

**TEMPERATURE THAT  
ENHANCES QUALITY  
OF LIFE**



## OUR OBJECTIVE:

*Our aim is to offer the best value for money by providing innovative, high-quality products that protect our environment and enhance people's living comfort.*

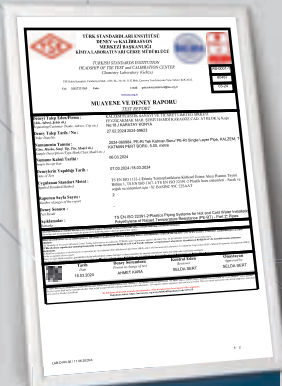


*From its inception to the present, Kalzem's history is a success story, rooted in the strength of its production, driven by research and development.*

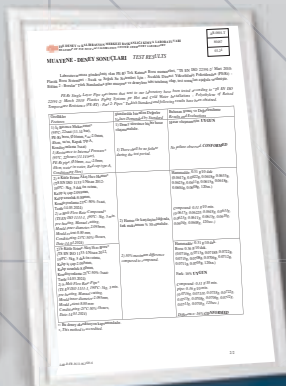
*Kalzem, which has received design registration and utility model certificates for numerous products, is recognized for its quality not only in the domestic market but also in international markets. Kalzem places a high priority on customer satisfaction, supported by a team of experts, quality production, robust logistics, and a high production capacity.*



# “Quality Assurance at Every Stage”



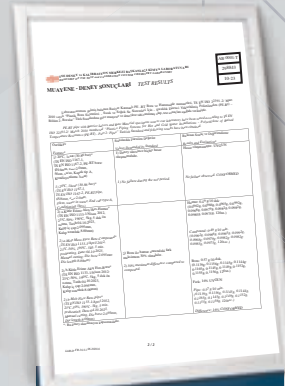
**TSE Certificate**



**TSE Certificate**



**TSE Certificate**



**TSE Certificate**



**CE Certificate**



**ISO 14001**



**ISO 9001**



**ISO 45001**





# What is **PE-RT**

**P**oly **E**thylene of **R**aised **T**emperature Resistance

*PE-RT pipes are polyethylene pipes known for their long-lasting hydrostatic resistance and high mechanical properties, commonly used in heating, cooling, and water transport systems. These pipes are safe for use in hot water systems, mobile systems, and underfloor heating systems. Kalzem PE-RT pipes are made from a new generation of PE-RT Type 2 raw material, featuring a flexible structure with enhanced resistance to temperature, pressure, and chemical substances.*

## **KALZEM PE-RT TIP 2** *Advantages of Oxygen Barrier Pipes:*

- 1- Easy to install due to their flexible structure.*
- 2- Simple installation, even in cold weather.*
- 3- High resistance to chemicals.*
- 4- Withstand high temperatures and pressure.*
- 5- No capillary cracks thanks to the flexible structure.*
- 6- Suitable for use in both hot and cold water systems.*
- 7- Convenient transport and storage as pipes are packed in coils.*
- 8- Time and labor-saving due to easy installation.*



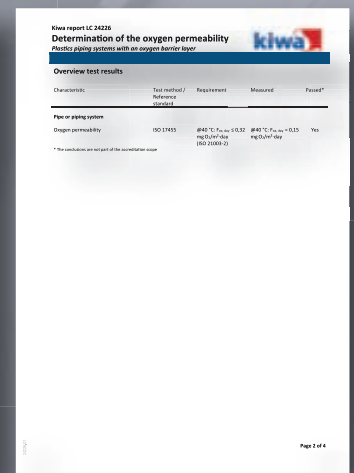


## Why Use Heating Pipes with Oxygen Barrier Layers ?

The hot water or heating fluid circulating in the pipes transfers heat from the pipe walls to the room, providing warmth. Kalzem oxygen barrier pipes feature a low oxygen permeability, effectively preventing the water in the pipe from coming into contact with oxygen due to the oxygen barrier (EVOH) in the middle layer. This barrier prevents oxygen from entering the system, thereby preventing the corrosion of metal parts such as radiators, valves, and pumps, extending the service life of the system, and significantly reducing pipe wall shrinkage.



Our oxygen barrier pipes have been tested by KIWA and have been deemed suitable for use.



Test method  
Reference standard  
**ISO 17455**

Requirement  
**@40 °C:  $F_{O_2, \text{day}} \leq 0,32$   
mg O<sub>2</sub>/m<sup>2</sup>·day  
(ISO 21003 2)**

Measured  
**@40 °C:  $F_{O_2, \text{day}} = 0,15$   
mg O<sub>2</sub>/m<sup>2</sup>·day**

Passed  
**Yes**



# “Perfect Heating, Signature of Our Quality!”

## Heat Emission Data:

The oxygen barrier ensures even heat distribution, resulting in high heating comfort.



