

## TEST REPORT

Date in: 03/17/2008

Client Name: CO.E.S. Compagnia Edil Sanitaria S.p.A.  
Address: Via Genova, 13 -Pioltello- MI- Italia  
Attn. : Ing. Richetti

Manufacturer name: CO.E.S. Compagnia Edil Sanitaria S.p.A.

Description of samples:  
n°3 pieces of green Polypropylene pipe COESTHERM HEXA

### Background:

The sample was submitted (mailed) to Galvanofinish by the client  
Sample condition when received (normal, abnormal, departure from standard condition): normal

Scope and purpose of the testing: n°3 (three) samples of green Polypropylene pipe COESTHERM HEXA were valued for compliance with the requirements of Global Migration in according with D.M. 04/06/2004 n. 174, D.Lgs. 31/2001 and D.M. 03/21/1973 and of Specific Migration.

## EXPOSURE AND NORMALIZATION

Samples have been exposed to extraction water for 24 h. at 40°C. As extraction water deionised water meeting specification ASTM D1193 Type II was used. Before exposure pieces have been rinsed with flushing tap water for 30 minutes.

Results have been normalised in according with Section 2 of D.M. n. 174 using the following formula:

$$M = [(m / a_1) \times (a_2 / q)] \times 1000$$

M = result expressed in mg/Kg.

m = leached substance (mg) = 3,0 mg

a<sub>1</sub> = surface in dm<sup>2</sup> of the sample exposed during the test = 2,137 dm<sup>2</sup> = a<sub>2</sub>

a<sub>2</sub> = surface in dm<sup>2</sup> of the sample exposed in the field

q = g. of water used to fill pieces in the field = 115 g

## APPLIED STRUMENTATION

THERMO - Gas Chromatographer / Mass Spectrometer - Focus DSQ - Serial N. 200658

**APPLIED TEST METHOD:** EPA 525.1 "Determination of Organic compounds in drinking water"

## GLOBAL MIGRATION:

Result: M = 26,087 mg/Kg.

(Limit M = 60 mg/Kg. All.III D.M.174)

Global Migration value respects regulation limit.

## SPECIFIC MIGRATION:

Residue obtained from Global migration, has been dissolved with an acid solution, this has been brought up to 1 liter. On the solution a solid phase extraction (SPE) has been made with Hexane. On the extracted solution the specific migration has been determined.

Polypropylene pipe COESTHERM HEXA:

Parameter	Quantity leached from a single piece mg/Kg	Limit value D.M.31 marzo 1973 mg/Kg
Quinoline derivate	0,92	-

None of the substance found with the Specific Migration has a regulation limit.

Metals leached form coloring agent*	Value found in %	Limit value as soluble metal in HCl 0,1N in % (Art.12, All.I D.M. 21 march 1973)
Lead	< 0,0000001	0,01
Arsenic	< 0,0000001	0,005
Antimony	< 0,0000001	0,05
Mercury	< 0,0000001	0,005
Cadmium	< 0,0000001	0,01
Chrome	< 0,0000001	0,1
Selenium	< 0,0000001	0,01
Barium	< 0,0000001	0,01

\*Analysis made with ICP

We certify that all portions of each test performed were under continuous, direct supervision of Galvanofinish lab and that this report is a true report of results from our tests of this material.

dott.sa Paola Zeffiretti  
Lab Director

## REMARKS: FOR YOU INFORMATION ONLY

I campioni sottoposti a prova saranno conservati per 15 giorni dalla data dell'analisi se non diversamente concordato con il cliente.  
Questo rapporto non può essere riprodotto, se non interamente, senza un consenso scritto del laboratorio.  
I risultati del test sono destinati alla conoscenza esclusiva del cliente a cui sono intestate le analisi e i risultati del test non sono applicabili a prodotti simili a quelli testati.