

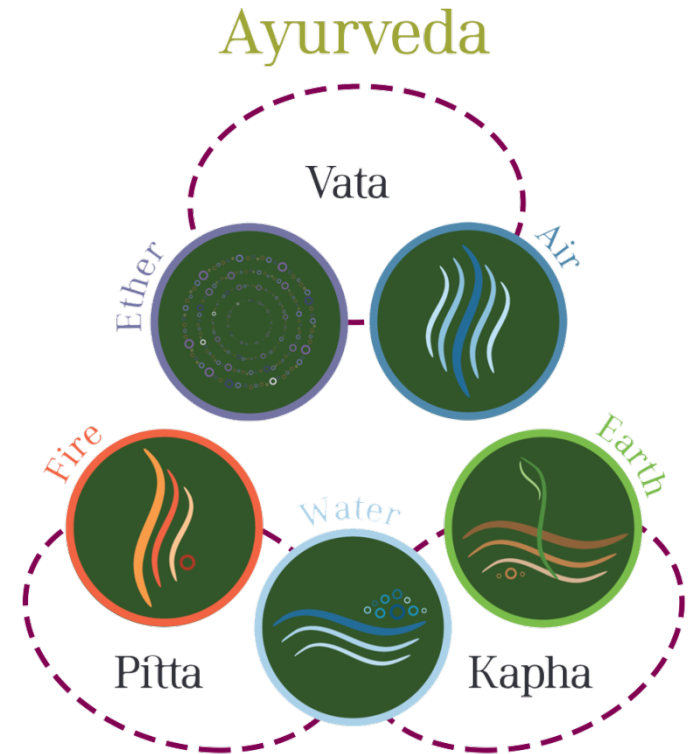
# BARNET

## WAGANDYS



- Ayurvedic Science
- Fast Acting Moisturizer
- Visible Anti-Wrinkle Effect
- Restores Damaged Skin Barrier

# CONCEPT



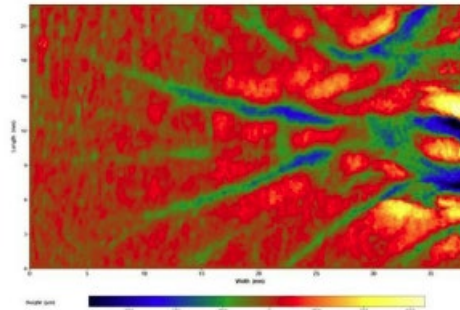
## Ayurvedic Inspiration

- Ayurveda is an ancient system of life (ayur) and knowledge (veda) originating in India centuries ago.
- Ayurveda is a careful integration of six important Indian philosophical systems-many physical/behavioral sciences, and the medical arts.
- All the principles of Ayurveda are based on universal principles like heat and cold, five sense organs, and the five great elements (Earth, Wind, Fire, Air, Ether).
- It works to heal the sick, to maintain health, and to prevent disease in order to promote quality of life and long life.
- Ayurveda Science focuses heavily on natural remedies and plant based treatments which has brought to light many options for topical benefits.

