

Certificate of Compliance

This certificate is issued for the following:

ROCKINSUL BUILDING ROLLS AND ROCKINSUL RB SLABS

Prepared for:

Rockwool (India) Ltd
4th Floor Block B
Laxmi Cyber City
Hyderabad, Andhra Pradesh
India 500084

FM Approvals Class: 4880

Approval Identification: 3046215 Approval Granted: 11/30/2012

Said Approval is subject to satisfactory field performance, continuing follow-up Facilities and Procedures Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

For more than 160 years FM Approvals has partnered with business and industry to reduce property losses.

Cynthia E. Frank.

Assistant Vice President, Group Manager

FM Approvals

1151 Boston-Providence Turnpike

Cynthia & Arank

Norwood, MA 02062



Member of the FM Global Group



CERTIFICATE N° 419 for the right to use the EUCEB Trademark

In accordance with the Constitution of the European Certification Board for Mineral Wool Products (EUCEB), the Management Board certifies that

Rockwool India Pvt, Ltd, - India

Plant Silvassa Stone Wool TA-9

has successfully passed EUCEB's recognition procedure (Appendix N° 419) for obtaining the registered Trademark certifying the conformity of fibres produced with the requirements of Note Q of the Regulation (EC) No 1272/2008 of the European Parliament and of the Council as currently in force.



Brussels, 11/10/2016

Mr. Aymon de Reydellet

Adely dettel

- President -

Mr. Jens Lyager
- Chairman of the Quality Board –

The validity of this certificate can be checked on the EUCEB web-site or at the

Avenue Louise 3/5 - Bte 4, BE -1050 Brussels, Belgium
Tel: +32 (0)2 647 52 54 Fax: +32 (0)2 647 37 66 E-mail: info@euceb.org

EUCEB - European Certification Board for Mineral Wool Products

APPENDIX Nº 419

The Quality Board has received for the subject:

Initial Application for the right to use the Trademark

from the company

Rockwool India Pvt, Ltd, - India

Plant Silvassa Stone Wool TA-9

the following documents:

- Legal Undertaking of 01/08/2016
- Manufacturers Declaration of 01/08/2016
- Certificate of exoneration of the short term biopersistence test presented for Stone Wool TA-9 of 20/03/2001
- Report from Fraunhofer ITEM of the short term biopersistence test No 02G00027 of 01/06/2001
- Confirmation of the External Expert Biopersistence Testing that Stone Wool TA-9 complies with EUCEBexoneration criteria of 10/12/2001
- Report of Analysis Institute on initial conformity inspection No 160905089-1 of 23/09/2016
- Confirmation of the External Expert Chemical Analysis that initial conformity inspection complies with EUCEB range of exonerated Stone Wool TA-9 of 11/10/2016

Examination for completeness and accuracy of the documents presented has revealed, that the requirements are complied with and that thus the right to use the EUCEB Trademark may be granted to Rockwool India Pvt, Ltd, - India, plant Silvassa

Brussels, 11/10/2016

- Mr. Jens Lyager -

Chairman, Quality Board

- Mr. Stephen J. Williams -

Vice Chairman, Quality Board

The validity of this certificate can be checked on the EUCEB web-site or at the EUCEB Secretariat.

Reference Projects for ROCKINSUL in Singapore

1C Sakra Ave (Evonik @ Jurong Island)

Apple HQ At Ang Mo Kio Hub - GALILEO Project

Asia Square Tower @ Marina Bay

ASME Technology

Auditorium @ SP (Gate 8)

Beatty Secondary School @ No.1 Toa Payoh North

Bendemeer Primary School

Boon Lay Community Centre

Bukit Panjang N5C13

Canberra & Yio Chu Kang Primary School

Centra Place @ 1 Hougang St.1

Changi Prison Complex

Chinatown Point

Dazhong Primary School @ Bukit Batok

DBS Showflat













Downtown Line Project

East Spring Primary School@ Tampines

GLYNOEBROURNE

Hamilton Scotts @ Orchard Road

ITE Central Ang Mo Kio

Lengkok Mariam 2

Light Industrial @ Lavendar St

Marina Bay Financial Centre Tower 3 (MBFC

Tower 3)

Miri Malaysia Project

MOM Building @ Bendemeer Road

Mural Camp Upgrading

Nanyang Poly Technic

Nissim Hill Condo

No.151 bencoleen st (NAFA CAMPUS 3 4th STOREY)

NTU Hall of Residence

NUS Block MD6

Reference Projects for ROCKINSUL in Singapore





One North @ 3 Fusiono Polis Link Pacnet Project, Paya Lebar River Safari Mandai Zoo Roche - Tuas Bay Link SAF Armour Centre

