

**MicroFiber®**





# Glasswool Insulation



**Blanket type**



**Board type**

# THE BENEFIT OF Glass Wool



Thermal  
Performance



Acoustic  
Performance



Non  
Combustible



Safe for  
health







## PRODUCTION PROCESS

- Molten glass is spun into fibre-like structures and formed into blanket of Glass Wool
- Made of 80% + glass of various types
- 100% recycled glass from cullet sourcing centers across Thailand



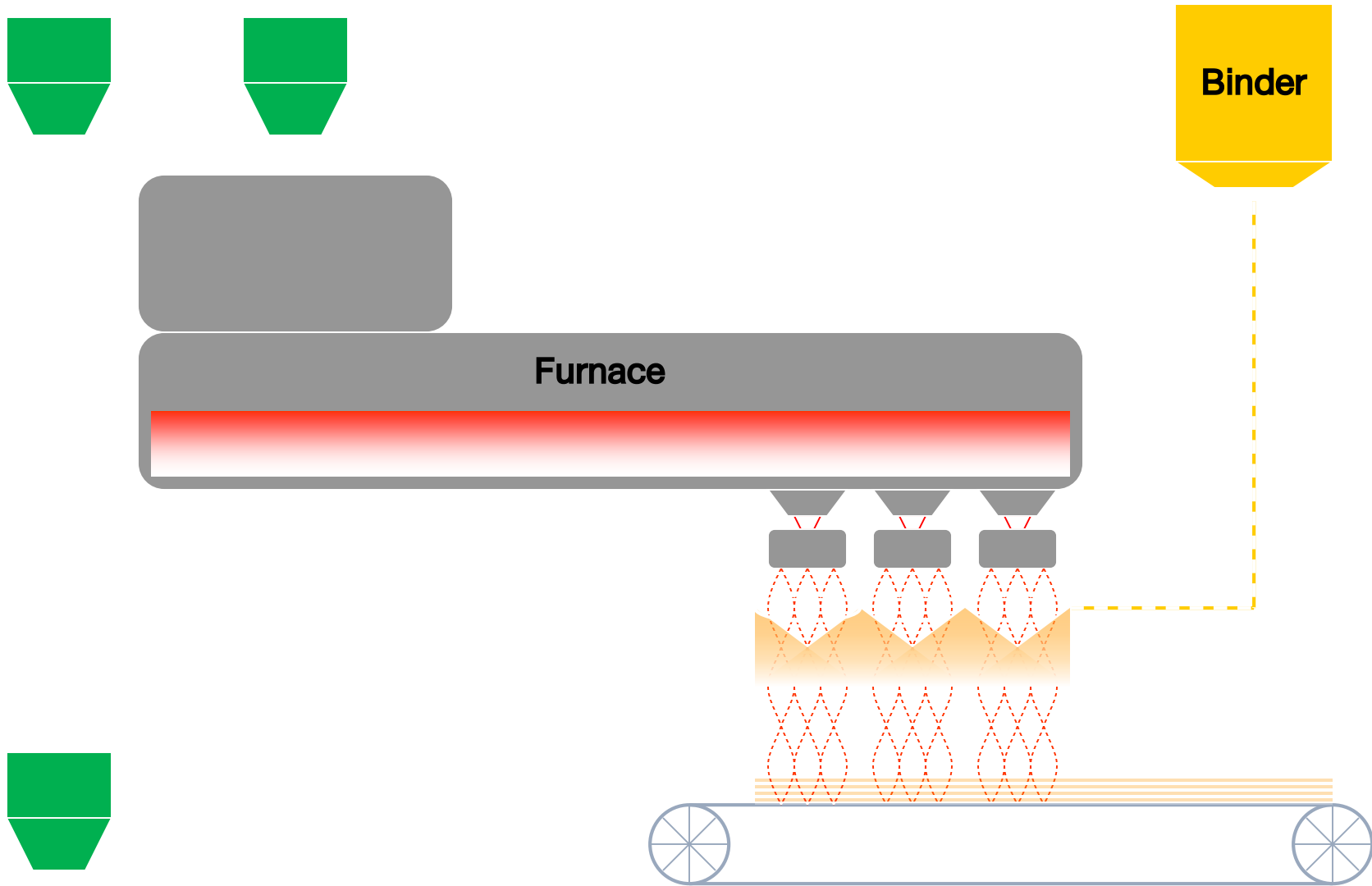
Window Cullet



Bottle Cullet



Rotary Cullet





White Wool Insulation

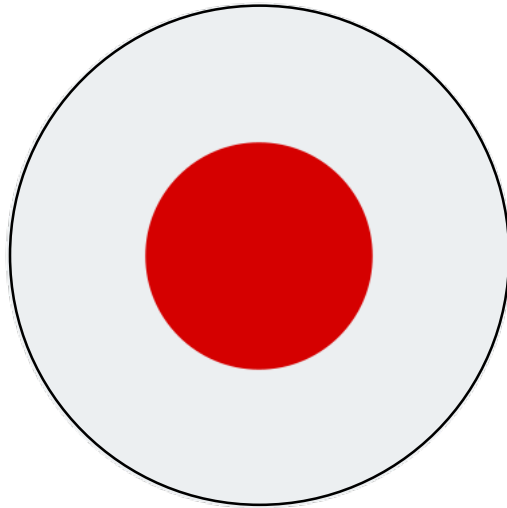
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ZERO-FORMALDEHYDE