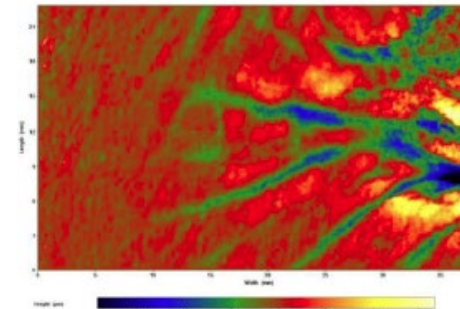
# IN VIVO: 2.00% WRINKLE DEPTH



T 0 Days



T 0 Days



T 14 Days

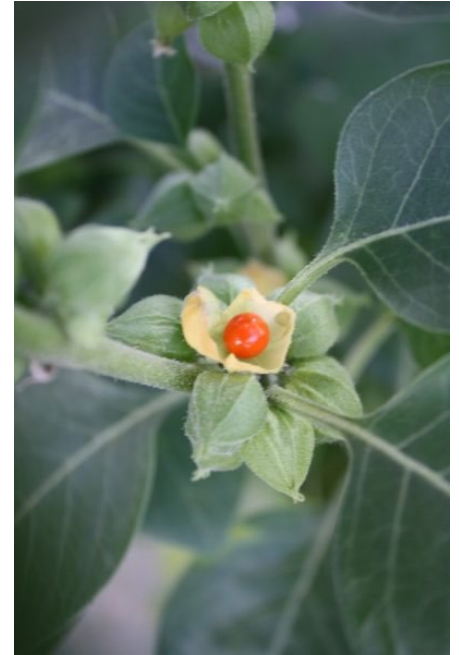


T 14 Days

## Wrinkle Improvement

- A formula containing 2.00% Wagandys was applied twice daily on 20 healthy women (40-60 years old) for 14 days to determine its ability to reduce wrinkle depth.
- The wrinkle depth was measured by fringe projection and color coded with a large amount of blue signifying a deeper wrinkle.
- Results above show the improvement from time zero to fourteen days in wrinkle depth and overall appearance of wrinkles.

# FIELD TO FACE



## Wagandys

- The Winter Cherry, *Withania somnifera*, is also known as Ashwagandha, one of the most powerful herbs in Ayurvedic healing.
- It has been used since ancient times for a wide variety of conditions, and is most well-known for its restorative effects as well as its anti-inflammatory capabilities.
- In Sanskrit, Ashwagandha means “the smell of a horse”, indicating that the herb imparts the vigor and strength of a stallion, and has traditionally been prescribed to help people strengthen their immune system after an illness.

**INCI Name: Squalane (and) Phytosterols (and) Withania Somnifera Root Extract (and) Helianthus Annuus (Sunflower) Seed Oil (and) Hordeum Vulgare Extract (and) Glycerin (and) Cucumis Sativus (Cucumber) Seed Oil**

