



## PERFORMANCE THAT BEATS ALL OTHER INSULATION MATERIALS

### Phen-omenal fire safety



Phenolic insulation is acknowledged as one of the safest insulation materials for use inside buildings. Now, protection moves up to a new level, with insulphen meeting the fire standards requirements in market around the globe – for example, Class 0 to UK building regulations and in North America achieving ASTM E84 25/50 and SB flame and smoke rating up to 3 inch thick on faced and unfaced material. On top of that; SBI Euroclass B,S1,D0 on Insulphen pipesections with factory applied reinforced alufoil. Insulphen's low smoke emissions and the fact that it gives off virtually no toxic fumes can make a significant difference in the event of a fire – as smokes and fumes are often a greater threat to life than the fire itself.



### Phen-omenal environmental benefits



One of the most important of today's environmental concerns relates to CFCs and their effect on the ozone layer. Insulphen and its production process is 100% free of CFCs and HCFCs. Complying with all international standards and guidelines, it has a zero ozone depletion rating. Insulphen's superior insulation value also leads to an increase in energy savings and a reduction in running costs. Performance that beats all other insulation materials.



### Phen-omenal moisture resistance



Condensation can compromise the effectiveness of insulation materials, a major issue in humid climates. With some materials, moisture penetration can severely affect the thermal efficiency of the insulation. Pipes can be damaged or corroded and the building fabric also deteriorates.

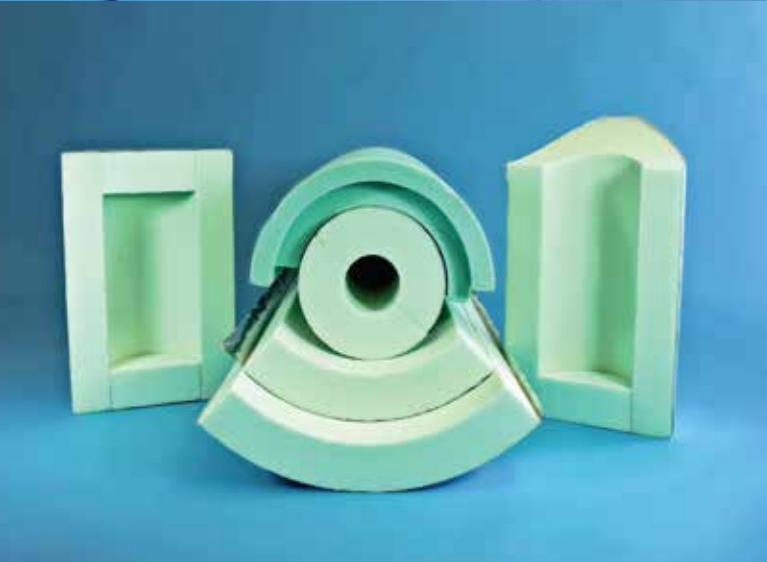
The closed cell content of insulphen gives it a very high resistance to moisture penetration which prevent the wicking effect seen with fibrous 'open cell' type materials.

Insulphen is normally supplied with a factory applied vapor retarding jacket. This all but eliminates the possibility of moisture or moisture vapor intrusion.

### Phen-omenal insulation value



Insulphen has the best k value/k factor/thermal conductivity of any type of commonly specified insulation material. Its high thermal efficiency means that the actual insulation thickness is significantly lower than other materials. By saving space, this makes it much easier to run – and insulate – pipework through difficult or restricted places.



[www.resolco.ae](http://www.resolco.ae)

## INSULATION INTELLIGENCE

Resolco International is a firmly established organisation whose people have years of innovative scientific experience in the laboratory, proven expertise in production techniques and an unrivalled track record in global sales and customer service.

The product is insulphen, produced in our state-of-the-art manufacturing facility in Holland to unique formulation.

This produces rigid blocks of a consistently uniform size and shape - free from pin holes, voids and cracks that compromise the performance of other products. This is then fabricated into pipe sections or pre-formed fittings and supplied for the insulation of all types of building service/process pipe and ductwork. It can also be supplied as sheets for use in cold store and other panel applications.

At Resolco we provide specifiers with guidance on all aspects of the product, its applications and compliance with relevant regulations and performance standards.

### THE NETHERLANDS (HEAD OFFICE)

Resolco International BV  
Distributieweg 4d, 4906 AD  
Oosterhout, The Netherlands  
Postbus 4203, 4900 CE Oosterhout, The Netherlands  
T +31 (0)162 492444  
F +31 (0)162 492441  
E [info@resolco.com](mailto:info@resolco.com)  
www.resolco.com

### NORTH AMERICA AND CANADA

Office Houston Resolco Inc.  
6430A Antoine, Houston, Texas 77091  
T 713 956 7376

### MIDDLE EAST

Resolco Insulation LLC.  
Dubai-UAE  
T +971 4 880 1600  
E [sales@resolco.ae](mailto:sales@resolco.ae)  
W [www.resolco.ae](http://www.resolco.ae)



## Key issues to consider when specifying insulation for chilled water pipes:

- Is the material environmentally safe and compliant with international protocols - i.e. Zero ODP?
- Does the material meet local fire regulations and most importantly, does it have low flame spread and low smoke emissions - i.e. Class 0 or ASTM E84 25/50?
- Is the material closed cell - i.e. resists moisture ingress?
- Is the material thermally efficient - i.e. low k Value - saving energy and CO2 emissions?



