

# PRATLIPERL®

## THE MODERN SOLUTION FOR ENERGY EFFICIENT BUILDING

Pratliperl, when mixed with cement, produces an eco-friendly, ultra lightweight, thermally insulating & fireproof concrete.

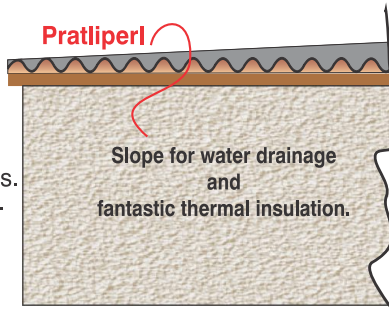
### BENEFITS:

- Exceptional thermal insulation.
- Energy saving “green” product.
- Ultra lightweight; reduces high rise structural building costs.
- Nailable.
- Completely fireproof.
- Durable.
- Good acoustic properties.
- Easy to apply.
- May be gunited when applied to large surfaces (e.g. mine tunnels).



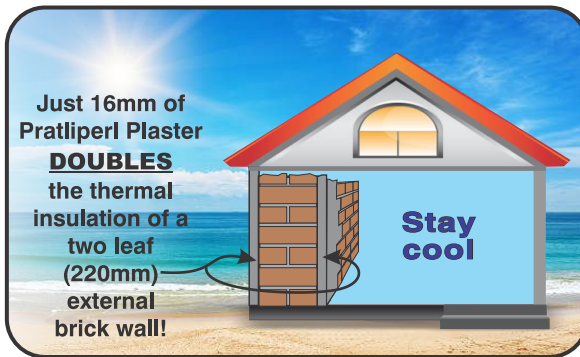
### SOME EXAMPLES OF PRATLIPERL USAGE:

- Thermally insulating and fireproof wall plaster.
- Ultra lightweight concrete, bricks and boards.
- Underfloor insulation and insulated roof decks.
- Lightweight screeds on corrugated iron or concrete roofs.
- Fire proofing structural steel columns.
- Insulating industrial cryogenic tanks.
- Loose fill thermal insulation in wall cavities.
- Pizza oven liners.
- Lightweight tile adhesive filler.



### PROPERTIES:

- **Excellent Thermal Insulator** - As a result of Pratliperl's low density and physical structure, it keeps your house warm in the Winter and cool in the Summer.



- **Resistant to Spalling** - Under fire conditions and, more severely, under water quench conditions (e.g. from a fire hose) following extreme heat, conventional concrete will spall and lose its integrity. Pratliperl remains intact.

- **Superb Strength** - Once cured, Pratliperl has superior strength when compared to ordinary lightweight concretes.

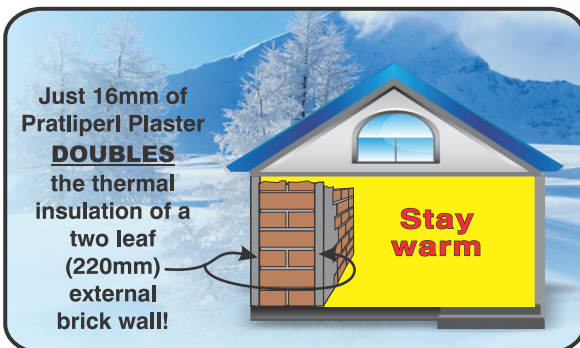


- **Compatible with Cement and Other Binders** - Pratliperl mixed with cement (and many other binders) can produce ultra lightweight panels, boards, bricks and blocks that can be cut, nailed and drilled.

- **Non-toxic and Completely Environmentally Friendly.**

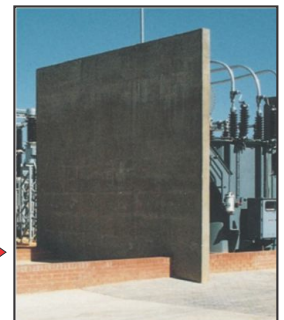
- **During a Fire, Pratliperl Will Not Spall nor Release Smoke or Toxic Fumes.**

- **Exceptional Fire and Heat Resistance** - Can withstand temperatures up to 1250°C without losing its structural integrity.



Fireproof storage room for solar batteries and inverters

Fire Resistant Pratliperl wall between transformers



# PRATLIPERL MIX RATIO CHART

TABLE 1.

