SPECIFICATION SHEET

1. CLASSIFICATION
ROOF COVERING AND ROOF DECK CONSTRUCTION-Underlayment
SINGLES, ROOF TILES & ROOF COVERINGS - 07300

2. PRODUCT NAME
RooftopGuard II, High Performance Roofing Underlayment

3. MANUFACTURER
RKW Finland Ltd.
PO Box 22, FIN-28601 PORI, Finland • www.rooftopguard.com

4. PRODUCT DESCRIPTION
RooftopGuard II is a 5-ply, 100% asphalt and asbestos free, high strength per
formance roofing underlayment used on steep sloped roofs beneath composite,
metal, clay, concrete, slate, wood and other roofing materials. RooftopGuard II is a
woven HDPE with a polyethylene film laminated with black LDPE on one side and
in addition a nonwoven polypropylene layer is laminated with LDPE on the other
side of the woven HDPE. RooftopGuard II is approved as an alternate replacement
for Type 15 or Type 30 asphalt roofing felt. RooftopGuard II measures 60” wide and
comes in 200’ rolls weighing 43 lbs per roll. The coverage per roll is 914 square.
RooftopGuard II is gray in color which helps reduce heat loads on attic structures.

5. APPROVALS
Metro Dade County: Passed PA 104-95 Testing - NOA No.12-0426.01
Exp.06/14/17
ICC-ES: Approval #ESR-2928
CAN/CSA: A220.1
Florida Building Code: FL 12145

6. INSTALLATION
RooftopGuard II must be installed above properly ventilated spaces (follow
local building code) as it is considered a vapor barrier. RooftopGuard II is laid
horizontally (parallel) to the eave with the printed side up, and with 4” horizontal
laps and 6” vertical laps. (The use of a slip sheet is not required underneath metal
roofing.) RooftopGuard II must be attached to the structural Roof Deck Material
using Plastic or Steel Cap roofing nails, having a minimum of 1” diameter cap,
spaced at 12” on vertical and 15” on horizontal. All Plastic, or Steel Caps, must
be attached flush with the underlayment surface and nails must be fastened at
a 90 degree angle to the deck. Prior to loading the roofing materials onto the
RooftopGuard product it is recommended that a roof jack, with planks, toe boards,
or a strong platform be secured to the underlying roofing deck to prevent slippage
of stored materials on steep sloped roofs (greater than 4 : 12 pitch). See OSHA
regulations (Standard 29 CFR), fall protection systems criteria and practices –
1926.502. For batten secured applications, the use of plastic cap roofing nails
required only to secure the underlayment and prevent blow off until the batten
system is installed. Where seams or joints require sealant or adhesive, use only
a high quality, low solvent asbestos free plastic roofing cement meeting ASTM
D-4586 Type 1 (Asbestos Free), Spec SS-153 Type 1 (Asbestos Free). Installing
final roofing within 6 months from initial underlayment application is recommended.

7. TECHNICAL SERVICES
RooftopGuard II provides a 50 year limited material warranty. For warranty and
technical information, go to www.rooftopguard.com.

