

# LEVAJOINT WATERSTOP

## DUMBBELL TYPE D TPV / TPE - R



**LEVAJOINT D TPV / TPE-R** Waterstop's raw materials, referred to as "thermoplastic rubbers", are a copolymer or a physical mix of polymers (pvc and a rubber) which consist of materials with both thermoplastic and elastomeric properties. **LEVAJOINT D TPV / TPE-R** Waterstops show both advantages typical of rubbery materials and plastic materials. The principal advantage of **LEVAJOINT D TPV / TPE-R** Waterstops is the type of cross linking bond in their structures. In fact, cross linking is a critical structural factor which contributes to impart high elastic properties. The crosslink in thermoset polymers is a molecular bond created during the vulcanization process. **LEVAJOINT D TPV / TPE-R** Waterstops is unaffected by concrete additives and most water solutions of organic chemicals, resist a wide range of oils, solvents and aggressive chemicals and are not readily soluble in any common solvent. Alcohols, ketones, glycols, esters and aqueous solutions of acids, bases and salts have little effect on **LEVAJOINT D TPV / TPE-R** Waterstop.

### USES

- Water/Waste Water Treatment Plants
- Lock and Dam Systems
- Reservoirs and Aqueducts
- Flood Walls
- Retaining Walls
- Foundations
- Tunnels and Culverts
- Bridge Abutments
- Containment Structures and Tanks
- Slabs-on-Ground.

### CHOICE OF WATERSTOP'S SIZE

In order to choose the appropriate width of **LEVAJOINT D TPV / TPE-R** Waterstop, concrete thickness, position of reinforcement and aggregate size and plasticizers uses are concerned. It is essential that concrete is properly englobing it.

As a general rule, the concrete's thickness should be equal or bigger than the **LEVAJOINT D TPV / TPE-R** Centrally fixed waterstop's width.

For concrete slabs having a thickness of less than 250 mm, a smaller section similar to the slab thickness will be more adequate.

## TECHNICAL DATA

**LEVAJOINT D TPV / TPE-R** has three essential characteristics:

- The ability to be stretched to moderate elongations and, upon the removal of stress, return to something close to its original shape.
- Processable as a melt at elevated temperature.
- Absence of significant creep.

PROPERTY	STANDARDS & NORMS	NOMINAL VALUES
Hardness Shore A ( $\pm 3$ )	ASTM D-2240	85
Tensile Strength	ASTM D- 412	2100 psi (14.47 MPa)
Ultimate Elongation	ASTM D-638	480%
100% Modulus	ASTM D-638	1050 psi (7.24 MPa)
Brittle Point	ASTM D-746	-69°F (-56°C)
Stress@ 100% Elongation, psi	ASTM D-638	1000
Ozone Resistance	ASTM D-1171	Passed 460 pphm
Peel Strength @ 23°C	ASTM D-816 mod.	22 pli

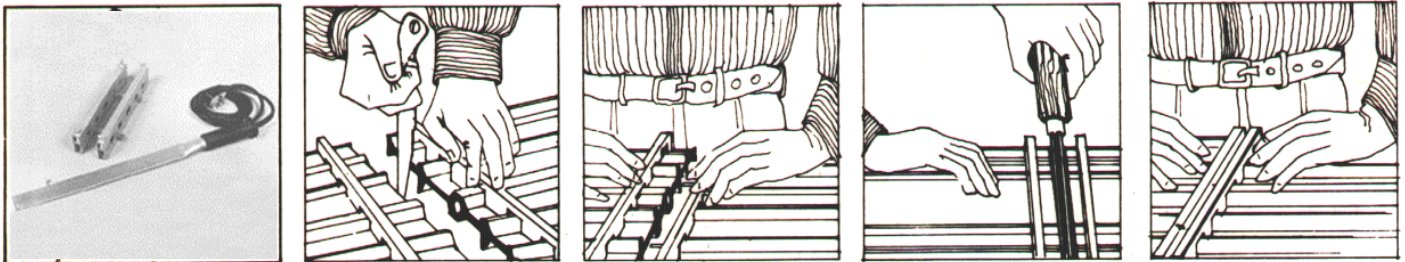
## SPLICING

**LEVAJOINT D TPV / TPE-R** PVC Waterstop may be butt-spliced on the job, with an electrical splicing iron. There is no need for skilled labor to do it. Crimping, shaping, brazing or vulcanizing is not necessary.

