

WALLTITE® ECO™ v.2

Spray Polyurethane Foam Insulation/Air Barrier

DESCRIPTION:

Purple, closed cell, medium density, spray applied polyurethane foam insulation and air barrier. WALLTITE ECO v.2 comes in three reactivity grades: regular WALLTITE ECO v.2, WALLTITE ECO v.2 Fast Grade (WALLTITE ECO v.2 F); and WALLTITE ECO v.2 Cold Temperature Grade (WALLTITE ECO v.2 CT). Unless specified, all references to WALLTITE ECO v.2 in this Technical Product Data sheet refer to all three grades of WALLTITE ECO v.2.

USES:

Intended for residential, commercial, industrial and institutional building applications where insulation is required. It can be used above or below grade, for interior or exterior building envelope applications including; exterior, cavity and foundation walls, between steel or wood framing, under floor slabs, in cantilevered areas and in specialized applications.

FEATURES AND BENEFITS

- **Superior Thermal Resistance** - The LTTR value of WALLTITE ECO v.2 is higher than traditional insulation products resulting in reduced conductive heat loss and lower energy consumption.
- **Excellent Air Sealing Ability** - WALLTITE ECO v.2 is a closed cell insulation that expands while being installed creating an effective air barrier, reducing air leakage, resulting in improved comfort and energy savings.
- **Quality Installation** – Licensing of installers is required by the CAN/ULC S705.2-05 Installation Standard, and WALLTITE ECO v.2 is installed by applicators who are licensed through BASF Canada's Quality Assurance and Training Program – RAISING PERFORMANCE TO NEW HEIGHTS® (QATP) and certified by the engineering firm Morrison Hershfield.
- **Durability** - WALLTITE ECO v.2 can be installed and left without any cladding for up to 6 months.
- **Experience** – With over 25 years experience in spray polyurethane foam insulation, BASF Canada is well equipped to understand the challenges of the Canadian climate. Consumers can rest assured that they are working with the leading spray foam manufacturer in both residential and commercial construction.

APPROVALS AND CREDENTIALS:

- Evaluation listing **CCMC 13530-L**
- Conforms to **CAN/ULC S 705.1-01 (including Amendments 1 and 2)** as referenced in the National Building Code of Canada and provincial codes.
- **Zero ODP** - WALLTITE ECO v.2 utilizes zero ozone depleting blowing agents.
- **EcoLogo™ Certified** - WALLTITE ECO v.2 is certified by EcoLogo, an independent third party, as meeting the criteria for Thermal Insulation CCD-016, confirming a minimum recycled content of 5% by weight of finished product.
- **GreenGuard Certified** - WALLTITE ECO v.2 meets the stringent requirements of GREENGUARD Children & SchoolsSM, thus ensuring occupant safety through improved indoor air quality.



TYPICAL PHYSICAL PROPERTIES*

The following test data is from an independent laboratory and is in compliance with the product standard.

Property	Value Metric (Imperial)	Test Method
Density (Core)	29 kg/m ³ (1.8 lb/ft ³)	ASTM D1622
Compressive Strength	186 kPa (27.0 psi)	ASTM D1621
Tensile Strength	241 kPa (35.0 psi)	ASTM D1623
Open Cell Content	8.0%	ASTM D2856
Water Absorption	1.2 % by volume	ASTM D2842
Water Vapour Permeance 50mm sample	42 ng/Pa·s·m ² (0.70 Perms)	ASTM E96
Dimensional Stability	Volume Change (%) after 28 days -0.0 @ -20°C (-29°F) 1.5 @ 70°C (158°F) @ 97± 3% RH 0.4 @ 80°C (176°F)	ASTM D2126
Flame Spread Classification**	Flame Spread <500 Smoke Developed <500	CAN/ULC-S102 Including S127
Time to Occupancy***	24 Hours	CAN/ULC-S774
Initial Thermal Resistance (50 mm)	RSI: 2.45 m ² ·K/W (R: 13.9 ft ² ·hr·°F / BTU)	ASTM C518
Hot-Surface Performance	Passed when exposed to 93°C for 96 hours	ASTM C 411
Fungi Resistance	After 28 day incubation - no fungal growth exhibited	ASTM C1338

LONG-TERM THERMAL RESISTANCE****

Test Method: CAN/ULC-S770

Thickness mm (inches)	R Value ft ² ·hr·°F / BTU	RSI m ² ·K/W
50.0 (1.97)	11.07	1.95
50.8 (2.00)	11.24	1.98
63.5 (2.50)	14.31	2.52
75.0 (2.95)	17.03	3.00
76.2 (3.00)	17.32	3.05
88.9 (3.50)	20.55	3.62
100 (3.94)	23.39	4.12
102 (4.00)	23.73	4.18

AIR BARRIER TESTING RESULTS

As per the Technical Guide for Air Barrier Systems for Exterior Walls of Low-Rise Buildings, Masterformat Section: 07272 prepared by CCMC,NRC

Material Result 0.00012 l/s/m2 @ 75Pa
System Result Testing In Progress

*These physical property values are typical for this material as applied at our development facility under controlled conditions. WALLTITE ECO v.2 performance and actual physical properties will vary with differences in application (i.e. ambient conditions, process equipment and settings, material throughput, etc.). As a result, these published properties should be used as guidelines solely for the purpose of evaluation. Physical property specifications should be determined from actual production material.