8. MAINTENANCE
None when installed in accordance with manufacturer’s recommendations.

TECHNICAL DATA/TESTING

<table>
<thead>
<tr>
<th>TEST</th>
<th>CRITERIA</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 104 Dimensional Stability</td>
<td>Tested at 180°F for six hours</td>
<td>No tears, cracks shrinking or wrinkling</td>
</tr>
<tr>
<td>ASTM D1938 Breaking strength (new)</td>
<td>General requirement is 3.5 pounds</td>
<td>Average result of 16.14 in one direction and 13.18 the other</td>
</tr>
<tr>
<td>ASTM D2523 Breaking strength (after UV exposure)</td>
<td>General requirement is 85% of new</td>
<td>Average result of 88% in one direction and 85% the other</td>
</tr>
<tr>
<td>ASTM D2523 Breaking strength (after heat aging)</td>
<td>General requirement is 85% of new</td>
<td>Average result of 98% in one direction and 91% the other</td>
</tr>
<tr>
<td>ASTM D2523 Elongation (new)</td>
<td>General requirement is minimum 25%</td>
<td>Average result of 29% in one direction and 27% the other</td>
</tr>
<tr>
<td>ASTM D2523 Elongation (after UV exposure)</td>
<td>General requirement is 85% of new</td>
<td>Average result of 86% in one direction and 87% the other</td>
</tr>
<tr>
<td>ASTM D2523 Elongation (after heat aging)</td>
<td>General requirement is 85% of new</td>
<td>Average result of 87% in one direction and 91% the other</td>
</tr>
<tr>
<td>ASTM D570 Water absorption</td>
<td>General requirement is maximum 3%</td>
<td>Average result of 2.4%</td>
</tr>
<tr>
<td>ASTM D1970 Cold flexibility (new)</td>
<td>Tested at 5°F Fahrenheit</td>
<td>No cracking</td>
</tr>
<tr>
<td>ASTM D1970 Cold flexibility (aged)</td>
<td>Tested at 5°F Fahrenheit</td>
<td>No cracking</td>
</tr>
<tr>
<td>ICBO EM AC48 Ultraviolet resistance</td>
<td>200 hours at 135 to 140°F</td>
<td>No peeling, chipping, cracking, flaking, pitting or other damage</td>
</tr>
<tr>
<td>PA 104 Accelerated aging</td>
<td>25 days of weather cycle</td>
<td>No visible damage; passes breaking strength and elongation tests</td>
</tr>
<tr>
<td>ICBO EM AC48 Cyclic elongation</td>
<td>100 elongation attempts after storing product at -20°F for 7 days</td>
<td>No cracking</td>
</tr>
<tr>
<td>PA 104 Puncture resistance</td>
<td>Five 1-lb puncture point drops each to new and aged product</td>
<td>No puncture</td>
</tr>
<tr>
<td>PA 104 Slippage resistance</td>
<td>Stacks of concrete and clay tiles</td>
<td>No tears, slippage, or pulling away from fasteners</td>
</tr>
<tr>
<td>ASTM D4518 Static friction</td>
<td>Control was 30-lb felt with a friction factor of 0.59 wet and 0.72 dry</td>
<td>Performs similarly with a Friction Factor of 0.49 wet and 0.62 dry</td>
</tr>
<tr>
<td>ASTM E331 Water penetration</td>
<td>No leakage found around fasteners when secured per instructions</td>
<td></td>
</tr>
<tr>
<td>ASTM E108, ICBO AC207 Class “A” fire rating</td>
<td>UL 790 Burning brand test Intermittent flame test</td>
<td>Passed 4 Class “A” Passed 2 Class “A”</td>
</tr>
<tr>
<td>ASTM D1204-08 Linear Dimensional Changes</td>
<td>Should not exceed 3% after 85°F/24 h</td>
<td>Length 1.5 % and width 2.1 %</td>
</tr>
<tr>
<td>ASTM E96-05 Water Vapor Transmission</td>
<td>Should not exceed 70 gram per square meter in 24 hours</td>
<td>0.6 grams per square meter in 24 hours</td>
</tr>
</tbody>
</table>

Testing Conclusion: RooftopGuard II meets or exceeds criteria set by
Metro Dade County, ICBO, BOCA, ICC-ES and CAN/CSA. RKW Finland
Ltd is ISO 9001-2008 certified
MATERIAL SAFETY DATA SHEET (MSDS)

1. PRODUCT IDENTIFICATION, COMPOSITION AND USE

PRODUCT NAME: ROOFTOPGUARD II
Composition: Woven HDPE with a polyethylene film is laminated with black LDPE on one side and in addition a nonwoven polypropylene layer is laminated with LDPE on the other side
Product Use: Intended for use as a roofing underlayment
Manufacturer: RKW Finland LTD.
PO Box 22, Ulasoorintie 185, FIN-28601 Pori, Finland
Telephone: +358 2 517 88 99
Fax: +358 2 517 88 90

2. HAZARDOUS INGREDIENTS/WARNINGS

The product is chemically inactive and is biologically inert. It is not a skin irritant.
RoofTopGuard II underlayment’s raw materials and additives contain no asbestos or asphalt products.
This declaration is based on individual approvals obtained by the suppliers of RKW Finland Ltd’s raw materials and ingredients.
To avoid danger or suffocation, the product should be kept away from babies and children.
This product is not considered dangerous to the environment.

3. FIRE HAZARD
This product burns, but is not classified as flammable. Flash point is approximately 350° Celsius (662° F).
The final products at complete combustion are carbon dioxide and water. At incomplete combustion with reduced oxygen supply, carbon monoxide, which is highly toxic, may form.
As for many other compounds, like wood, paper and other products from oil other decomposition products like various hydrocarbons, acids and aldehydes may also form, but only in very small quantities.

4. FIRE FIGHTING
Water in a spread jet, dry chemical, foam and carbon dioxide can be used.

5. HANDLING
The product is stable under normal conditions of use, storage and transportation. For safe installation, it is recommended to follow installation instructions given by the manufacturer/seller.

6. WASTE HANDLING
The product can be used as landfill, or incinerated, as required.

Disclaimer
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