The following figures illustrate the splicing method to produce strong water-tight butt weld. Elbows tees and crosses can also be produced using this method.

A splicing iron is the recommended tool for splicing PVC Waterstops. In most instances, although a hot metal plate is still usable where an electric outlet is not available. Where the number and type of welds warrant it, the use of a hot air welding gun and vinyl welding rod is recommended. *Complete **LEVAJOINT D TPV / TPE-R** welding kits, comprising **LEVAJIGS** and **LEVAKNIFE** are available on request.*

## WELDING PROCEDURE



Be sure that: The **LEVAKNIFE** is clean, plug it into the correct voltage (220V) electricity supply and let it warm up.

The ends of **LEVAJOINT D TPV / TPE-R** Waterstop to be welded are identical, clean them with water or a solvent without oil, and dry them.

Clamp the ends of **LEVAJOINT D TPV / TPE-R** to be welded in the **LEVAJIGS** and cut both ends with a sharp cutter, flush with the faces of the **LEVAJIGS**.

Open the **LEVAJIGS** and slide them back , leaving around 10mm of each end appearing , clamp the **LEVAJIGS** tightly in position , then locate the projecting bars of one jig in the holes of the other . Place the **LEVAKNIFE** on the bars between the jigs and slide them together until the **LEVAJOINT D TPV / TPE-R** Waterstop ends are pressed firmly against of the **LEVAKNIFE**'s blades.

The **LEVAJOINT D TPV / TPE-R** should melt without burning or carbonizing.

Hold the **LEVAJIGS** firmly in position until molten PVC beads appear along both sides of the **LEVAKNIFE**.

Slide the **LEVAJIGS** back a little and remove the **LEVAKNIFE** up so that it takes as little PVC as possible with it. Join the molten ends of the **LEVAJOINT D TPV / TPE-R** by sliding the jigs together by exerting pressure holding the ends firmly together for around 25 seconds to allow molten PVC to fuse completely. Put the **LEVAKNIFE** off. As it is still hot, clean well the **LEVAKNIFE** preparing it for the next joint welding.

Without bending the **LEVAJOINT D TPV / TPE-R** , unfasten the **LEVAJIGS** and remove carefully the **LEVAJOINT D TPV / TPE-R** Waterstop.

When the **LEVAJOINT D TPV / TPE-R** becomes cold, test it by bending it several times, in order to be sure of the melting procedure success.

P.S. Where an electrical outlet is not available, the use of a hot metal blade is possible, provided this blade is heated with a clean flame.

When the required temperature is reached, the **LEVAJOINT D TPV / TPE-R** will melt easily when touched against the blade.

Keep attention to the blade's temperature, if it is too hot, the **LEVAJOINT D TPV / TPE-R** will carbonize.

## HEALTH AND SAFETY

Hot weld site jointing of PVC **LEVAJOINT D TPV / TPE-R** Waterstops results in the liberation of hydrochloric acid fumes. Therefore, good ventilation must be provided or a suitable respirator used in closed places. In open places, such precautions are not necessary as no danger to health exists.

## PRECAUTIONS

Avoid drive nails through center of waterstop when forming.

Never lap waterstop .

All joints must be sealed with a heat sealing method.

Avoid embedding center bulb in concrete. It must be positioned in the center of the joint to insure freedom of movement and proper expansion.

Catalog No.	Description	Meters/Roll	Special Length
┌ 010 PWP	Plain Web 10 cm	25	Upon request
┌ 017 PWP	Plain Web 17 cm	25	Upon request



**Bauchrieh - Industrial City - Saffar Building  
P.O.Box 11-9737 - Beirut – LEBANON**

Phone Factory: 00 961 1 690594 – 3 260989  
Fax : 00 961 1 690594  
E.Mail: info@barakeh.com  
www.barakeh.com