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# Insulating materials Specifications



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- Heat insulating characteristics,  $\lambda$  value
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# Materials

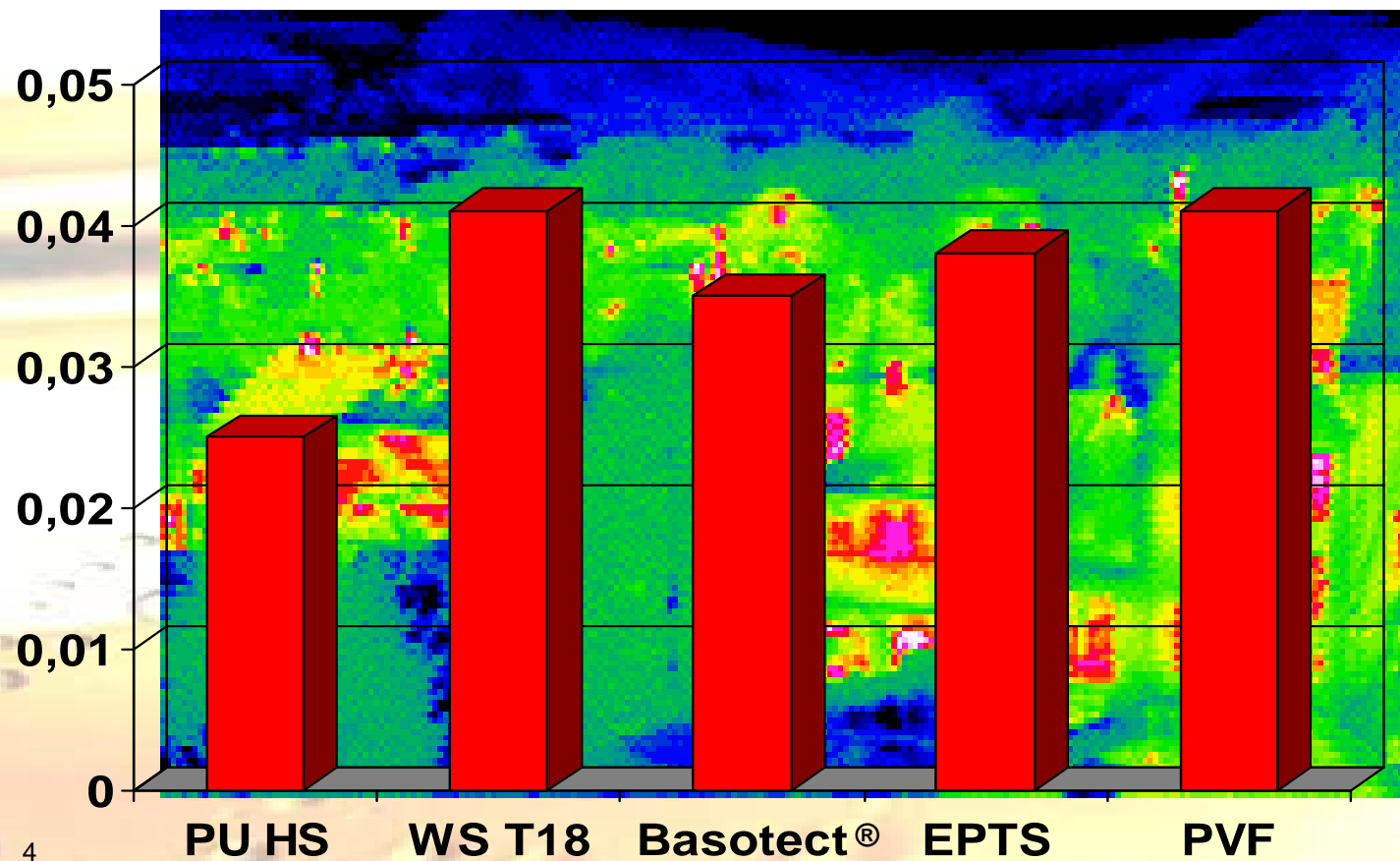
- Polyurethane soft foam
- Melamine resin foam, **Basotect<sup>®</sup>**
- Thermostabilized EPS, **EPTS**
- Polyester fibre mat, **PFV**



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# Heat insulating characteristics

