



**Espiroflex**

FÁBRICA DE TUBERÍA FLEXIBLE



# HIDROTUBO<sup>®</sup>

the original

USER'S MANUAL



**Espiroflex**  
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Flexible pvc hose with smooth inner and outer surfaces reinforced through a rigid anti-schock pvc spiral.

**PVC FLEXIBLE HOSE WITH HELIX REINFORCEMENT FOR SUCTION AND DISCHARGE OF ACQUOUS MATERIALS**

## Storage

**NOTE: ALWAYS STORE THE HOSES INDOORS**



**HIDROTUBO** , is available in 25 or 50mt coils film-wrapped



The coils are better stored horizontally and always indoors as direct exposure to sun-light results in high internal temperature eventually deforming the hose.

It is advised not to pile heavy objects on top of hidrotubo coils to prevent that same effect.

# Installation

Hidrotubo is used in the domestic domain for its ease of use with the small connections of the several sewage points in the house. It is also used in swimming-pools, whirlpools and air-conditioning systems, in this latter case to extract the condensed water.

Being as flexible as it is Hidrotubo allows for a substantial save in connecting parts while at the same time prevents any flow losses that might arise from using those parts.

Hidrotubo of diam. 65x75 and upwards are used mainly in the outside of buildings to channel the discharged waters with several advantages against the rigid pvc pipes, namely less sonority and ease of use, installation and storing.

The nominal diameter of the hose used for discharge purposes must not be decreased in the direction of the flow and be installed steeply enough so as to allow it to become totally empty.

In underground installations, HIDROTUBO must be lying firmly on the ground avoiding the contact with elements that may eventually pierce or deform the hose. To this purpose it is highly advisable to "cradle" the hose using sand.

The hose should not be bent more than its bending radius as according to the technical datasheet as it would result in some clogging and the fitting eventually coming off the hose.



Save money  
Save time  
Hassle-free



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# AENOR certified



**FLEXIBLE PVC HOSE FOR HIDRO-SANITARY SYSTEMS SUITABLE FOR ALL TYPES OF FITTINGS AVAILABLE IN THE MARKET**



This highly flexible hose features fixed external diameters and a rigid pvc helix to reinforce its structure which is not in contact with the products running through it.

Works with P.V.C as well as P.E fittings, allowing for a perfect seal when correctly glued.

**Hidrotubo Espiroflex** is easy to cut and suitable for most glues available in the market.

**Hidrotubo Espiroflex** is very easy and quick to install saving in connecting parts.



In an average installation HIDROTUBO Espiroflex will save the installer around 15% of the cost compared to using rigid pvc. It is available in coils of up to 50mts what will avoid constant cutting and glueing.

Adaptable to any type of facilities, drainage, health circuits of purification of swimming pools, gardening, whirlpool baths, condensation in facilities.

# Technical features

Flexible P.V.C hose in compliance with norm UNE EN ISO 3994, with an internal rigid P.V.C helix. Virtually non-deformable and anti-shock with smooth inner and outer surfaces being its bending radius 3 times the diameter.

Resistant to temperatures from -10°C up to 60°C. This hose has been devised to be coupled with female glueing accessories (P.V.C outlet accessories in compliance to norm UNE 53114 and pressure according to norm UNE 53112) and PE fitting according to norm ISO 14236.

It is also within the scope of the norm its use with male accessories to be connected internally.

Product extremely easy to handle, install and stock. Highly adjustable to uneven grounds, surfaces or installations.

## **Branding**

The word AENOR as well as AENOR's logo, number of contract, reference to the relevant norm, trade mark and manufacturer's identification, type of hose, nominal internal and external diameter and year of production must all appear on the hose every meter.

**To dim.13 from 125  
ii Únicos !!**



Ø Int. I.D. mm.	Ø Ext. O.D. mm.	Peso gr/ml	Vacío m H2O	Presión Servicio bar	Presion Rotura bar.	Radio Curvatura mm.	Largo Rollos Mts.
13	16	100	7	7	22	39	25-50
16	20	155	7	7	22	48	25-50
20	25	240	7	7	22	60	25-50
25	32	400	7	7	22	75	25-50
26	32	370	7	5	16	78	25-50
27	32	334	7	5	16	81	25-50
34	40	480	7	5	16	102	25-50
35	40	400	7	5	16	105	25-50
42	50	710	7	5	16	126	25-50
43	49	550	7	5	16	129	25-50
43	50	685	7	5	16	129	25-50
55	63	1000	7	5	16	165	25-50
65	75	1400	7	4	12,5	195	25-50
80	90	1800	7	4	12,5	240	25-50
100	110	2200	7	3	9,5	300	25
110	125	3700	7	3	9,5	330	25

# Glueing guideline

Airtight bonding with special glues for PVC.