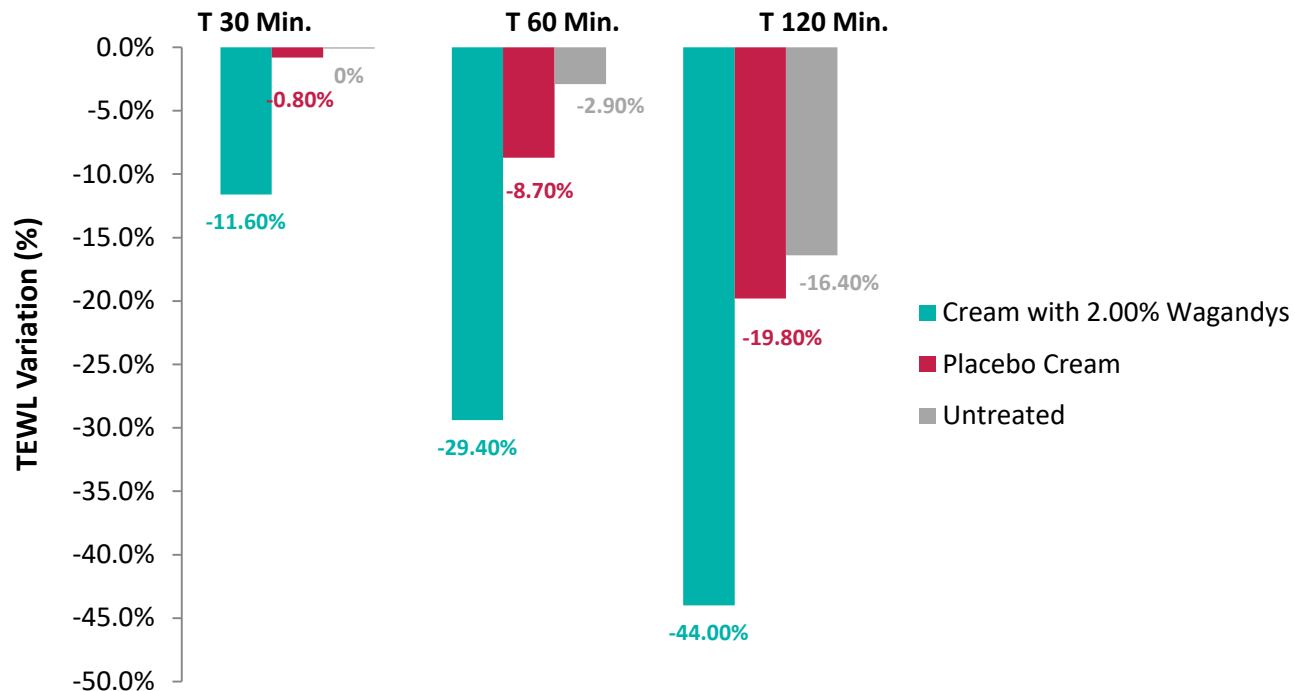
# EX VIVO: GENOMIC EFFECTS

| Gene Symbol  | Description                      | Result       | Function  |
|--------------|----------------------------------|--------------|---|
| COL4A1       | Collagen Type IV alpha 1 chain   | 28% Increase | Integral components of basement membranes             |
| COL1A2       | Collagen Type 1 $\alpha$ 2 chain | 43% Increase | Strengthens and supports the skin                     |
| IL1B         | Interleukin-1B                   | 25% Decrease | Contributes to inflammatory pain and hypersensitivity |
| TNF $\alpha$ | Tumor Necrosis Factor Alpha      | 24% Decrease | Encodes for a pro-inflammatory cytokine               |
| MMP1         | Metalloproteinase-1              | 20% Decrease | Involved in the breakdown of collagen                 |
| MMP9         | Metalloproteinase-9              | 70% Decrease | Involved in the breakdown of collagen                 |

## Gene Improvements

- Fifteen skin explants were prepared in two ways; untreated or treated with 2mg/cm<sup>2</sup> of Wagandys.
- After 24 hours, 12 RNAs were extracted using RNA Tissue Miniprep System.
- Quantitative evaluation of total RNAs was performed via spectrophotometry based on the marker genes above.
- Above, the results illustrate the increase in positive genes and the decrease in those causing a negative impact within the skin.
- Overall, the results indicate anti-aging and anti-inflammatory effects induced by Wagandys.

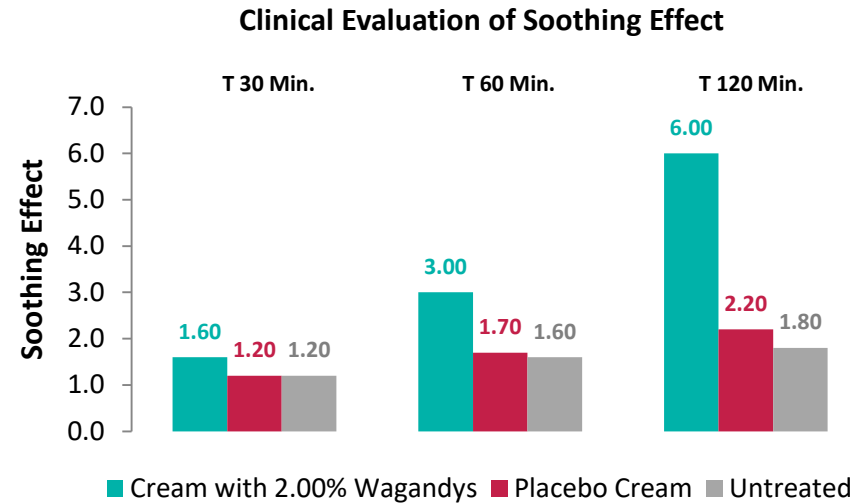
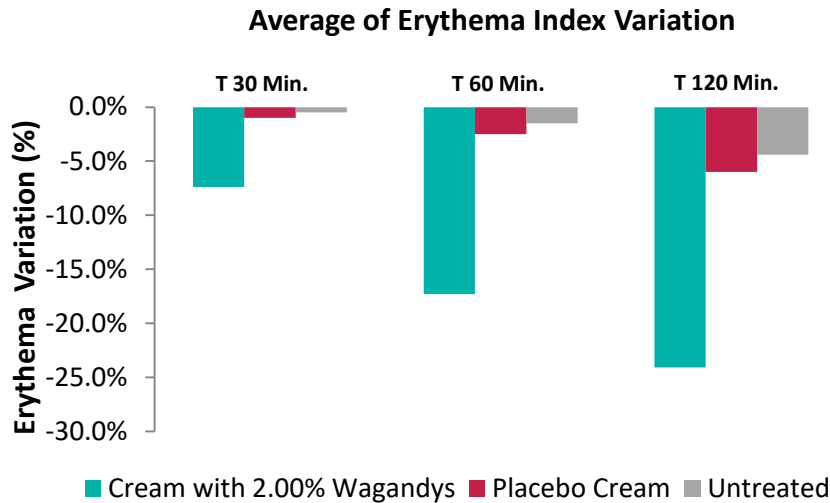
# IN VIVO: 2.00% RESTORATION OF BARRIER FUNCTION