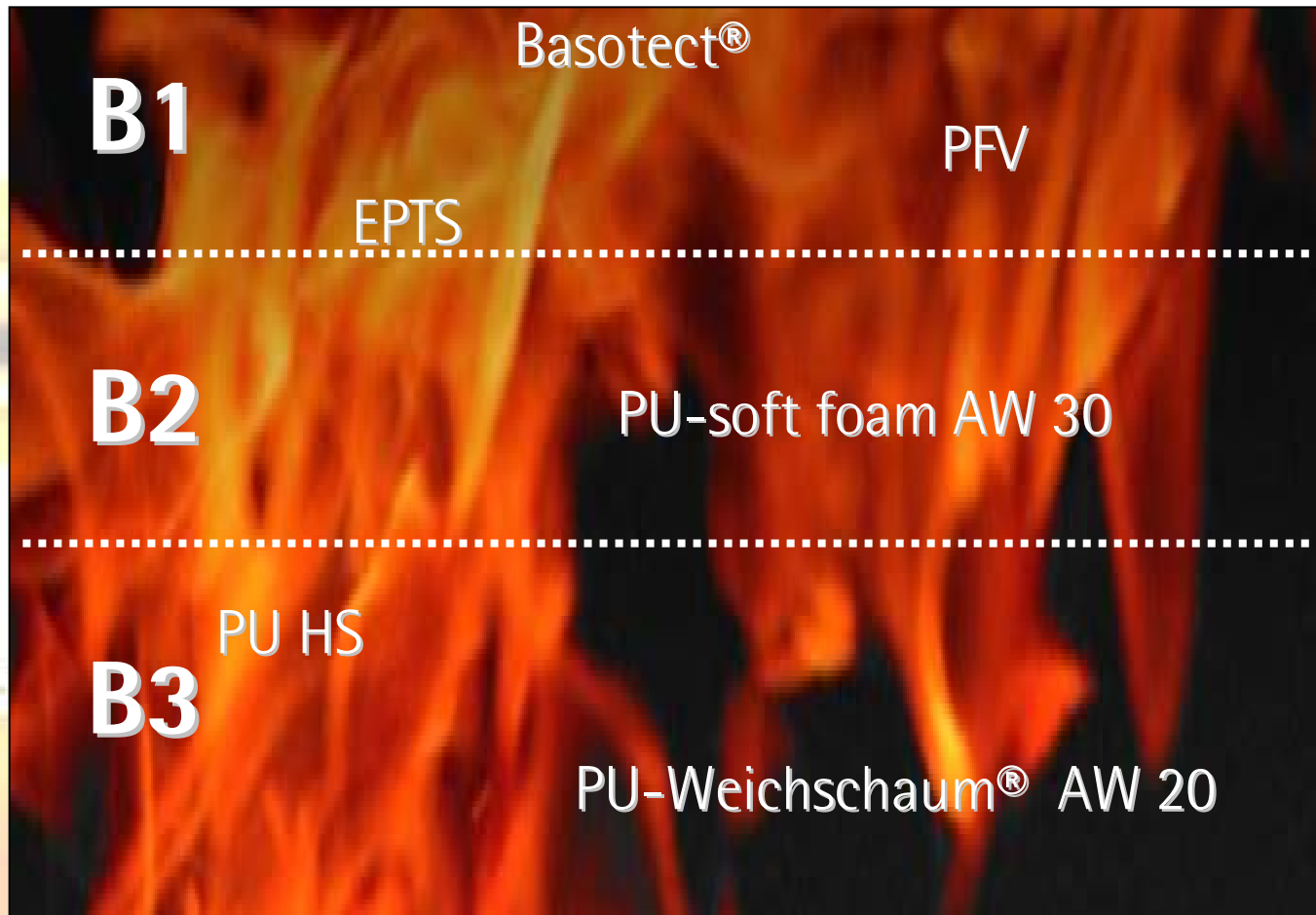
**Lambda value**  $\lambda = W/mK$ , the Lambda value represents the heat conductivity of a construction material.  
The smaller the Lambda value is, the better the heat insulating character of a construction material.