# Global Trend on Construction Material

## Developed Countries' Customer Insight



“Sick House Syndrome”  
“Indoor Air Pollution Issues”  
Standard Building Law 2003



WHO/Europe conducted guidelines  
for indoor air quality restricted VOCs  
usage included Formaldehyde

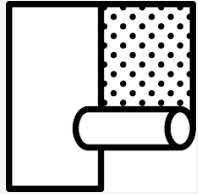






# Formaldehyde

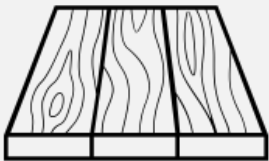
## The Best Known Indoor VOCs



Wallpaper



paint



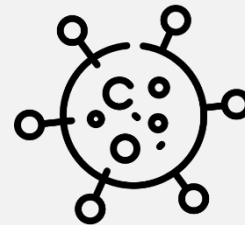
Wood  
Preservative



Eyes Irritation



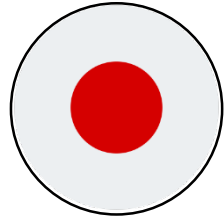
Headache



known to cause  
cancer

# Insulation with NON formaldehyde

ZERO Formaldehyde and low TVOC



In Japan and Europe, more than 50% of the insulation system used are 'Formaldehyde Free'





# White Wool

ZERO Formaldehyde

Research and development of new products that feature zero formaldehyde and zero TVOCs along with **cutting-edge binder** technology

As the leading glass wool insulation manufacturer in Thailand, we are the first mover in healthy and indoor air quality concerned insulation with 3 significant attributes.



Lead to..

- No formaldehyde added
- No colour added

# Key Attributes



## Health Prioritization

New binder formula to ensure zero formaldehyde with same durability and adhesive capability.



## 10-Year Warranty

White Wool Insulation comes with at least one side of facing material lead to higher heat properties and endurance will grant the “10-year warranty” on our insulation product.



## Green is Goal

From factory to your commercial and residential, every step we take concerns global sustainability.



# Insulation Core

White wool insulation is a revolutionary insulation material for fiberglass insulation. This is a quantum leap in commercially leading low-emission insulation technology. Performance of thermal insulation, sound absorption, superior fire protection and enhanced environmental certification.

Using the White Wool Insulation can be archived

- Zero-formaldehyde
- Significant energy savings
- Improved fire safety
- Greater acoustic performance



# Low VOCs

White Wool Insulation obtained CDPH test to comply with LEEDS v.4 that are benefits below :

- Low TVOC refers to total volatile organic compounds that are not harmful to the environment and humans. It mostly refers to adhesive and sealant products that have a very low or zero TVOC.
- Low TVOC materials help to reduce the emission of smog-forming compounds when used in construction and remodeling projects. They also help to maintain the quality of air indoors.

Products



Test Report No.: 242128560-02

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## Test Result

Table 3. 24-h and 48-h chamber concentrations and emission factors

Parameter	CAS no.	Chamber concentration ( $\mu\text{g}/\text{m}^3$ )		Emission factor *1 ( $\mu\text{g}/\text{m}^2\text{h}$ )	
		24h	48h	24h	48h
TVOC	--	n.d.	n.d.	n.d.	n.d.
Formaldehyde	50-00-0	n.d.	n.d.	n.d.	n.d.

Table 4. 96-h chamber concentrations and emission factors of all target VOCs and most abundant – Only detected compounds have been listed

Compound Name	CAS No.	Chamber concentration ( $\mu\text{g}/\text{m}^3$ )	Emission Factor *1 ( $\mu\text{g}/\text{m}^2\text{h}$ )	Remark*2 CREL/ C/ TAC
TVOC	--	n.d.	n.d.	--
Formaldehyde	50-00-0	n.d.	n.d.	CREL/C/TAC

Note : n.d. = not detected ( $< 1 \mu\text{g}/\text{m}^3$ )