**Numerical flame spread ratings are not intended to reflect hazards presented by this or any products made from this material under actual fire conditions. WALLTITE ECO v.2 should not be left exposed and must be protected by a thermal barrier.

***The volatile organic compound (VOC) emissions under consideration were measured with an assumed room ventilation rate of 0.3 air changes per hour as per the NBC requirements for new construction.

****The Long-Term Thermal Resistance values are the design value used for WALLTITE ECO v.2 as per CAN/ULC-S705.1, paragraph 5.5.8.2.

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Warning! These products can be used to prepare a variety of polyurethane products. Polyurethanes are organic materials and must be considered combustible.

COLOUR

Initial surface colour is purple. This is expected to change upon exposure to UV (sunlight) to a grey or rusty brown. The colour of the core may vary based on application thickness and the number of passes.

APPLICATION

WALLTITE ECO v.2 must be installed in accordance with the CAN/ULC-S705.2 standard and the QATP manual by applicators licensed through the QATP and certified by Morrison Hershfield.

Before applying, ensure ambient temperature is:

WALLTITE ECO v.2	10°C (50°F) to 40°C (104°F)
WALLTITE ECO v.2 F	0°C (32°F) to 20°C (68°F)
WALLTITE ECO v.2 CT	-10°C (14°F) to +5°C (41°F)

Do not apply WALLTITE® ECO v.2 in excess of 50 mm (two inches) depth per pass due to the product's exothermic effect. After spraying a pass, cooling time must be allowed for the dissipation of heat before spraying another pass. Not allowing adequate cooling time raises the risk of scorching and/or fire.

- WALLTITE ECO v.2 regular grade: after applying the first pass, wait at least 10 minutes before applying a second pass. If a depth of more than 100mm (4") is required, wait at least 1 hour before spraying a third pass. If a fourth pass is required, wait at least one hour before applying it. A maximum of four passes to a total depth of 200mm (8") can be applied in a twelve hour period.
- WALLTITE ECO v.2 F: after applying the first pass, wait at least 10 minutes before applying a second pass. If a depth of more than 100mm (4") is required, wait at least 2 hours before spraying a third pass. A maximum of three passes to a total depth of 150mm (6") can be applied in a twelve hour period.
- WALLTITE ECO v.2 CT: after applying the first pass, wait at least 1 hour before applying the second pass. A maximum of two passes to a total depth of 100mm (4") can be applied in a twelve hour period.

For application information, please consult the *BASF Canada Application guidelines for WALLTITE ECO v.2 Insulation / Air Barrier Material*.

SYSTEM ACCESSORIES

Typical accessories include transition membranes, though wall flashings and other components. Refer to the WALLTITE ECO technical guide specification for more information.

SHORT FORM SPECIFICATION (visit www.walltite.com for a more detailed specification)

Insulation/ Air Barrier Material and Air barrier System: Closed cell, spray applied polyurethane foam, medium density, ccSPF meeting the requirements of CAN / ULC-S705.1-01 (including Amendments 1 and 2) . Certified by EcoLogo as containing a minimum of 5% recycled content by mass of finished product. GREENGUARD Indoor Air Quality Certified® by the GREENGUARD Environmental Institute under the GREENGUARD for Children & SchoolsSM product certification program. Product to utilize Zero ODS (Ozone Depleting Substance) blowing agent.

Product: WALLTITE ECO® v.2 by BASF: The Chemical Company

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Revision Date: November 18, 2010

Page 3 of 5

QUALITY ASSURANCE PARAMETERS AND REACTIVITY*All Measurements taken at ambient temperatures of 23 °C, using Graco Reactor E30 and Fusion AP 5252 chamber*

	WALLTITE ECO v.2	WALLTITE ECO v.2 F	WALLTITE ECO v.2 CT
Hose and Primary Temperatures - °C(°F)	49 (120)	49 (120)	49 (120)
Pressure – Bar (psi)	83 (1200)	83 (1200)	83 (1200)
Gel Time (seconds)	1.85 ± 0.25	1.65 ± 0.25	1.45 ± 0.25
Rise Time (seconds)	5.00 ± 1.00	4.50 ± 1.00	4.00 ± 1.00

PACKAGING AND STORAGE RECOMMENDATION

WALLTITE ECO v.2 is sold to installers in drums or bulk tankers. It consists of two components: WALLTITE ECO v.2 Resin and Elastospray 8000A Isocyanate.