# Flammability DIN 4102



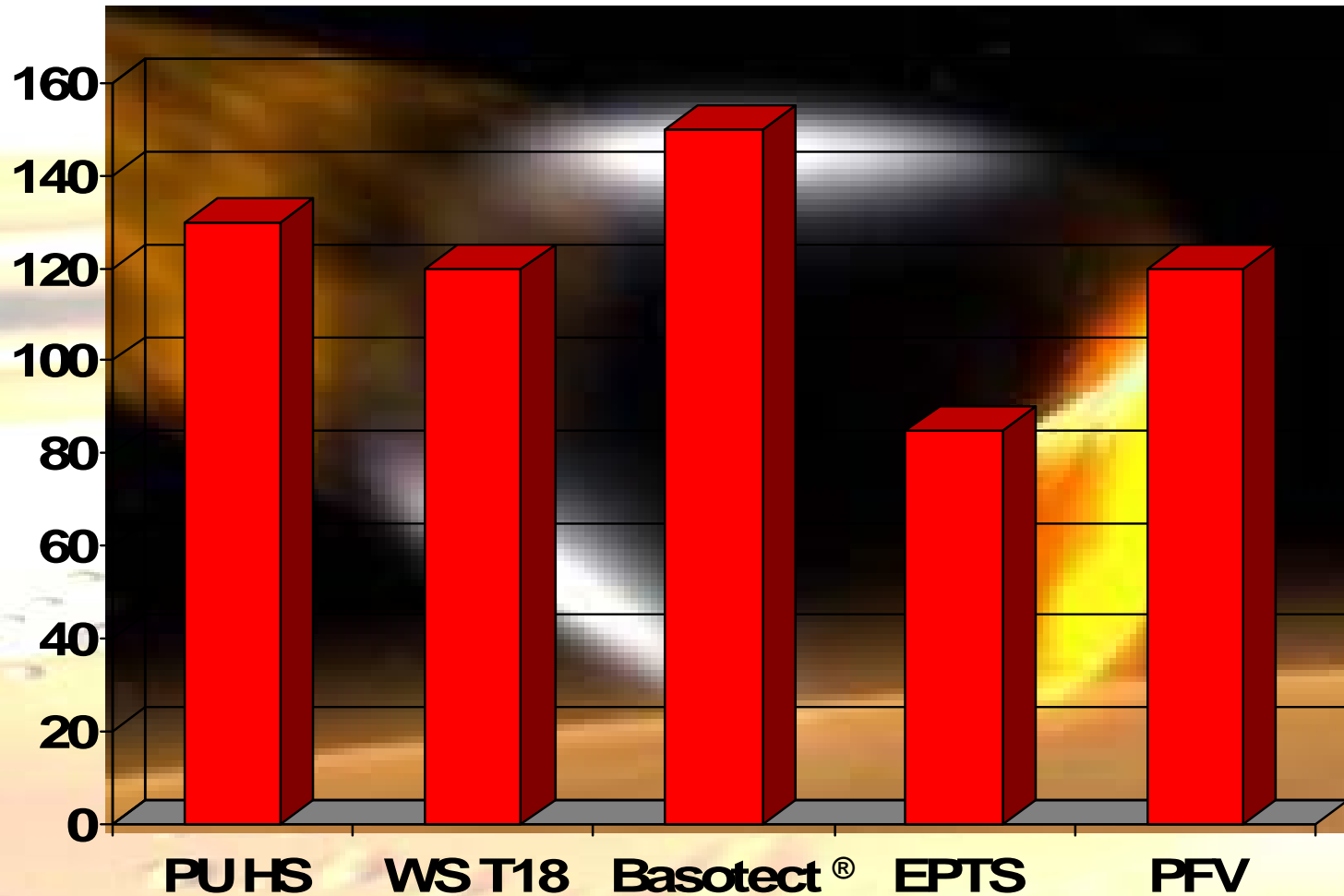
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# Temperature resistance in degrees Celsius