## Low Maintenance:

The oxygen barrier prevents corrosion of metal parts in the system, thereby reducing maintenance and servicing costs.



## Energy Savings:

Underfloor heating systems contribute to reducing heating costs by operating at low temperatures between 35 to 50 degrees Celsius.



## What are the advantages

## Improved Air Quality:

Underfloor heating systems offer healthier and safer heating from floor to ceiling. Additionally, since no burnt dust is produced in the heating system, soot does not form on curtains and walls.



## Aesthetic Benefits:

Installing the heating system on the floor allows for optimal room utilization and flexible design options.

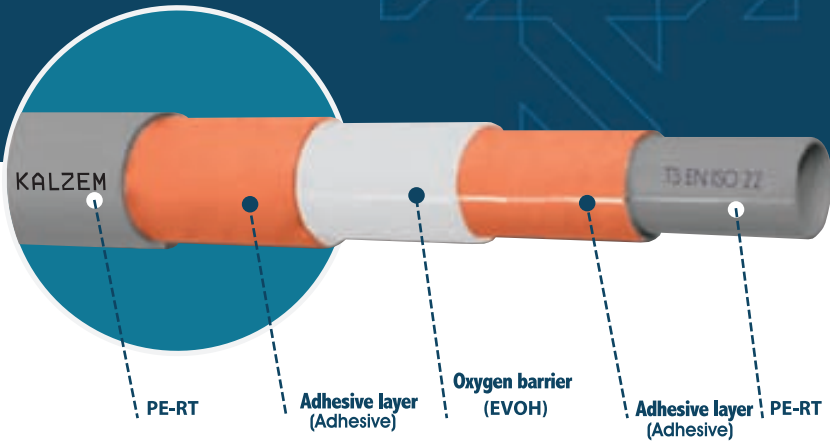
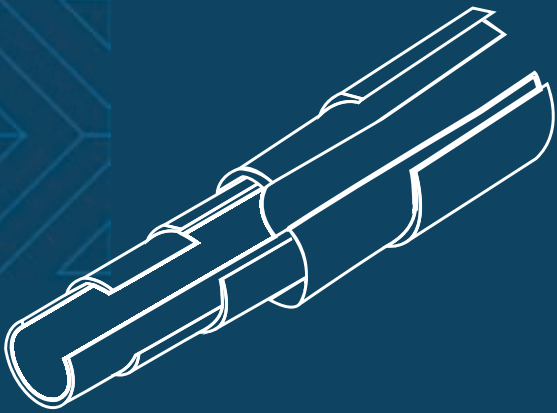


# **KALZEM** Oxygen Barrier Pipes for a Warm Home



# Oxygen Barrier Pipe

(5 Layers)



### Product Features:

- Oxygen barrier: 0,15
- Thermal conductivity: 0,4 W / mK
- Maximum service temperature: 70 °C
- Maximum working pressure: 6 bar
- Minimum installation temperature: -5 °C
- Minimum bending radius: 5 x d

In Kalzem's 5-layer oxygen barrier pipes, the oxygen barrier is placed in the middle layer, providing protection against abrasion, friction, impact, and alum water through the PE-RT material in the outer layer. These pipes are manufactured with advanced technology, preventing damage to the oxygen barrier by positioning it in the middle layer. Kalzem's 5-layer oxygen barrier pipes provide optimal protection of metal parts in the system against corrosion.



ARTICLE NO.	ARTICLE DESCRIPTION	DIAMETER	PACKING
GR516020-240	5 Layer Oxygen Barrier PE-RT Pipe (Grey)	16x2	240 m
GR516020-400	5 Layer Oxygen Barrier PE-RT Pipe (Grey)	16x2	400 m
GR516020-500	5 Layer Oxygen Barrier PE-RT Pipe (Grey)	16x2	500 m

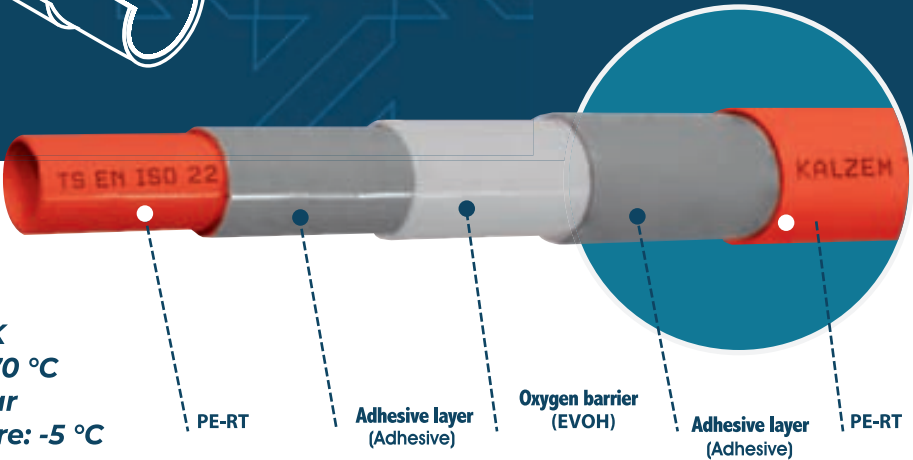


# Oxygen Barrier Pipe

(5 Layers)

