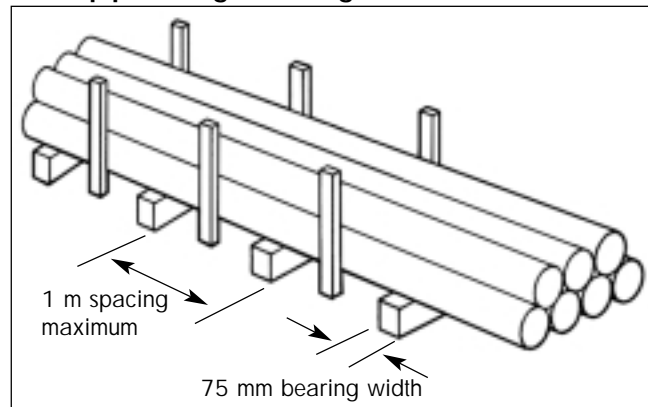
When stored in the open for long periods or if exposed to strong sunlight - cover pipes with an opaque material.



Handling block bundles



Loose pipe storage on the ground



#### STORAGE - LOOSE PIPE

Different sized pipe should be stacked separately. If this is not possible we recommend that larger sized diameter pipe should be stacked at the bottom, not more than seven layers high or to a maximum height of 2 m.

#### SOLVENT CEMENT/CLEANING MATERIALS

These should be stored in a cool place away from direct sunlight and away from any heat source.

#### **4.03 MATERIALS**

Pipes and fittings are manufactured mainly in PVCu. Many fittings are injection moulded with integral snap caps and seals.

Polypropylene material is used for 450mm and 250mm inspection chamber bases and raising pieces.

High density polyethylene (HDPE) is used for the manufacture of snap caps.

#### **4.04 COLOUR**

Drainpipes and fittings are golden brown unless otherwise stated.

#### **4.05 CHEMICAL RESISTANCE (SEE MODULE 12.01)**

Hunter PVCu drain and sewer products are exceptionally resistant to chemical attack in the form of liquids, effluent and gases.

Acids and alkalis commonly occurring in the ground have no effect on PVCu.

However where organic solvents are likely to discharge down PVCu pipes or leak into the surrounding soil, or where PVCu pipes are being used for other than established practices, specifiers, engineers and end-users should consult the comprehensive Chemical Resistance Tables which can be found in CP3 12: Part 1 Plastic Pipework (Thermoplastics Material).

*Note: For full Chemical details see Module 12.01*

#### **4.06 THERMAL PROPERTIES**

Hunter Plastics standard pipes and fitting are produced in accordance with BS EN 1401-1: 1998 whilst all ancillary fittings and pipes are manufactured in accordance with BS 4660: 2000 and are designed to withstand the temperature of normal effluent discharges into drainage systems.

Push-fit sockets allow expansion to take place, provided that spigots are inserted into sockets in accordance with manufacturers recommendations (see Jointing/Push-fit).