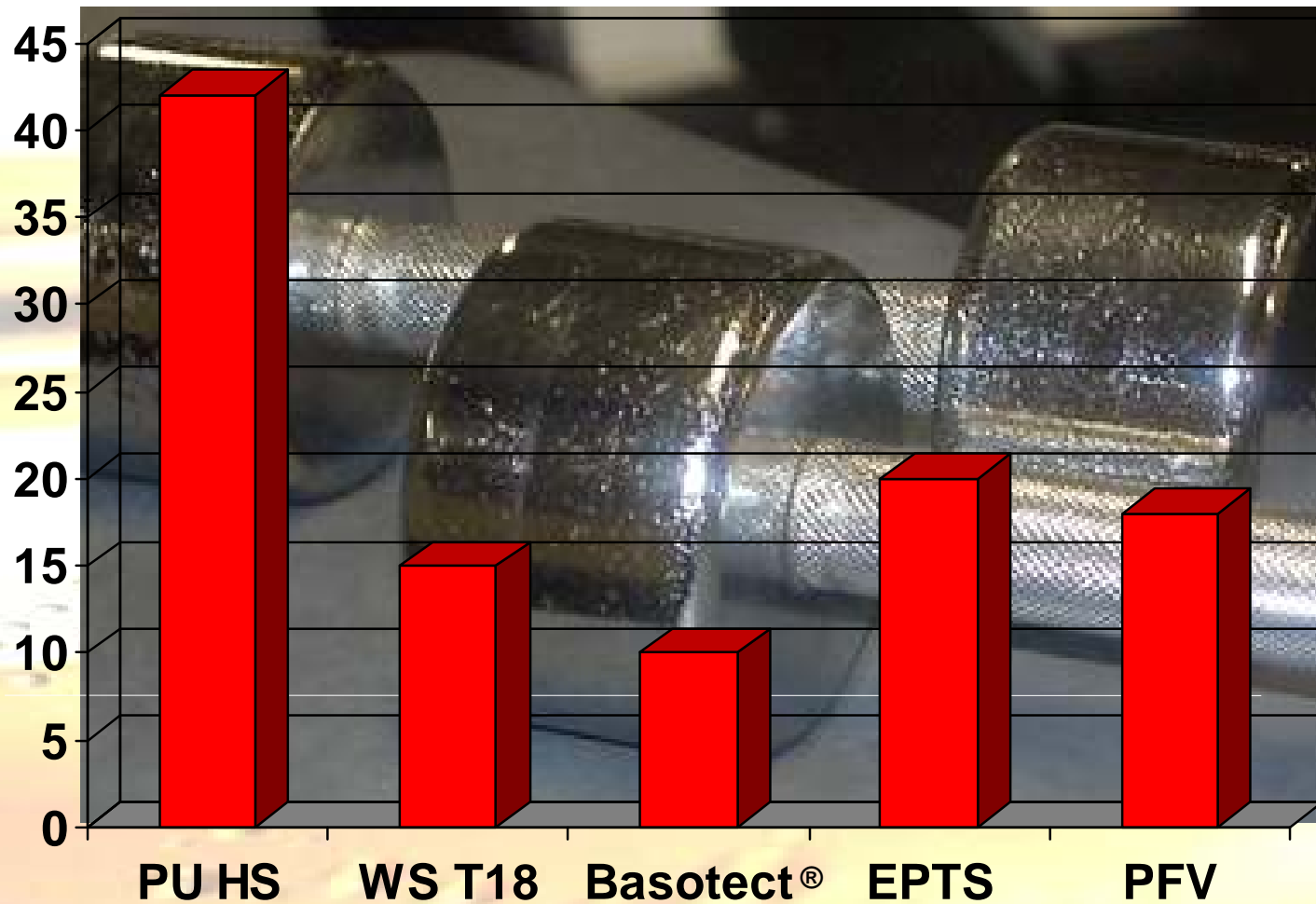
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# Volumetric weight in kg/m<sup>3</sup>