To obtain a sealing resistant to pressure follow the steps below:

- 1 – Verify that glue is in perfect condition.
- 2 – Carefully clean up the surface to glue with a cleaning solvent for PVC.
- 3 – If the solvent has been properly applied, the surface will look its brightness.
- 4 – Once the surface is dry, apply the glue all around the end of the hose and also on the edge.
- 5 – Apply again the glue on the hose.
- 6 – Slip the end of the hose into the fitting without twisting it.
- 7 – Let the glue to adhere without exerting any pressure on the hose.
- 8 – Allow to settle and do not check the adherence within the first 6 hours. For peace of mind, check between the following 12 and 24 hours (depending on ambient temperature conditions)

## *Pictures*



**(Step 1)**



**(Step 2)**



**(Step 3)**

# Hidrotubo installed in swimming-pool water systems

## ***High resistance to the chlorine!!***

The action of disinfectants (between 0,5 y 1,5 ppm of free residual chlorine) do not alter the molecular structure of the raw materials composing the hose.

After a number of tests run to assess the effect of different concentrations of the most widely used type of chlorine tablets, we observed that no damage was endured by the HIDROTUBO at concentrations over 10 ppm, which is the maximum concentration normally found around the skimmer.

For the hose to be damaged there must be high concentrations of residual chlorine over a long period of time, situation which arises when tablets are used without water being renewed.

## ***CHEMICAL RESISTANCE OF HIDROTUBO TO SLOW-DISSOLUTION CHLORINE TABLETS (ÁCIDO TRICLORO ISOCIANÚRICO)***

A number of different concentrations were prepared to dip the HIDROTUBO in it during a period of time elapsing for a month.

### ***CONCENTRATION 1000 ppm***

Variation in the shade of grey, the rigid spiral turns from white to brown.

Variation of mass : +4,7% Variation of volume: +5,5%

### ***CONCENTRATION 100 ppm***

Variation in the shade of grey, the rigid spiral remains white.

Variation of mass: +0,3% Variation of volume: +0,7%

### ***CONCENTRATION 50 ppm***

No changes in the colour of the hose nor variations of mass or volume were observed.

### ***CONCENTRATION 10 ppm***

No changes in the colour of the hose nor variations of mass or volume were observed.

### ***\* 1 ppm = 1 mg / litro***

A normal concentration of free residual chlorine must be between 0,5 y 1,5 ppm whereas the concentration in the area around the skimmer can reach up to 10ppm as the tablets are laid in a nearby basket.

It can be concluded from the previous statements that HIDROTUBO can be used in water treatment circuits in swimming-pools.

We must insist again that For the hose to be damaged there must be high concentrations of residual chlorine over a long period of time, situation which arises when tablets are used without water being renewed.

DEPARTMENT OF QUALITY (21-07-2005)



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# Insurance and guarantee

HIDROTUBO falls within the coverage of a civil liability policy operated by WINTERTHUR for problems derived from bad manufacture practices and/or raw materials.

## **IT IS NOT COVERED BY THE GUARANTEE:**

### **GLUEING**

The use of glues which are not fit for flexible PVC hoses.

Improper fittings

Not following the basic rules for glueing.

### **STORAGE**

Storage of Hidrotubo outdoors in full exposure to the sunlight.

To pile up heavy items on top of coils of Hidrotubo as this could damage the hose.

### **INSTALLATION**

Do not use inadequate tools which might perforate the hole during the digging-out.

Do not install hoses which present diameters which are not in compliance with the norm or look unsuitable for its purpose.

And generally, practices which are against the installation guidelines provided by the manufacturer.





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# Garantía de calidad del producto

**TUBERIA FLEXIBLE DE P.V.C. HIDROTUBO FABRICADO SEGÚN NORMA UNE EN 3994 Y CERTIFICADO AENOR DE PRODUCTO.**

Con el objeto de ofrecer a nuestros clientes un producto de calidad reconocida, el HIDROTUBO es conforme con los requisitos establecidos en **la Norma UNE-EN-ISO 3994:2001** y como garantía de ello, somos licenciatarios de la **MARCA N AENOR** de:

**"Manguera flexibles de termoplásticos tipo 2 serie 1" Marca comercial: HIDROTUBO**

La calidad de este producto está asegurada por el control tanto en la fabricación como en el laboratorio.

Los ensayos a los cuales este producto de somete son:

Aspecto

Dimensiones

Presión Interna a 23°C

Presión Interna a 55°C

Radio de curvatura

Radio de curvatura en frío.

Perdida de masa por calentamiento.

Presión pulsante

Resistencia al vacío.

Resistencia a la fractura del refuerzo.

Periódicamente el organismo AENOR, efectúa auditorias de seguimiento para los productos certificados, para comprobar que Espiroflex, cumple con las Normas, los reglamentos aplicables y los controles establecidos.

**ESPIROFLEX,S.A.. fue la primera empresa en obtener la certificación AENOR del producto, concretamente en el año 2001, y es el único con la marca comercial HIDROTUBO.**