## TEWL + Barrier Function

- Twenty healthy participants applied a 2.00% Sodium Lauryl Sulfate patch for 24hrs on three areas of skin to mimic an alteration of the skin barrier. After the alteration of the barrier, only two skin areas were treated with a cream containing 2.00% Wagandys and a placebo cream. The third skin area, the control, was left untreated.
- Measurements were taken at 30, 60, and 120 minutes using a Tewameter TM 300 to measure the density gradient of the water evaporation from the skin.
- The cream with 2.00% Wagandys promoted a faster restoration of the skin barrier function as demonstrated by the average of transepidermal water loss (TEWL) variation (%) recorded in the treated area when compared to the placebo and the untreated area.

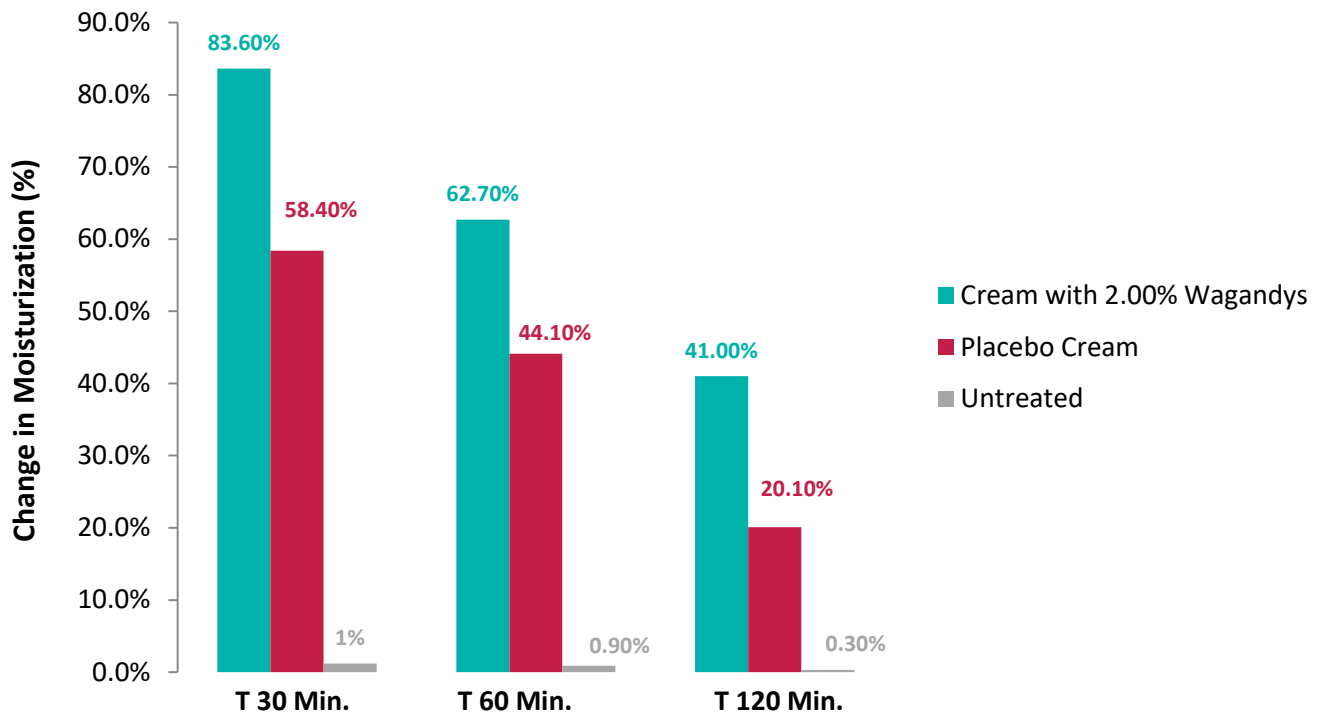
# IN VIVO: 2.00% REDUCTION OF IRRITATION



## Erythema + Soothing Effect

- Furthermore, the erythema index was then evaluated at 30, 60, and 120 minutes using a Mexameter 18. Wagandys promoted a faster reduction of skin erythema when compared to the placebo and untreated areas.
- The second graph shows results of the clinical evaluation of the soothing effect of Wagandys using a scale of 1 (no effect)-10 (excellent effect) which is greater than both the placebo and untreated areas.