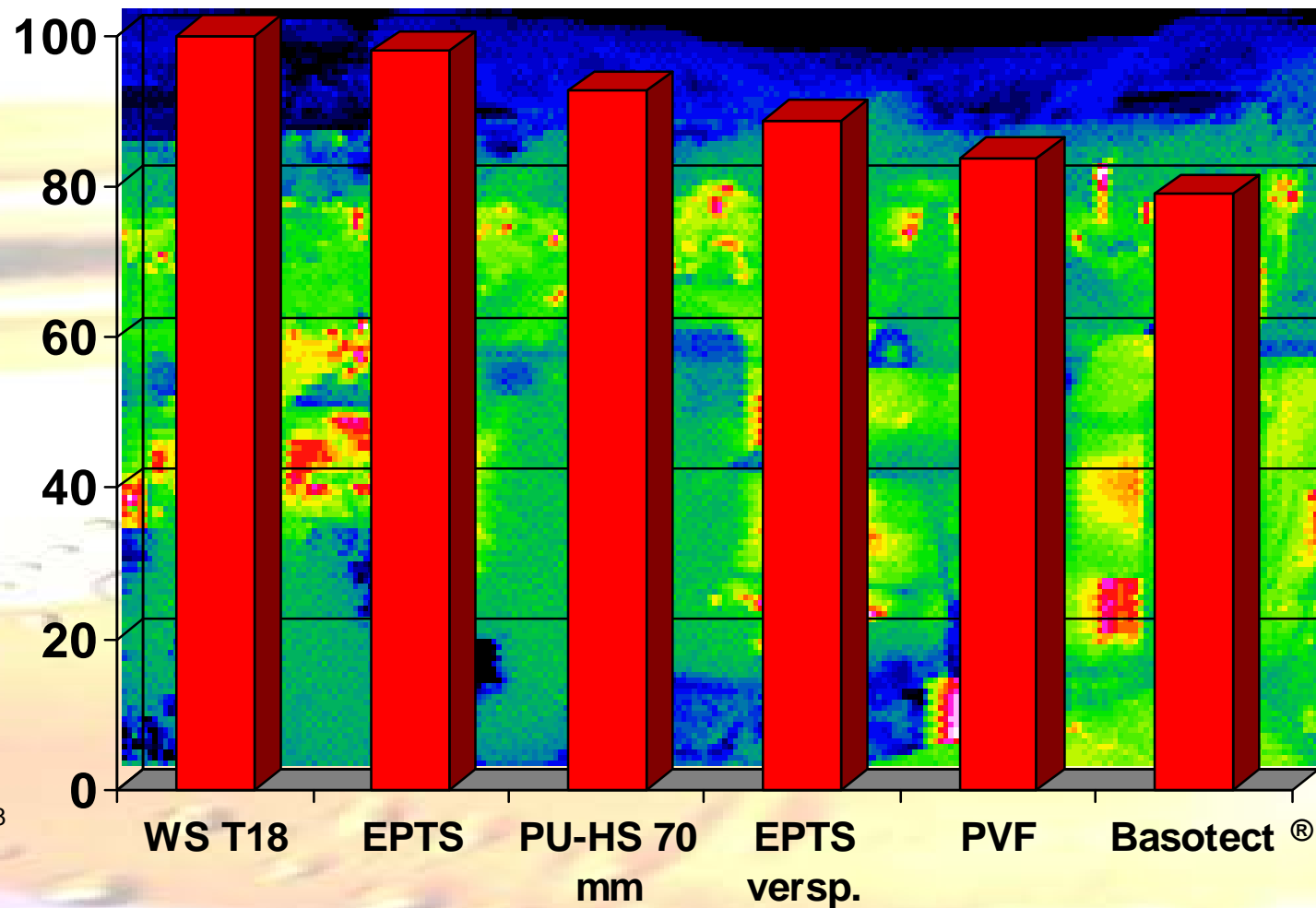


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# Loss of energy in 24h

100 mm standard insulations

The casing, ceiling and ground insulation has the same insulating capability.