Compare Typical Insulation Materials	LOW-K			
	CFC/HFC Free	Low Flame Low Smoke	Closed Cell	Low K Value
Insulphen Phenolic	✓	✓	✓	✓
Fibreglass/Mineral wool	✓	✓	✗	✗
Nitrile/Expanded Rubber	✓	✗	✓	✗
Cellular Glass	✓	✓	✓	✗
Polystyrene (EPS/XPS)	✓	✗	✓	✗
Polyisocyanurate (PIR)	✓	✗	✓	✓

## ONLY INSULPHEN MEETS ALL THESE REQUIREMENTS PHEN-OMENAL

### Other information

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Resolco International BV. The data on this sheet relates only to the specific material designated herein. Resolco International BV assumes no legal responsibility for use or reliance upon this data. For information regarding specific applications of the product please contact Resolco International BV.

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ARE YOU REALLY INSULATING?

ARE YOU PROVIDING A SAFE ENVIRONMENT?

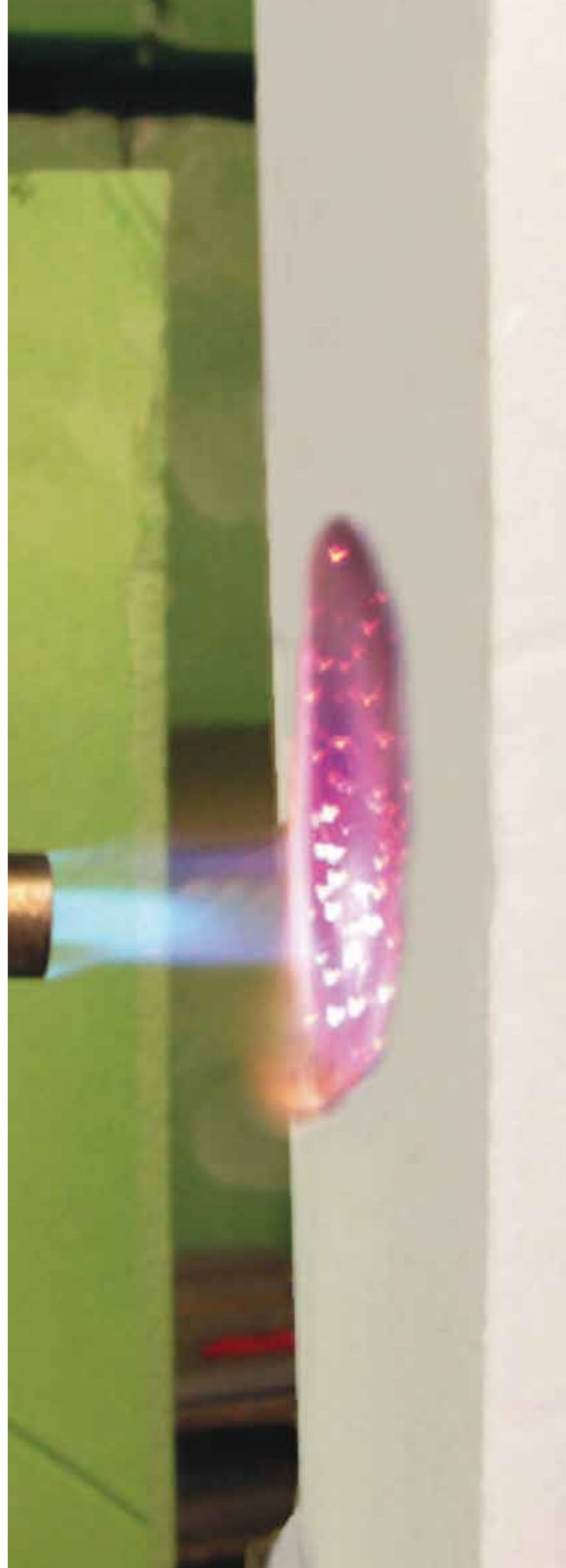
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**AN INSULATION THAT IS FIRE SAFE, SMOKE SAFE AND ENVIRONMENTALLY SAFE...**

- Resolco International is an established organisation whose people have years of innovative scientific experience and an unrivalled track record in global sales and customer services.
- Resolco has developed an insulation material more advanced than anything currently available. This product is "Insulphen" which is manufactured as a block at our factories in Holland and USA. These blocks are fabricated into pipe sections or pipe supports for use on HVAC systems in hospitals, offices, schools, hotels, breweries, food plants and pharmaceutical factories. Insulphen can also be cut into flat sheets for panel applications.
- Insulphen has the lowest insulation value – saving space, saving energy.
- Insulphen is fire and smoke safe – helping to save lives
- Insulphen resists moisture ingress – critical in hot and damp climates
- Insulphen is 100% CFC and HCFC free – environmentally friendly

**INSULATION THAT SAVES LIVES, SAVES ENERGY AND SAVES THE ENVIRONMENT**



**INSULATION INTERNATIONAL**

Phenolic insulation has been used in low temperature and HVAC applications worldwide for close to 25 years, and is the standard specification in the UK and Hong Kong.