# White Wool Insulation positioning with proven product efficacy

## 1. Zero Formaldehyde and TVOC with high quality of facing material

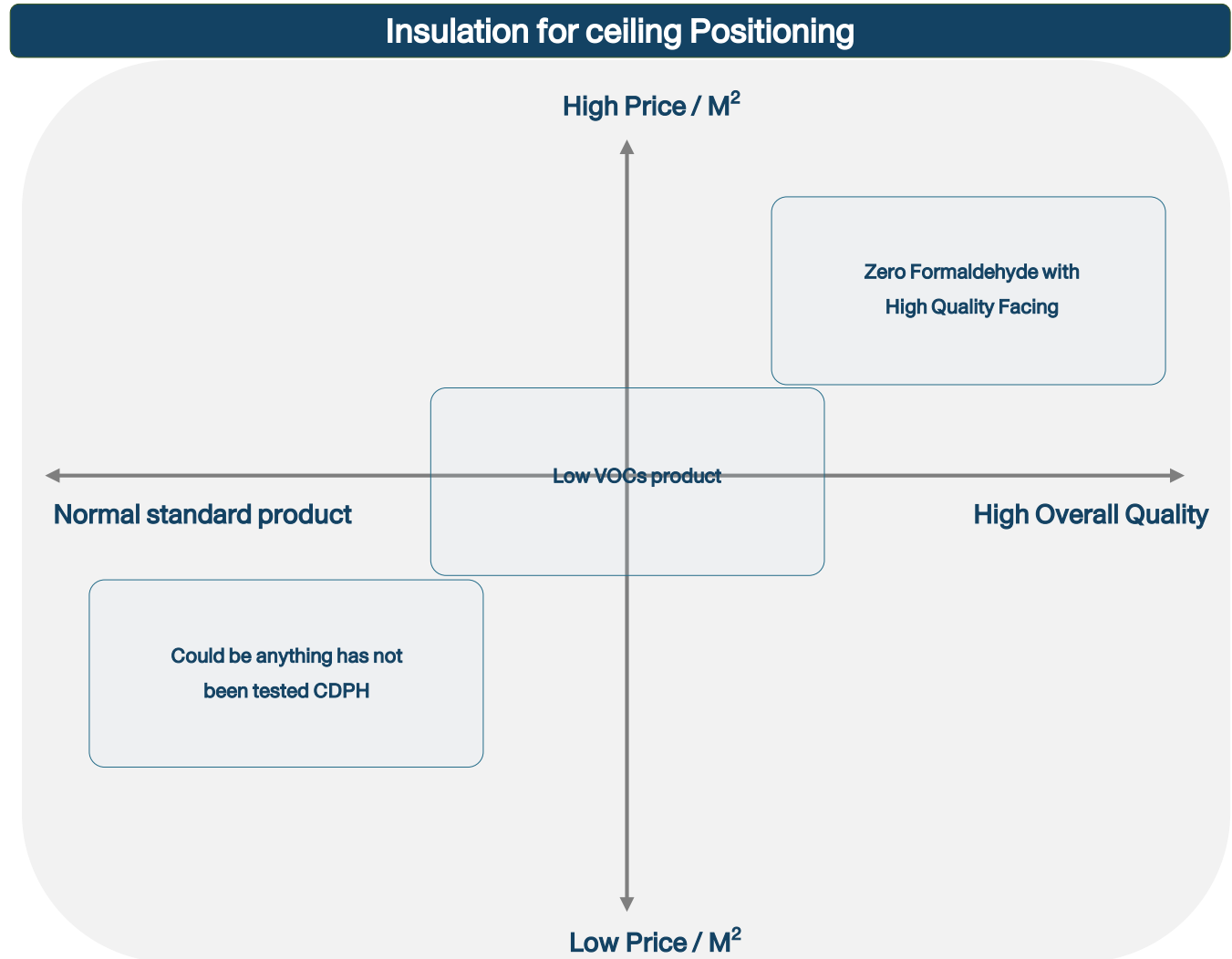
Highest perceived overall quality both in terms of durability and toxicity

## 2. Low TVOCs product

It's low VOCs not Zero Formaldehyde

## 3. Normal standard product

Formaldehyde rather than 20 microgram per m<sup>3</sup>





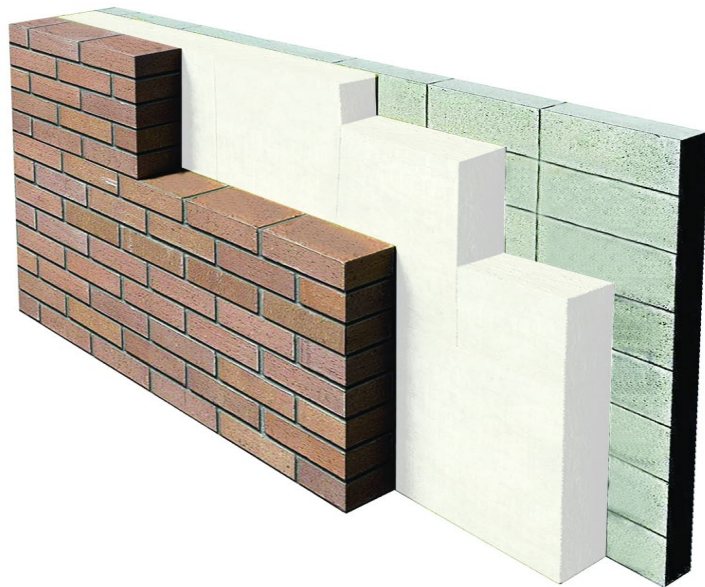
**Where to use**





# Wall Panels

All finish wall treatments (Wall coverings, Curtain wall, Partition wall, even wall frames as well as *insulation inside the partition*)





# Ceiling

All ceiling panels, ceiling tile, surface ceiling structures such as gypsum or plaster, suspended systems as well as insulation above the ceiling





# Roof & HVAC ducts

Insulation for Roof & HVAC ducts may be included at the project team's discretion.

