



## ICC-ES Listing Report

Reissued June 2024

### ESL-1346

This listing is subject to renewal in June 2025.

**CSI:** DIVISION: 09 00 00—FINISHES  
Section: 09 29 00—Gypsum Board

#### Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

**Product:** DIAMANT HARTGIPSPLATTEN DFH2IR 12.5MM GYPSUM BOARD

**Listee:** KNAUF RADIKA AD – DEBAR

**Evaluation:** The Diamant Hartgipsplatten DFH2IR gypsum board comes in nominal 1/2-inch (12.5 mm) thick-by-49 inches (1250 mm) wide-by-79 inches (2000 mm) length sheets and has tapered edges. The board was evaluated based on testing in accordance with the following standard:

- ASTM C1396 (-17 and -14a), Standard Specification for Gypsum Board, ASTM International.

**Findings:** When tested in accordance with Sections 4.5, 4.6 and 4.7 of ASTM C1396, the Diamant Hartgipsplatten DFH2IR gypsum board test results are as shown in Table 1 below; ASTM C1396 is referenced in the applicable sections of the following code editions:

- 2021 and 2018 *International Building Code*®  
Applicable Section: 2506
- 2021 and 2018 *International Residential Code*®  
Applicable Section: R702.3

#### Identification:

1. Each Diamant Hartgipsplatten DFH2IR 12.5 mm gypsum board carries a label indicating the manufacturer's name, plant identifier and date code, the product name, the board thickness, the ICC-ES Listing Report number (ESL-1346), and when applicable, the ICC-ES Listing Mark.
2. The report holder's contact information is the following:

**KNAUF RADIKA AD - DEBAR**  
**UL. 8-SEPTMEVRI BB**  
**1250 DEBAR**  
**NORTH MACEDONIA**  
**+389 46 839 200**  
<http://www.knauf.mk>

**Installation:** The product must be installed in accordance with the Knauf Radika AD - Debar published installation instructions and applicable codes (IBC Section 2508 and IRC Table R602.3(1)).

#### Conditions of listing:

1. The listing report addresses only conformance with the standards and code sections noted above.
2. Approval of the product's use is the sole responsibility of the local code official.

3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
4. Mold resistance testing in accordance with Section 4.3 of ASTM C1396 is outside the scope of this listing report.
5. Type X (Special Fire-Resistant) testing in accordance with Section 4.4 of ASTM C1396 is outside the scope of this listing report.
6. The Diamant Hartgipsplatten DFH2IR 12.5 mm gypsum board is manufactured under a quality control program with inspections by ICC-ES.