### Product Features:

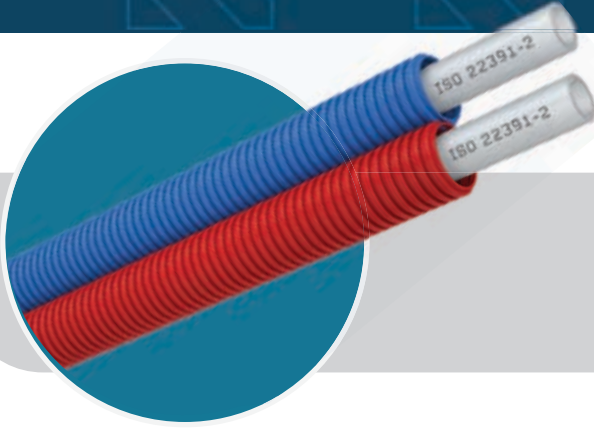
- Oxygen barrier: 0,15
- Thermal conductivity: 0,4 W / mK
- Maximum service temperature: 70 °C
- Maximum working pressure: 6 bar
- Minimum installation temperature: -5 °C
- Minimum bending radius: 5 x d



Thanks to its flexible production structure, Kalzem can manufacture pipes with or without oxygen barriers in various diameters and wall thicknesses according to customer requirements.



ARTICLE NO.	ARTICLE DESCRIPTION	DİAMETER	PACKING
RD520020-80	5 Layer Oxygen Barrier PE-RT Pipe (Red)	20x2	80 m
RD520020-160	5 Layer Oxygen Barrier PE-RT Pipe (Red)	20x2	160 m
RD520020-240	5 Layer Oxygen Barrier PE-RT Pipe (Red)	20x2	240 m

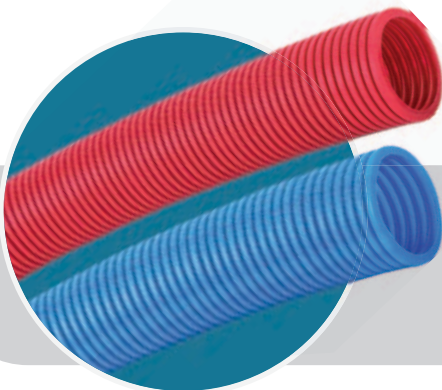


## Sheathed Pipes



*Kalzem PE-RT pipes are used not only in underfloor heating systems with oxygen barrier pipes but also as barrier-free or sheathed pipes in radiator systems for mobile installation applications.*

ARTICLE NO.	ARTICLE DESCRIPTION	DİAMETER	PACKİNG
BF16020.RD250-100	Spiral Sheathed Oxygen Barrier PE-RT Pipe (Red)	16x2	100 m
BF16020.BL250-100	Spiral Sheathed Oxygen Barrier PE-RT Pipe (Blue)	16x2	100 m
GR516020.RD250-100	Spiral Sheathed 5-layer Oxygen Barrier PE-RT Pipe (Red)	16x2	100 m
GR516020.BL250-100	Spiral Sheathed 5-layer Oxygen Barrier PE-RT Pipe (Blue)	16x2	100 m



## Spiral Sheath



ARTICLE NO.	ARTICLE DESCRIPTION	DİAMETER	PACKİNG
RD250-100	Spiral Casing Pipes	25 mm	100 m
BL250-100	Spiral Casing Pipe	25 mm	100 m



# Angled Clamp 90



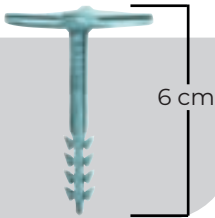
ARTİKEL-NR.	PRODUCT	DİAMETER	PACKİNG
202308-001	Angled Clamp 90	16 mm	240 piece

# Double Pipe Hook



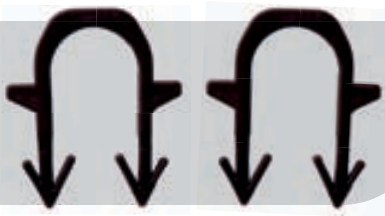
CODE	PRODUCT	PACKİNG
202309-001	Double Pipe Hook	4000 piece

# Styrofoam Plugs



CODE	PRODUCT	PACKİNG
202401-001	Styrofoam Plugs	3000 piece

# Tacker Needles



CODE	PRODUCT	PACKİNG
202402-001	Tacker Needles	10000 piece

“We're Everywhere  
in the World!”



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