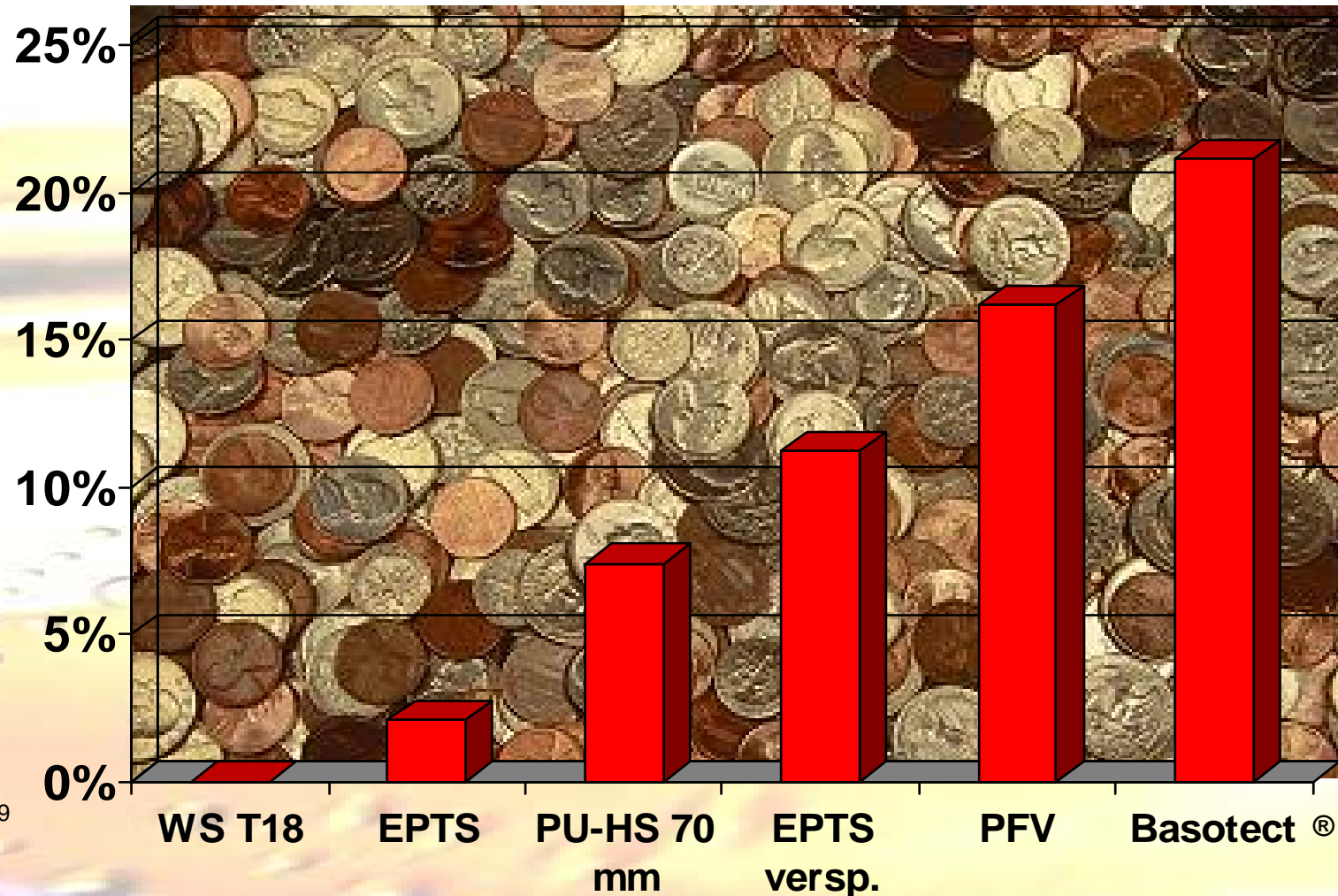




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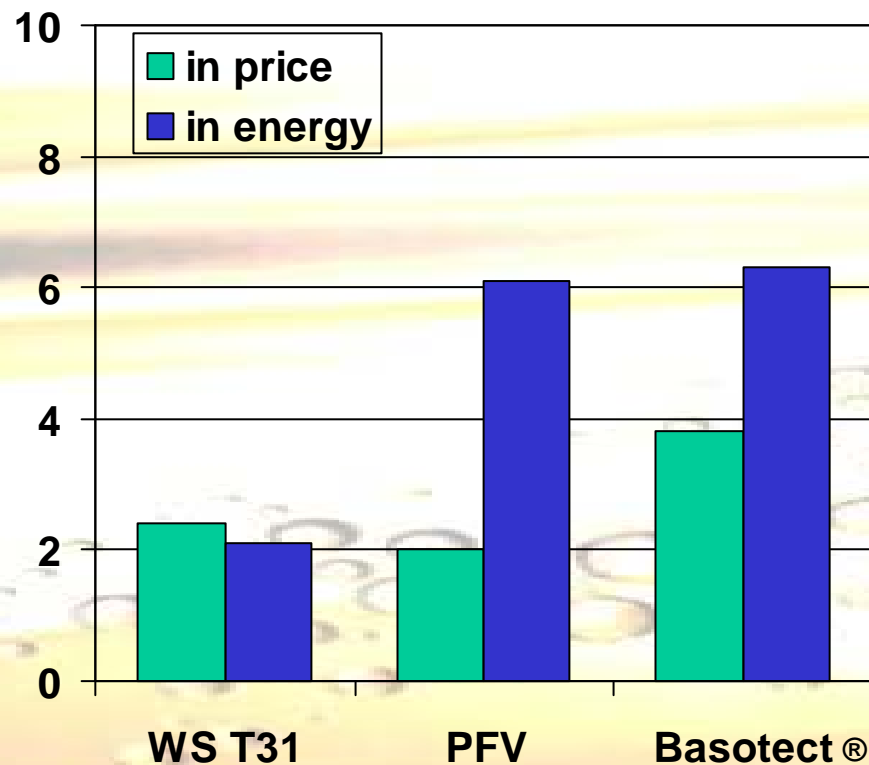
# Economization (%) / year