**TABLE 1—ASTM C1396 REQUIREMENTS FOR DIAMANT HARTGIPSPLATTEN DFH2IR 12.5 MM GYPSUM BOARD**

ASTM C1396 SECTION	TEST METHOD	REQUIREMENT	TEST RESULT	IN COMPLIANCE
4.5	ASTM E84 - FLAME SPREAD INDEX	FLAME SPREAD INDEX OF NOT MORE THAN 25	< 25	YES
4.6.1.1 5.1.1 6.1.1 7.1.1 8.1.1 9.1.1 10.1.1 11.1.1 12.1.1	ASTM C473 - SECTION 11: FLEXURAL STRENGTH (METHOD B)	FOR 1/2-INCH (12.5 MM) MATERIAL: BEARING EDGES PERPENDICULAR TO PANEL LENGTH: NOT LESS THAN 107 LBF (97 LBF FOR GYPSUM LATH – SECTION 11.1.1) BEARING EDGES PARALLEL TO PANEL LENGTH: NOT LESS THAN 36 LBF (31 LBF FOR GYPSUM LATH – SECTION 11.1.1)	BEARING EDGES PERPENDICULAR TO FIBER SURFACING AND FACE UP: <b>154 LBF</b> BEARING EDGES PERPENDICULAR TO FIBER SURFACING AND FACE DOWN: <b>162 LBF</b> BEARING EDGES PARALLEL TO FIBER SURFACING AND FACE UP: <b>76 LBF</b> BEARING EDGES PARALLEL TO FIBER SURFACING AND FACE DOWN: <b>87 LBF</b>	YES
4.6.2	ASTM C473 - SECTION 12: CORE, END AND EDGE HARDNESS (METHOD B)	AVERAGE CORE, END AND EDGE HARDNESS OF NOT LESS THAN 11 LBF.	CORE HARDNESS: <b>80 LBF</b> END HARDNESS: <b>83 LBF</b> EDGE HARDNESS: <b>61 LBF</b>	YES
4.6.1.1 5.1.3 6.1.3 7.1.3 8.1.3 9.1.3 10.1.3 11.1.3 12.1.3	ASTM C473 - SECTION 13: NAIL PULL RESISTANCE (METHOD B)	FOR 1/2-INCH (12.5 MM) MATERIAL (METHOD B): NOT LESS THAN 77 LBF (66 LBF for GYPSUM LATH – SECTION 11.1.3)	<b>211 LBF</b>	YES
4.6.1.1 5.1.2 6.1.2 7.1.2 8.1.2 9.1.2 10.1.2 11.1.2 12.1.2	ASTM C473 - SECTION 14: HUMIDIFIED DEFLECTION	FOR 1/2-INCH (12.5 MM) MATERIAL: NOT MORE THAN 10/8-INCH OF AN INCH DEFLECTION (NOT MORE THAN 5/16-INCH FOR GYPSUM CEILING BOARD – SECTION 12.1.2)	<b>1/8 INCH OF DEFLECTION</b>	YES
4.6.1.1 4.6.3 5.2.3 6.2.3 7.2.3 8.2.3 9.2.3 10.2.3 11.2.3 12.2.3	ASTM C473 - SECTION 15: END SQUARENESS	EDGES AND ENDS SHALL BE STRAIGHT; CORNERS SHALL BE SQUARE WITH A TOLERANCE OF ±1/8-INCH IN THE FULL WIDTH OF THE BOARD. (TOLERANCE OF ±1/4-INCH IN THE FULL WIDTH OF THE BOARD – SECTION 11.2.3)	DEVIATION OVER 48-INCHES: <b>0 INCH</b>	YES
4.6.1.1 5.2.1 6.2.1 7.2.1 8.2.1 9.2.1 10.2.1 11.2.1 12.2.1	ASTM C473 - SECTION 16: NOMINAL THICKNESS	FOR 1/2-INCH THICK WITH TOLERANCES OF ±0.015 INCH WITH A LOCAL VARIATION OF ±0.030-INCH (±0.030 INCH WITH A LOCAL VARIATION OF ±0.060-INCH – SECTIONS 6.2.1, 9.2.1, 11.2.1)	<b>0.478-INCH</b>	YES
4.6.5	ASTM C473 - SECTION 17: RECESSED- OR TAPERED-EDGE DEPTH	AVERAGE THICKNESS OF THE EDGE OF RECESSED OR TAPERED EDGE SHALL NOT BE LESS THAN 0.020-INCH BUT NOT MORE THAN 0.090-INCH LESS THAN THE AVERAGE THICKNESS OF THE BOARD.	<b>0.064-INCH</b>	YES

TABLE 1—ASTM C1396 REQUIREMENTS FOR DIAMANT HARTGIPSPLATTEN DFH2IR 12.5 MM GYPSUM BOARD (Continued)

ASTM C1396 SECTION	TEST METHOD	REQUIREMENT	TEST RESULT	IN COMPLIANCE
4.6.1.1 5.2.2 7.2.2 8.2.2 10.2.2 12.2.2	ASTM C473 - SECTION 18: WIDTH	WIDTH SHALL BE UP TO EITHER 48 INCHES OR 54 INCHES WITH A TOLERANCE OF $\frac{3}{32}$ -INCH UNDER SPECIFIED WIDTH (TYPICAL). (WIDTH SHALL BE FROM 16 TO 48 INCHES WITH A TOLERANCE OF $\frac{1}{8}$ -INCH UNDER A SPECIFIED WIDTH –SECTION 6.2.2) (WIDTH SHALL BE 24 OR 48 INCHES UNDER A TOLERANCE OF $\frac{1}{8}$ -INCH – SECTION 9.2.2) (WIDTH SHALL BE UP TO 48 INCHES WITH A TOLERANCE OF $\frac{3}{16}$ -INCH UNDER AND $\frac{1}{8}$ -INCH OVER THE SPECIFIED WIDTH – SECTION 11.2.2)	49 $\frac{5}{32}$ -INCHES	YES
4.6.4	ASTM C473 - SECTION 19: LENGTH	LENGTH SHALL HAVE A TOLERANCE OF $\pm\frac{1}{4}$ -INCH.	78 $\frac{3}{4}$ -INCHES	YES
4.6.1.1 9.1.4	ASTM C473 - SECTION 20: WATER RESISTANCE OF CORE-TREATED WATER-REPELLANT GYPSUM PANEL PRODUCTS	AVERAGE WATER ABSORPTION OF NOT MORE THAN 10 WEIGHT % AFTER 2-HR IMMERSION	< 10% WEIGHT AFTER 2-HR IMMERSION	YES
4.7	ASTM C471 - VOLATILE SULFUR COMPOUNDS	SHALL NOT CONTAIN GREATER THAN 10 PPM OF ORTHORHOMBIC CYCLOOCTASULFUR (S <sub>8</sub> )	< 10 PPM	YES

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N