Flexible - Versatile - Lightweight

DELTA® LAMELLA is manufactured with perpendicular orientated mineral wool bonded together with a high temperature binder. The end grain fiber is adhered perpendicularly to a laminate {facing surface}. This construction provides high compressive strength and easy-to-wrap, flexible type insulation that require the finished characteristics of heavy density mineral wool boards. **DELTA® Mineral Wool LAMELLA** has a wide range of applications from -20°F.(-29°C) to 850°F.*(454°C*) including use on large pipes & cylindrical ducts, storage tanks, and equipment.

Physical Properties

All values in ( ) are metric conversions.

Density ..... Nom. 4 lb./ft^3 (Nom. 64 kg./m^3)

Service Temperature: [ASTM C 411] ..... up to **850°F*(454°C*)**

Thermal Conductivity: °F.(°C) mean temp.= Btu in./h ft² °F (W/m K)
[per ASTM C 177 with C 1045 calculations]

100°F. (38°C) = 0.29 (0.040) 400°F. (204°C) = 0.55 (0.078)
200°F. (93°C) = 0.36 (0.052) 500°F. (260°C) = 0.65 (0.094)
300°F. (149°C) = 0.44 (0.063) 600°F. (316°C) = 0.78 (0.113)

k = 0.27 @75°F. (24°C) mean temp. or∧**R = 3.7** per in. (25mm)

Compressive Strength: [ASTM C 165] .....
Not less than 125 lbs./ft^2 (5.8 kPa)

Corrosion [Steel, Aluminum, Copper, ASTM C 665] ..... None

Moisture Sorption [Vapor, ASTM C 1104] ..... Less than 1%

Water *wicking* resistant* and Non-hygroscopic.*

Permeance: [ASTM E 96] ASJ & FSK facing only ⇛...
.....= 0.02 Perms, max. (.014 g/24h m^2/mm Hg., max.)

Does not promote growth of fungi or bacteria.

Incombustible: Mineral Wool per ASTM E 136 Test Method

Surface Burning Characteristics: Tested as a composite/finished
product with ASJ facings per ASTM E 84 Test Method
Flame Spread Index = 15 Smoke Developed Index = 20

Facings {Laminates}

Standard: **A.S.J.** {**A**ll **S**ervice **J**acket} laminate constructed with 30 lb/↵3000 ft^2 (49g/m^2) White Kraft, tri-direction fiber glass filament {Scrim}, 0.00035" (9 µm) aluminum Foil, and fire retardant adhesive. *Special Order*: ①**F.S.K.** {**F**oil-**S**crim-**K**raft} laminate constructed with 0.0007"(18µm) aluminum Foil, Tri-directional fiber glass filament {Scrim}, 30 lb/↵3000 ft^2 (49g/m^2) natural Kraft, and fire retardant adhesive. ② ↵0.033"(0.9 mm) thick fiber **Glass Mat.**

Roll Forms Available

Thickness: 1" (25mm) thru 6" (152mm) in ½" (13mm) increments

Width: 36 in. (91cm) Roll Length: Varies with thickness

Custom lengths {special stretch-outs} available at extra costs.

Packaged: ≅ 27"(69cm) diameter roll in perforated polyethylene
or corrugated carton, 27½"(70cm) square by 37"(94cm) high.

Specifications

{Board Blank tested flat}ASTM C 612-93

{ASJ Facing Only}U.S. Federal Specification HH-B-100B

U.S. Federal Specification HH-I-558B and C

Stainless Steel Stress Corrosion Specification:
Special provisions apply concerning lot testing, contact manufacture…
ASTM C 795, per test methods, C 871 & C 692

Nuclear Regulatory Commission, Reg. Guide #1.36

*Consult manufacturer for limitations under elevated temperature conditions.

DELTA® MINERAL WOOL LAMELLA

Suggested Thickness: 7140°F. Outer Temp.

3EPLUS® v2.12 computer model calculating for insulation thickness at various Process Temperatures on a vertical flat surface. Input data: ambient air= 75° F, no wind, for outer surface...Emittance {A.S.J. Facing} = 0.9 or
Emittance {Oxidized Aluminum Jacketing} = 0.1

Process Temp.	*Thickness ASJ Alum.*	*Process Temp.*	*Thickness ASJ Alum.*
250°F.→	0.5" ---- 1.0"	650°F.→	2.5" ----- 5.5"
350°F.→	1.0" ---- 2.0"	750°F.→	3.5" ----- XX
450°F.→	1.5" ---- 3.0"	850°F.→	4.5" ----- XX
550°F.→	2.0" ---- 4.0"	XX ⇛ Not Recommend	

Caution: ①Various operational conditions such as insufficient thickness, higher ambient temperatures, solar load, and aluminum jacketing can cause the outer temperature to exceed the maximum temperature {150°F.(66°C)} limit of the insulation facing. Double layering is not recommended for process temperatures above 550°F.(288°C) at 80°F.(27°C) ambient air. Maximum recommended installed thickness is six (6) inches. ②Properly installed protective vapor retarders must be used for below ambient applications to prevent movement of water vapor through or around the insulation towards the colder surface. ③During initial heat-up to operating temperatures above 380°F.(193°C), an acrid odor and smoke will be given off as a portion of the bonding material used in the insulation begins to undergo a controlled decomposition.

ROCK WOOL MANUFACTURING COMPANY
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