## 3 : 1 MIX RATIO (BY VOLUME)





3 : 1 Volume Mix Ratio Recommended Uses	Mix Ratio	PRATLIPERL	Cement	Water <small>May vary with cement type</small>	Approximate Compacted Volumetric yield
External Plaster. Internal Plaster. Built Up Floors (Heavy Loads). Insulating Roof Decks. Fire Seals. Castables (High Strength). Spray Applications. Underfloor Heating Insulation. Lightweight Screeds (High Strength).	Pratliperl : Cement 1 Bag : 1 Pocket	~1 Bag ± 100ℓ 	~1 Pocket ± 33ℓ 	Litres for Screed = 25-30 Litres for Plaster = 28-37	± 0.093m <sup>3</sup> 
	3 : 1 Mix Ratio by Volume	1 Bag = 10 Kg's = ± 100 Litres	1 Bag = 50 Kg's = ± 33 Litres	 DON'T USE TOO MUCH WATER	

TABLE 2.

## 4.5 : 1 MIX RATIO (BY VOLUME)


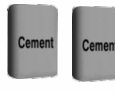


4.5 : 1 Volume Mix Ratio Recommended Uses	Mix Ratio	PRATLIPERL	Cement	Water <small>May vary with cement type</small>	Approximate Compacted Volumetric yield
External Plaster. Internal Plaster. Built Up Floors (Light Loads). Insulating Roof Decks (No Heavy Loads). Fire Seals. Castables (Medium Strength). Spray Applications. Lightweight Screeds (Medium Strength).	Pratliperl : Cement 3 Bags : 2 Pockets	~1 Bag ± 100ℓ 	~1 Pocket ± 33ℓ 	Litres for Screed = 58-72 Litres for Plaster = 74-93	± 0.280m <sup>3</sup> 
	4.5 : 1 Mix Ratio by Volume	3 Bags = 30 Kg's = ± 300 Litres	2 Bags = 100 Kg's = ± 66 Litres	 DON'T USE TOO MUCH WATER	

TABLE 3.

## 6 : 1 MIX RATIO (BY VOLUME)









6 : 1 Volume Mix Ratio Recommended Uses	Mix Ratio	PRATLIPERL	Cement	Water <small>May vary with cement type</small>	Approximate Compacted Volumetric yield
Insulating Roof Decks. Fire Seals. Castables (Low Strength). Spray Applications.	Pratliperl : Cement 2 Bags : 1 Pocket	~1 Bag ± 100ℓ 	~1 Pocket ± 33ℓ 	Litres for Screed = 39-45	± 0.186m <sup>3</sup> 
	6 : 1 Mix Ratio by Volume	2 Bags = 20 Kg's = ± 200 Litres	1 Bag = 50 Kg's = ± 33 Litres	 DON'T USE TOO MUCH WATER	

TABLE 4.

## 10 : 1 MIX RATIO (BY VOLUME)

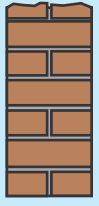
10 : 1 Volume Mix Ratio Recommended Uses	Mix Ratio	PRATLIPERL	Cement	Water <small>May vary with cement type</small>	Approximate Compacted Volumetric yield
<b>(Low Strength)</b> (Reenterable)  Fire Seals.  Castables (Low Strength Very Light Reenterable) Insulation Between Cavity Wall.	Pratliperl : Cement 7 Bags : 2 Pockets	~1 Bag ± 100ℓ 	~1 Pocket ± 33ℓ 	Litres for Screed = 134-170	± 0.651m <sup>3</sup> 
	10 : 1 Mix Ratio by Volume	7 Bags = 70 Kg's = ± 700 Litres	2 Bags = 100 Kg's = ± 66 Litres	 DON'T USE TOO MUCH WATER	

### Example of Pratley Energy Saving:

**COLD 3°C**

**WARM 23°C**

**Unplastered Brick Wall**




$$Q = \frac{\Delta t}{R_B}$$

$$= \frac{20}{0.262}$$

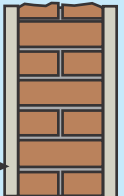
$$\therefore Q = 76.4 \text{ W/m}^2$$

(Note: The electrical analogue ohm's(Ω) law  
I (Current) =  $\frac{V \text{ (Voltage)}}{R \text{ (Resistance)}}$ )



**Ordinary Plastered Brick Wall**


ORDINARY PLASTER



$$Q = \frac{\Delta t}{R_{TOTAL}}$$

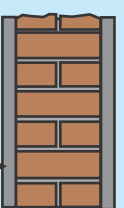
$$= \frac{20}{.020 + .262 + .020}$$

$$\therefore Q = 66.2 \text{ W/m}^2$$



**Pratliperl Plastered Brick Wall**

PRATLIPERL PLASTER



$$Q = \frac{\Delta t}{R_{TOTAL}}$$

$$= \frac{20}{.133 + .262 + .133}$$

$$\therefore Q = 37.9 \text{ W/m}^2$$