Samsung GMR Energy Project - Jurong Island

Scanning Station @ Brani Terminal Ave Scare Hotel @ Chin Swee Road Schenker

Schenker Building @ Changi School at Woodlands Crescent Seacare Hotel @ Chin Swee Road

Seletar Hanger Project Sengkang Primary School Sg Poly (Blk) 1@ Dover Road

Singapore American School

Singapore Polytechnic Block 1

SIP Denki Project

Space @ Kovan SUTD Campus @ Changi **Tampines Substation**

Tan Tock Seng Hospital Tannery @ Choa Chu Kang Road

Temp Holding Building @ NTU

The Heeren

The Signature Building @ Changi Business Park

TUAS DEPOT C1685

Tuas Mega Shipyard

Tuas Naval Base

Tuas South Boulevard Mega Yard Store

Tuas West C1685

UPS Hotel @ Upper Pickering Street (Park Royal Hotel)

Westgate @ Jurong East

Yio Chu Kang Primary School

Yishun Polyclinic

Yishun Ring Road (Lup G98) Blk 326





Reference Projects for ROCKINSUL in Singapore

1 Marina Boulevard (NTUC Centre)

211 Temp Sports Facility @ Sin Ming ave

25 International Business Park. German Centre

30 Princep House NTUC

442 Orchard Road/ 1183 Orchard Hotel Shopping

9 Bouna Vista Road

Ai Tong School @ Lorong Bright Hill Drive

Aims AMP Capital @ 103 Defu lane

Anchorvale Centre @ Fermvale Street

Asai Square Tower 2

Asperia Bldng @ 8. 10 Kallang Road

Assumption English School

AXA Tower Level 50 - R10

AZ Building @ Paya Lebar Rd

Bay Condo @ upper serangoon

Big Box Warehouse @ Jurong East St.

Blk 531A #04-100 Upper Cross street

Bosten Scientific tower 2. 8th Storey Metropolis

Complex

Boston Scientific

Bottle Tree Condo @ Lorong Chencharu

Bottle Tree Condo @ Lorong Chencharu

Brani Terminal Avenue

Buckey Classique @ Buckley road

Canberra Condominium @ Sembawang





Canberra Secondary School

Capita green @ Market Street Level 6 & 7

Capital Hotel

Capital Peninsula Plaza

CAPITOL Building

CGS Church @ Queen Street

Chai Chee Sec. school @5 sennett Road

Changi Business Park

Chao chu kang Community Club

Chevron House @ 30 Raffles Place

Chevron House @ Raffles Place

Chiangi Prison Complex

CHIJ Primary School @ Toa Payoh

China Culture Centre @ Waterloo Street

Reference Projects for ROCKINSUL in Singapore

Cleantech Park 2 @ Nanyang Ave
Compassvale School
Condominium Housing @ Punggol walk
DBS Tower 2
DHL Logistics Hub @ Changi
Dritrade @ New Industrial Road





Eco Sanctuary @ Chestnut Avenue
Eng wah Cinema @ Clementi Ave 3
Evonik @ Jurong Island
Farrer Park MRT Station
Firmenich Lab J144
Flamingo Valley at 480 Siglap Road
Fuji Oil R & D @ Science Park Road
Geylang methodist Primary School
Grant Hyatt Hotel @ Loading bay
Great World City @ Kim seng Road
Haite @ Changi Business park
Halcim Technology Gate way
Hansapoint @ CBP level 2

Haw Par Technocentre @ 401 Commonwealth Dr.

Heron

Hillsta Condominium @ CCK

Hotel @ Hamilton Road

Huawei Headquarters @ Science Park 2

Hwa Chong International School

Ice World @ Kallang Leisure Park

Insead Phase 3 @ 1 Ayer Rajah avenue

J.cube @ Jurong East

Jurong Gateway

Kallang Leisure Park

Korean Church @ Gangsa Road

Kovan Regency @ Kovan Rise



Reference Projects for ROCKINSUL in Singapore

Lakeside Primary School

Light Industrial @ lavender Street

LKC School of Medicine

Marina Bay Financial Centre

Marina East Water venture (Linkway)