# IN VIVO: 2.00% MOISTURIZATION

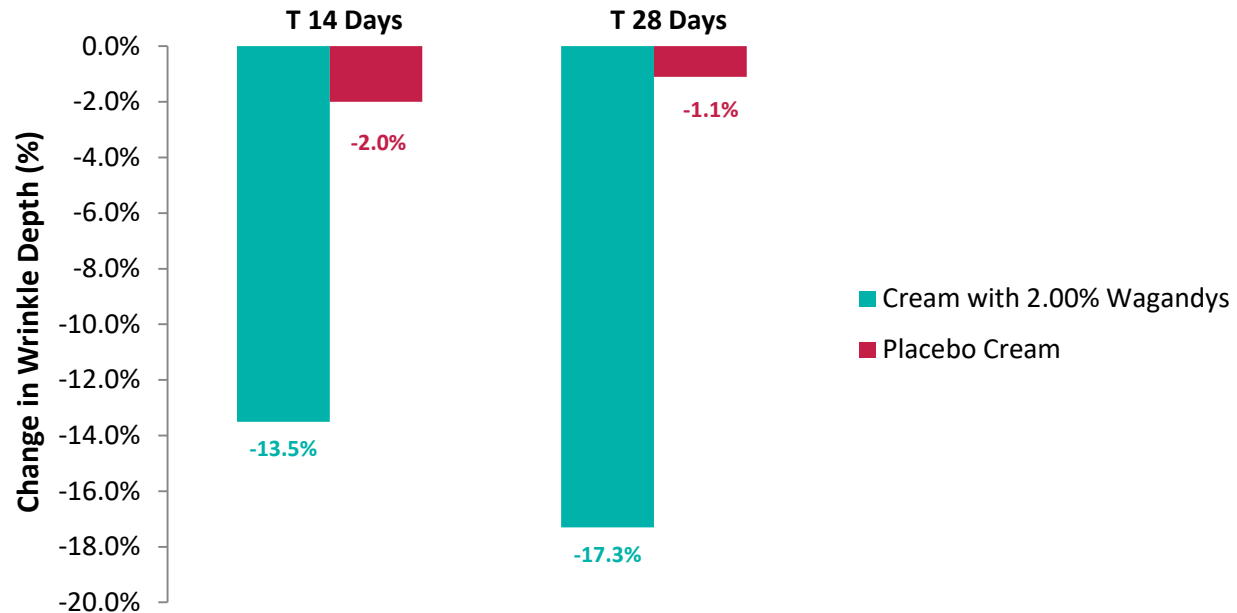


## Fast Acting Moisturization

- A cream containing 2.00% Wagandys was applied to twenty participants. A placebo cream and an untreated area was also measured for comparison purposes.
- The average of skin moisturization variation (%) vs. baseline was measured by a Corneometer at 30, 60, and 120 minutes.
- The application of the cream containing 2.00% Wagandys promoted a higher hydration of the skin when compared to both the placebo and the untreated area.
- After 2 hours, the cream with 2.00% Wagandys was 2 times more moisturizing than the placebo cream.