In North America, closed cell phenolic has been used for chilled water applications for over 15 years and its use is increasing in many other parts of the world including Singapore, Ireland and the Middle East. To meet the growing global demand, Resolco operates in North America, Europe, the Middle East and the Far East. In all of these regions Resolco has a presence through local fabrication, sales and technical support.

**RESOLCO PROVIDING WORDWIDE COVERAGE**

**USA & CANADA**

Resolco International is now firmly established and supplying in the North America market with Insulphen phenolic foam from its manufacturing base in Houston Texas.

Resolco has established a network of nationwide fabricators and has a strategic partnership in place to provide sales and technical support across North America.

**MIDDLE EAST**

Resolco Insulation LLC based in Jebel Ali near Dubai manufacture Insulphen pipe section, pipe support and cut sheet utilizing the latest CNC cutting equipment. Resolco Insulation have a dedicated external and internal sales and technical support team. Resolco has supplied many prestigious projects in Dubai, the UAE and other Gulf countries. A wider presence is now being established in other Middle East countries and North Africa.

**UK**

GRM Distribution and Manufacturing are one of the leading manufacturers and suppliers of phenolic pipe sections, pipe supports and sheet products in the UK. GRM has an established network of stockists for their range of phenolic products. Resolco and GRM work closely to provide sales and technical support in the UK.

**EUROPE**

Resolco's headquarter and European manufacturing base are located in the Netherlands. From here we can supply cut sections and cut sheet for most applications requiring a highly efficient and fire/smoke safe thermal insulation. Resolco has tested Insulphen to most European standards covering Holland, France and Germany.

**FAR EAST**

Resolco has established partnerships in this region covering Hong Kong, China and Singapore – our partners in these areas fabricate our products and provide local service and support. Please contact us for more information.

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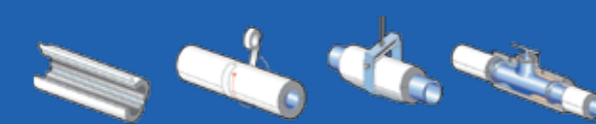
**TOTAL SERVICE FROM MANUFACTURE TO FABRICATION**

Insulphen is manufactured under strict quality control conditions and produced as rigid blocks in standard densities from 40kg/m3 (2.5lb/ft3) to 160kg/m3 (10lb/ft3).

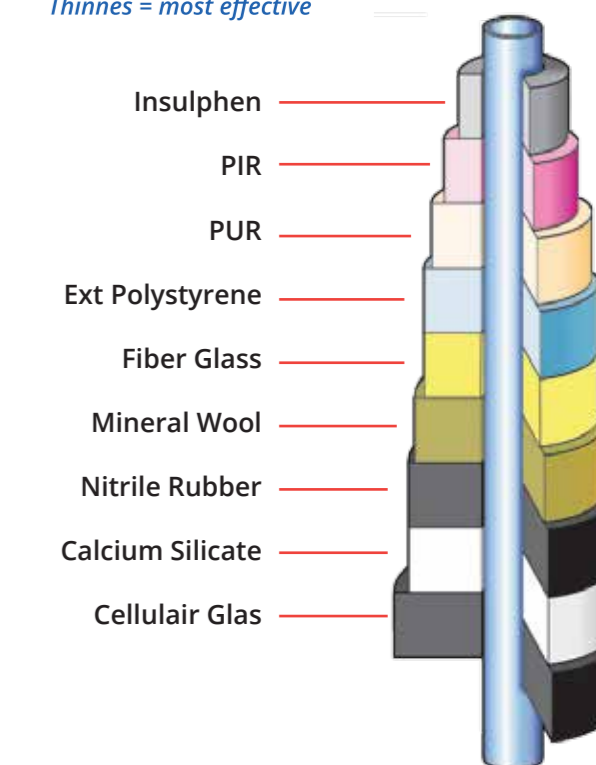
The higher density material is used specifically for the fabrication of pipe supports. These blocks are shipped around the world to our network of approved fabricators who fabricate into pipe sections, sheets and preformed fittings.

Insulphen can be cut to suit any pipe or vessel in any thickness - and all types of fittings including bends/elbows and vessel heads/domes.

For insulated panel applications, sheets are available in 1220mm (4ft) widths.



Comparative Insulation efficiency by thickness  
*Thinner = most effective*



**Resolco International References**



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