MAS Building @ Shenton Way

Maybank Tower @ Shenton way

ME5 Evonik Project @ Jurong Island

MEDIACORP Complex @ Media HUB

Metro @ Centerpoint

Metropolis @ Bouna Vista

Metropolis Tower (Shell Tower) @ North Bouna Vista

Metropolis Tower 2 Mc Donalds @ 11 Bouna vista

Millena Tower

MOE @ Ghim Moh Rd

Mount Alvernia Hospital @ Thomson

MTU Asia Headquarters

N6C10 Bukit Panjang

NAFA Campus

Nanyang Ave Cleantech Park 2,

Nanyang Poly @ AMK

National Art Gallery

Nautical @ Jalan Sendudok

Nee Soon Camp

Nepal Park

Ng Teng Fong Hospital

No. 100 Street, The Treasury

NOL @Metropolis

Northland Pri.school

NTU - Hall of Residence 5 & Hall Office in NTU

NTU Learning Hub @ Nanyang Ave

NTU SPMS N2.1

Nus @ Create way

Ocean Financial Centre level 33

Old Chang kee Building @ 2 & 4 Woodlands terrace

Old Parliament House

Orchard Tower (Orchard Ktv)

ORQ Building @ Raffles quay







Reference Projects for ROCKINSUL in Singapore

Palms Residences @ Sixth Avenue

Phase 6 to USS Attraction 2

Poi Ching School @ 21 Tampines street 71

PRIMZ Bizhub @ Woodlands

Raffles @ Seletar Aerospace Park

Raffles Boulevard marina Square

Ren Ci Hospital 2 Tan tock Seng (Blk 51, 507 & 512)

Resorts world Hotel Micheal

Robinson Point

SATS Inflight Catering Center @ Changi North Crescent

Sengkang Secondary School

Sentosa LUGE Park

Sentosa Workshop @ Artillery Ave

SGX Centre @ 2 Shenton way

Shell Office @ Metropolis tower 1

Singapore General Hospital Ey Centre

Singapore Institute of manag

Singapore Turf Club

Singpost @ Eunos

Solvary Merlion

Solvay Merlion (Jurong Island)

ST. Anthonys Primary School

Substation @ Simei Ave

Sungei Gedong Camp

Synapse Building @ 3 Biopolis drive

Tannery Condo @ Choa Chu Kang

The Herencia Condominium

The Vista Project

Tuas West C1685

Twin Fountain Condominium

Twin Waterfall Condominium

UE Square @ 81A Clemenceau Avenue

Valley Point Shopping Centre @ 491 River valley R

Whampoa Road- Bus Station

Whitney Residences

Woodlands Bus Interchange

Woodlands Office Fitout Asia Square

Woodsgrove Primary School

Yew Tee CC

/II Hua Primary School



Reference Projects for ROCKINSUL in Singapore

Google office @ mapletree business city ii
Hewlett Packard (hp) sea headquarters @ depot road
Virgin active @ guocco tower
Schneider sea headquarters @ kallang wa
JTC space tuas
Swisshotel upgrading 300 rooms @ raffles city
Raffles hotel renewal & upgrading
Raffles hospital extension @ bugis



Woodlands Police Headquarters
Northpoint Shopping Mall (A&A)
Glaxosmithklein SEA Headquarters @Buona Vista
Singapore German School
Changi Airport Cargo Complex Terminal 4

CITIBANK @ Changi Business Park

Parkway Parade Shopping Centre Upgrading





Technical Data Sheet



ROCKINSUL ROCKWOOL RB SLAB - 60 kg/m³

1) Material Composition:

Stone wool board insulation composed of rock fibers processed

from the molten state into fibrous form and bonded with binder.

Free from asbestos.

2) Nominal Density:

60 kg/m³

3) Facing:

Unfaced; faced with Aluminium foil facing (FSK), Black Glass Tissue

(BGT), ALG foil

4) Dimension

(a) Length:

1.0 m or as per requirement from 0.6m to 1.2m

(b) Width:

0.6m

(c) Thickness:

25-150 mm (Tolerances: -3mm; +6mm)

5) Thermal Conductivity at 25 °C

mean temperature :

0.034 W/m.K

6) Linear Shrinkage:

Less than 2 %

7) Water vapor absorption:

Less than 1 % by volume

8) Surface Burning Characteristics

(a) Flame Spread index:

≤ 25

(b) Smoke developed index:

≤ 50

9) Combustibility of unfaced slab

Non-Combustible; A1 when tested as per EN 13501

10) Odor Emission:

No detectable odor of objectionable nature was observed

11) Corrosiveness to Steel:

No Corrosion

12) Rigidity:

Soft to Rigid

13) Fungi Resistance:

Do not promote fungi growth

14) Non-fibrous Content:

Less than 25 %

15) Stress Corrosion to Austenitic Stainless Steel: No Cracking observed; pH - 7 to 10

Standard Compliance:

ASTM C 612

All information and data mentioned in this technical data sheet are based on tests performed in the Laboratory. Nothing herein to be construed as a warranty or representation and we recommend, however, all potential users of the product make their own actual tests prior to using it on industrial scale –

Rockwool India Pvt Ltd. Email: <u>Customersupport@rockwoolIndia.com,www.rockwoolindia.com</u>