Basis: 400 ltr., WS T18, Standard



# Modification foil foam

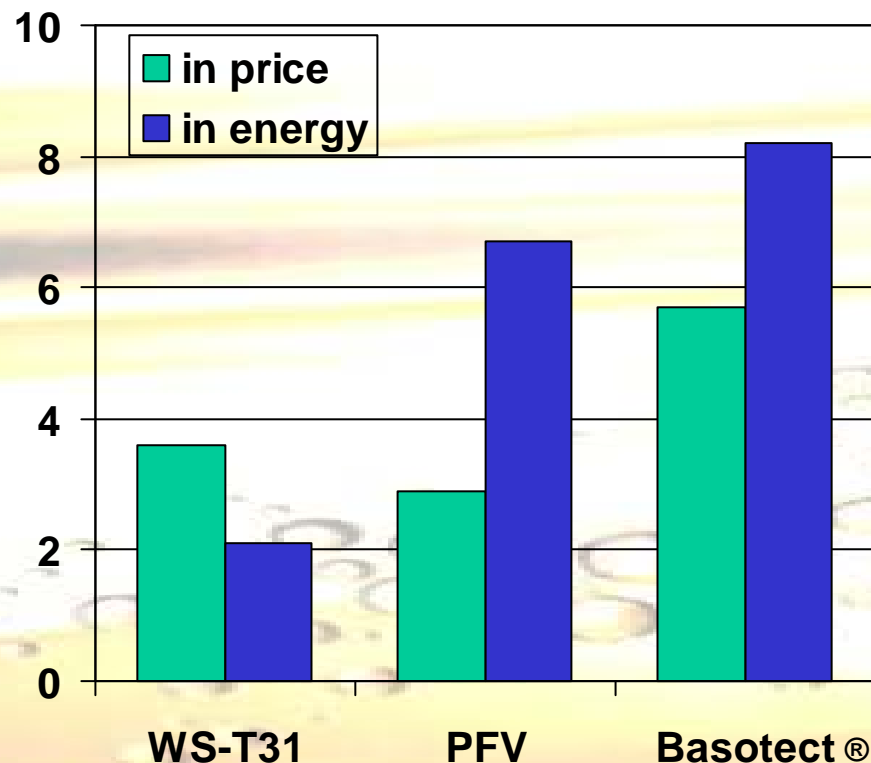
## Influence of ground insulation 100 mm



Changes in % related to standard:

- PFV
  - Best heat insulation
  - Lowest price
- Basotect®
  - Higher dimensional stability
  - Higher price
- PU-WS T31
  - Improved heat insulating characteristics

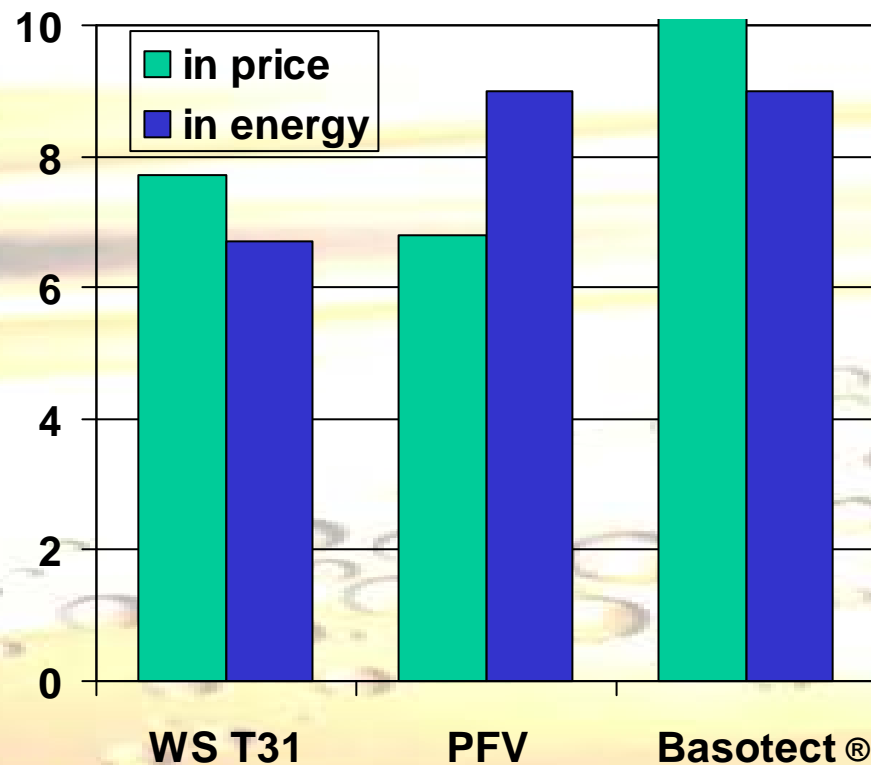
# Modification foil foam Influence of ceiling insulation 150 mm



Changes in % related to standard:

- PFV
  - Good heat insulation
  - Lowest price
- Basotect®
  - Even better heat insulation
  - Higher dimensional stability
- PU-WS T31
  - Improved heat insulating characteristics