# IN VIVO: 2.00% REDUCTION OF WRINKLE DEPTH

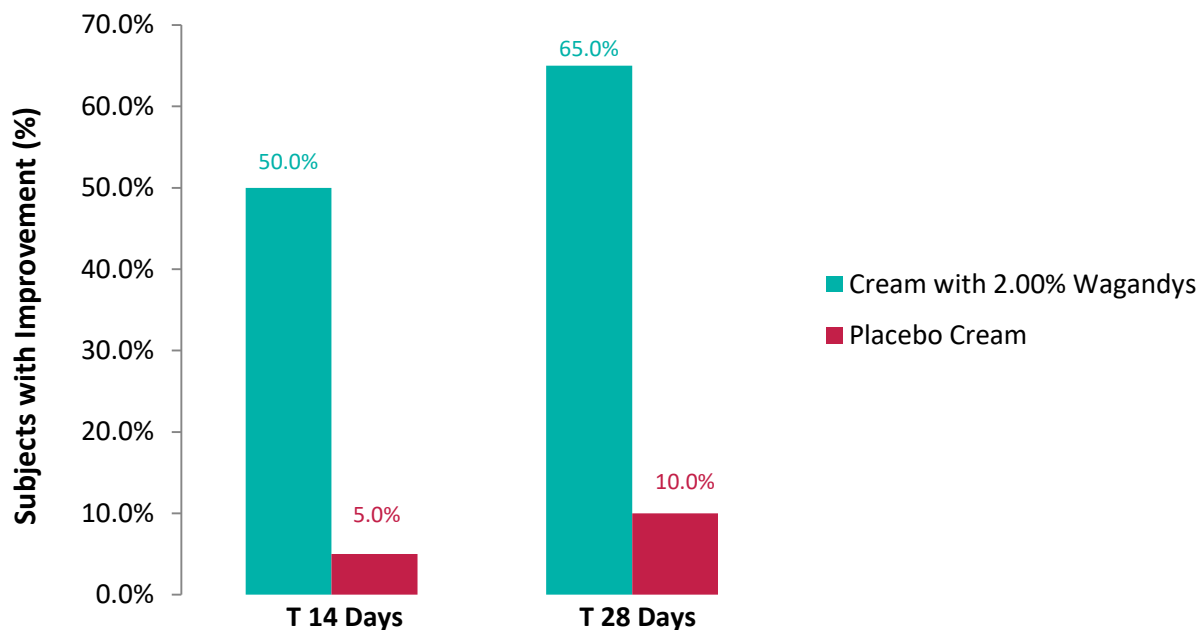


## Wrinkle Depth

- Twenty healthy males and females participated in a study in which a formula containing 2.00% Wagandys was applied twice daily for 28 days to determine the reduction of wrinkle depth.
- The average of the wrinkle depth variation (%) versus baseline at each experimental monitored time was evaluated.
- The recorded improvements for the cream containing 2.00% Wagandys are significantly higher in reducing the depth of wrinkles than those for the placebo cream.

# IN VIVO: 2.00% WRINKLE REDUCTION

## Skin Wrinkle Evaluation



## Dermatologist Evaluation

- Twenty healthy males and females participated in a study in which a formula containing 2.00% Wagandys was applied twice daily for 28 days.
- At each experimental monitored time (Day 14 and 28), the dermatologist evaluated skin wrinkleness according to the scores established from 0, meaning no wrinkles to a 3 signifying deep wrinkles.
- After just 14 days of bi-daily product use, half of the subjects showed an improvement in the clinical evaluation.
- After 28 days of product use, 65% of subjects showed a reduction in visible wrinkles.

# SELF-ASSESSMENT

| Parameter   | Cream with 2.00% Wagandys* | Placebo Cream* |
|---|----------------------------|----------------|
| Roughness is visibly reduced                              | 75%                        | 50%            |
| My skin has become smoother and softer                    | 95%                        | 70%            |
| I have less wrinkles                                      | 70%                        | 50%            |
| Sees an improvement in the crow's feet area               | 70%                        | 45%            |
| I'm convinced of the anti-wrinkle efficacy of the product | 70%                        | 50%            |
| I have noticed an improvement on my skin's overall beauty | 80%                        | 65%            |
| My skin seems less shiny                                  | 85%                        | 70%            |
| My skin became more moisturized                           | 95%                        | 80%            |

## Volunteer Evaluation

- Questionnaire performed after wrinkle and moisture test (20 people, 2.00% Wagandys, Twice Daily, 28 Days)
- Post treatment, volunteers were asked to complete a questionnaire on a scale of completely agree to completely disagree.
- After using the product the results indicate above that Wagandys delivered favorable results when compared to the placebo cream.

# WAGANDYS

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**Preservative:** None

**Suggested Use Level:** 2.00%

**Formulation Guidelines:** Wagandys is an off white to light brown, opaque viscous liquid with a characteristic odor. It is important to mix Wagandys well before use. Wagandys is oil soluble and should be added to the oil phase before emulsification or post added if the oil phase is external. Heat is not necessary but Wagandys can be heated up to 80°C.

## Global Compliance and Product Features:

For additional information please contact [technical@barnetproducts.com](mailto:technical@barnetproducts.com).

| COUNTRY   | COMPLIANCE               |
|-----------|--------------------------|
| AUSTRALIA | Listed AICS; Exempt      |
| CANADA    | Listed DSL, NDSL; Exempt |
| CHINA     | Listed IECIC             |
| EU        | <1 MT Exempt             |

