



## THERMGUARD C.C.

P.O. Box 36769

Menlo Park

Pretoria, 0102

Tel: 011 018 7800

Fax: 086 225 0335

E-mail: [info@thermguard.co.za](mailto:info@thermguard.co.za)

Website: [www.thermguard.co.za](http://www.thermguard.co.za)

VAT No: 4330114978

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### THERMGUARD CELLULOSE FIBRE INSULATION - INFORMATION SHEET

#### DESCRIPTION

Thermguard is a Cellulose Fibre Insulation manufactured primarily from waste newsprint which is impregnated with a mixture of inorganic salts to impart fire resistance and repellency to insects and rodents. The insulation is ideally suited to all domestic, commercial and industrial applications where loose fill insulation is appropriate.

Thermguard is manufactured as a fluffy fibrous matrix, allowing for maximum air entrapment between the fibres. The paper fibres themselves, being micro cellular, have high thermal resistance, thus minimising heat movement by conduction through the material and ensuring excellent insulating qualities. The result being an insulation with the natural ability to balance moisture and insulate against fire to a much greater extent than synthetically made insulation.

#### ENVIRONMENTALLY FRIENDLY

Thermguard is made from more than 80% recycled newsprint thereby deriving use out of products that would ordinarily end up in landfills. The main purpose of Thermguard insulation is to maintain a home's internal temperature thereby reducing the homes energy consumption which in turn slows the burning of fossil fuels - which is a very environment-friendly concept. This prevention of greenhouse gases at both the producer and consumer of the product lifecycle is known as a "double green" effect.

Additionally, Thermguard is non-toxic as well as non-irritant and can be handled safely without gloves (it does not contain asbestos or glass fibre). Additives used in Thermguard are practically non-toxic to fish, invertebrates and birds, and will biodegrade without negatively affecting the environment.

#### DURABILITY

Thermguard is unattractive to vermin. Additives in Thermguard, while harmless to humans, irritate insects and rodents, hence they will not live in the fibres. Thermguard will not support fungal growth, and in normal building construction the insulation is unaffected by exterior wind. Thermguard will not create a corrosion hazard when in contact with metals present in the roof. Thermguard has very low settlement properties and will last the lifetime of the building under normal conditions.



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## ACOUSTIC INSULATION

Cellulose fibre is a very effective soundproofing material. Thermguard is almost four times as dense as glass fibre and therefore has excellent acoustic values. Thermguard will significantly reduce the noise pollution from traffic and airplanes as well as sound travelling between rooms through the roof space, especially when used as ceiling insulation, or as an acoustic filling in a stud partition, or between timber floors. When installed at 100mm, and thicker, Thermguard will absorb .80 – .90 of sound.

## SETTLED DENSITY/SETTLED THICKNESS

The settled density measured at a thickness of 100mm is between 2,5 and 3kg per square metre. Cellulose Fibre will settle slightly over time. However, thickness and R-Values are calculated at settled densities and thus this is not a concern.

## PERCENTAGE MOISTURE ABSORPTION

The percentage moisture absorption is between 0 and 15%. Small drip leaks will not harm Thermguard or the ceiling as they will be absorbed by the insulation. The following day when the roof space heats up, the moisture will evaporate out of the insulation, thus Thermguard is known as a “breathing insulation”.

## COMPARISON WITH INSULATION ROLLS

Any gaps in roof insulation reduce the insulations effectiveness, but with Thermguard, you will never have this problem. Thermguard is blown onto your ceiling and fills every nook and cranny, creating a totally seamless blanket and giving 100% cover thereby ensuring no heat gains and losses can occur. Tests undertaken in the U.S.A. proved that cellulose creates “air tightness” of a building and that when installed, performed on average up to 26% more efficiently, and up to 38% in extreme climates when compared to rolls of insulation.

## DOWNLIGHTERS AND WIRING

The correct treatment of downlighters is an important part of our professional installation service. Thermguard contractors fit protective covers above downlighters isolating them from the insulation. Because Thermguard is a loose-fill insulation, the wiring can easily be traced should maintenance be required.

For a comprehensive list of the many advantages of Thermguard cellulose fibre insulation, see the Advantages of Cellulose Fibre sheet.