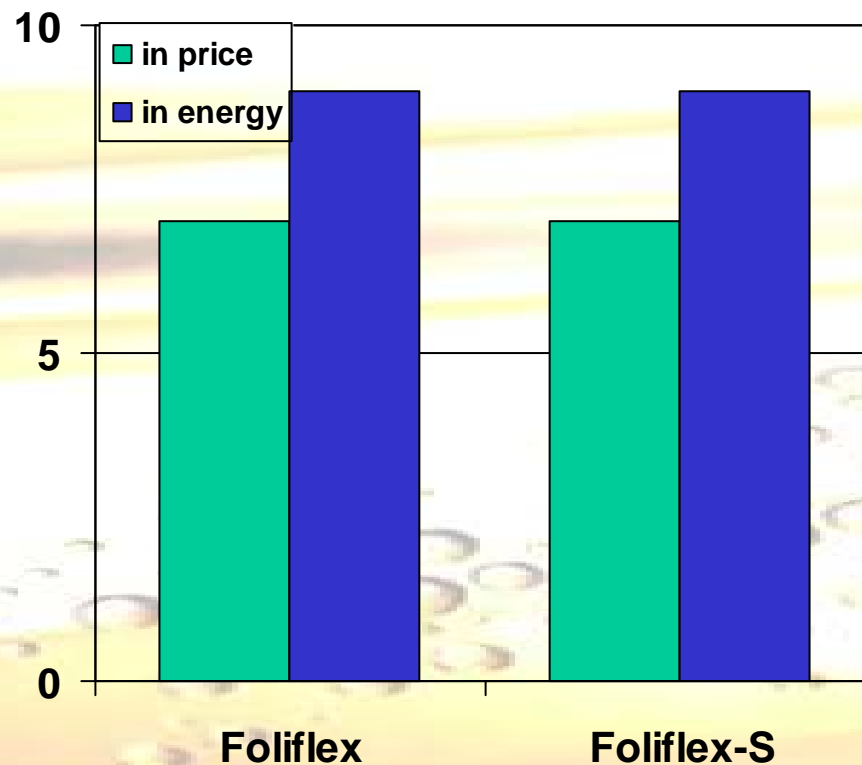
# Modification foil foam Influence of ceiling insulation 200 mm



Changes in % related to standard:

- PU-WS T18
  - Not performed, because
  - No significant improvement
- Other
  - Good heat insulation related to 150 mm
  - Rel. minor differences between each other
  - Higher costs

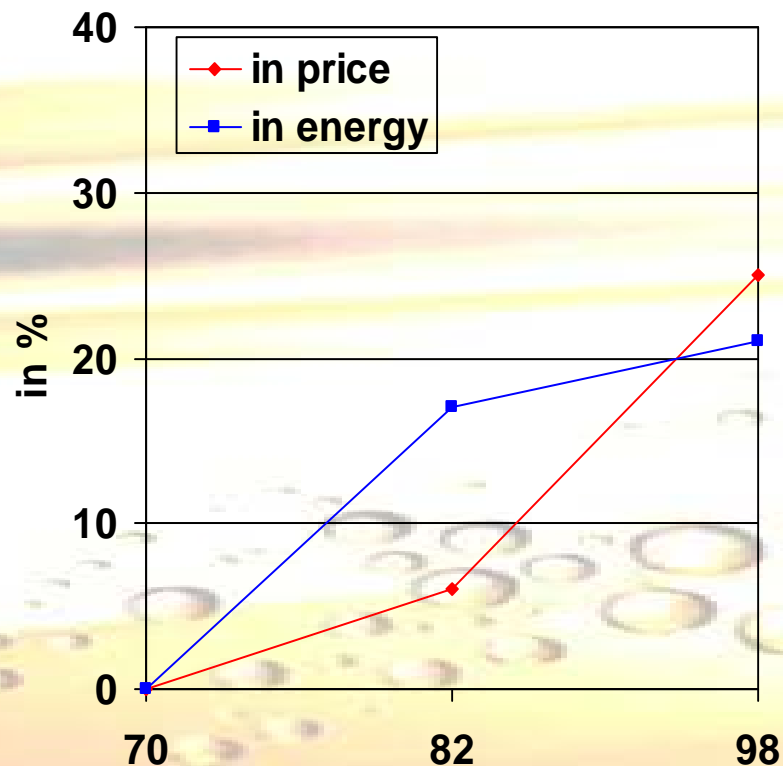
# Influence of regular reflection Foliflex and Foliflex-S



Changes through  
regular reflection in %:

- Considerable decrease of heat losses
- No influence on weight and easy installation

# Influence of material thickness on price and insulation characteristics



Changes in % in an example of Foliflex:

- In lower range
  - Better heat protection
  - Lower cost push
- In upper range
  - Smaller improvement of heat protection
  - Bigger cost push
- Conclusion:
  - Wall thickness >100 mm less reasonable