	WALLTITE ECO v.2 Resin	Elastospray 8000A Isocyanate
Shelf Life	6 months	12 months
Storage Temperature Recommendations	16-23 °C (61-73 °F)	16-27 °C (61-81 °F)
Drum Description	Purple Steel Drum, 220 kg (485 lb)	Red Steel Drum, 250 kg (551 lb)

LIQUID COMPONENT PROPERTIES

	WALLTITE ECO v.2 Resin	Elastospray 8000A Isocyanate
Viscosity – mPa·s @ 25°C (77 °F)	250 ± 50	200 ± 30
Specific Gravity @ 25°C (77°F)	1.20	1.22
Flash Point	>93°C (>200°F)	>200 °C (>390 °F)
Ratio (Parts by Volume)	100	100

HEALTH, SAFETY AND TOXICITY CONSIDERATIONS HANDLING RECOMMENDATIONS:

Always handle and apply WALLTITE® ECO v.2 in accordance with the QATP manual.

Do not apply WALLTITE® ECO v.2 in excess of 50 mm (two inches) per pass due to the product's exothermic effect. Allow appropriate cooling times between passes (see the Application section, above).

Elastospray 8000A Isocyanate

- Use personal protective equipment (see MSDS)
- Avoid all contact with skin and eyes
- Do not inhale the vapours
- Do not store in a humid environment
- In case of spills, absorb using sand or absorbing material (not sawdust)
- For larger spills, contact BASF Canada at 1-800-454-2673, or any agency specialized in chemical damage control (e.g. CANUTEC at 613-996-6666)

WALLTITE ECO v.2 Resin

Contains a low boiling point blowing agent:

- Use personal protective equipment (see MSDS)
- Before opening, unscrew the bung slowly to release the gas pressure in the drums
- Avoid all contact with skin

Application Safety

At all times while spraying, properly fitting breathing apparatus supplying fresh air **must** be worn by the installers and others working within 10 meters (33 feet) of the installer. Protective gloves, overalls, eye protection, safety shoes and hard hats must also be worn while spraying. While spraying, always provide mechanical ventilation with a minimum 0.3 air changes per hour and continuing for 24 hours following installation. People with known respiratory allergies must avoid exposure to the isocyanate component. If inhalation of vapours occurs, remove the person from the working area to breathe fresh air and if breathing is still difficult call a physician. Avoid contact with eyes, skin and clothing. In case of eye contact, immediately flush with large amount of water for at least 15 minutes and call a physician immediately. In case of skin contact, wash area with soap and water. Wash soiled clothing before reuse.

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Fire Hazard

Fires involving either component may be extinguished with carbon dioxide, dry chemical, or an inert gas. Personnel fighting the fire must be equipped with self-contained breathing apparatus.

PRECAUTIONS/LIMITATIONS

Do not install in locations where a non-combustible insulation is required.

When installed inside a building protect foam in accordance with the building code requirements using a layer of drywall or a suitable thermal barrier.

WALLTITE® ECO™ v.2 and ENERTITE® 1-2-1™ using the same machine. These two materials are distinct products with distinct application processes that MUST be stringently observed.

Changing to ENERTITE 1-2-1

- Use a separate drum pump or wipe down pump shaft before putting into ENERTITE 1-2-1 drum.
- Mix ENERTITE 1-2-1 resin drum on high speed (800 rpm or level 3 on a Twistork) for a MINIMUM of 30 minutes prior to flushing.
- Constant mixing on low speed (400 rpm or level 1.5 on a Twistork) is required during flushing of resin.
- Flush WALLTITE ECO v.2 from coupling block into pail until colour of resin has completely changed from purple to yellow cream. Do not mix resins for recycling purposes; this can result in chemical contamination. Flush resin to be disposed of according to local regulations.
- Spray out a test sample to ensure ENERTITE 1-2-1 meets density criteria. If good, continue to application techniques (refer to BASF Canada ENERTITE 1-2-1 Application Guide), otherwise continue flushing and test again.

Changing to WALLTITE ECO v.2

- Flush ENERTITE 1-2-1 from coupling block into pail until colour of resin has completely changed from yellow cream to purple. Do not mix resins for recycling purposes; this can result in chemical contamination. Flush resin to be disposed of according to local regulations.
- Spray out a test sample to ensure WALLTITE ECO v.2 meets minimum density criteria (refer to BASF Canada WALLTITE ECO Application Guide). If good, continue with application, otherwise continue flushing and test again.

TECHNICAL ASSISTANCE

For more detailed information, call:

Eastern region

ON, QC, MAR

Toll-Free: 1-866-474-3538

Western region

BC, AB, SK, MB, NWT, YT, NU

Toll-Free: 1-800-891-0671

BASF Canada Inc.: www.walltite.com

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Page 5 of 5