KNAUF INSULATION
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Knauf Data Sheet | PE-DS-15e 12-09

# KwikFlex™ Pipe & Tank Insulation

*with ECOSE® Technology*

with ECOSE® TECHNOLOGY

- Knauf KwikFlex offers a unique combination of flexibility and compressive strength in a roll form.

- Tough and durable, yet easy to handle and fabricate.

- Can be used for any curved or irregular surfaces that require the finished characteristics of rigid fiber glass insulation.

- KwikFlex has excellent thermal properties, with temperature rating to 850°F (454°C).

- Wraps tightly around curved and spiral surfaces, making installation quick.

## Facts at a glance

- Covers any curved or irregular surface
- No need to stock multiple sizes
- Excellent compressive strength
- Great flexibility provides easier installation
- Low thermal conductivity
- Easy to handle and fabricate

# KwikFlex™ Pipe & Tank Insulation *with ECOSE® Technology*

## Description

Knauf KwikFlex Pipe and Tank Insulation with ECOSE Technology is a 48" wide semi-rigid fiber glass blanket, 2.5 pcf density, in roll form. It is available plain or faced with a factory-applied ASJ, FSK or PSK vapor retarder jacket. The fiber orientation provides excellent compressive strength while maintaining flexibility for ease of installation.

## ECOSE Technology

ECOSE Technology is a revolutionary new binder based on rapidly renewable bio-based materials rather than non-renewable petroleum-based chemicals such as phenol, formaldehyde or acrylics. ECOSE Technology reduces Knauf binder embodied energy and contains no phenol, formaldehyde, acrylics or artificial colors found in traditional fiber glass insulation.

## Application

Knauf KwikFlex Pipe and Tank Insulation with ECOSE Technology is typically used on tanks, vessels and large-diameter (greater than 10") pipes. It can be used for any curved or irregular surfaces that require finished characteristics of rigid fiber glass insulation.

## Features and Benefits

### Excellent Thermal Properties

- Temperature rating to 850°F (454°C).

### Low-Cost Installation

- Flexible.
- Easy to handle and fabricate.

### Inventory Savings

- No need to stock multiple sizes.
- Various thicknesses available to meet all your pipe and tank insulation needs.

### Resists Damage

- Tough and durable.
- Resists damage in shipment and during and after installation.

### Resists Microbial Growth

- Does not promote the growth of fungi or bacteria.
- Will not rot.
- Will not sustain vermin.

### Corrosiveness (ASTM C 665)

- Does not accelerate corrosion on steel, copper or aluminum.

### Corrosion (ASTM C 1617)

- The corrosion rate in mils/yr will not exceed that of the 1 ppm chloride solution.

## Specification Compliance

- UL/ULC Classified (FSK, ASJ)
- ASTM C 1393
  Types I, II, IIIA, IIIB Category 2

## Technical Data

### Temperature Range (ASTM C 411)

- Operating temperature to 850°F (454°C).

### Compressive Strength (ASTM C 165)

- Not less than 25 PSF (1.2 kPa) at 10% deformation.

### Water Vapor Transmission (ASTM E 96, Procedure A)

- FSK, ASJ and PSK vapor retarders have a maximum rate of .02 perms.

### Puncture Resistance (TAPPI Test T803) (Beach Units)

- FSK and PSK facings: 25
- ASJ facing: 50

### Surface Burning Characteristics

- UL/ULC Classified (FSK, ASJ)
- Does not exceed 25 Flame Spread, 50 Smoke Developed when tested according to ASTM E 84 and UL 723.

### Linear Shrinkage (ASTM C 356)

- Negligible.

## Application & Specification Guidelines

### Precautions

- ASJ, FSK and PSK jackets should not be used if outer-surface temperature exceeds 150°F (66°C).
- During initial heat-up to operating temperatures above 350°F (177°C), a slight odor and some smoke may be given off as a portion of the bonding material used in the insulation begins to undergo a controlled decomposition.
- If natural convection is not adequate in confined areas, forced ventilation should be provided in order to protect against any harmful fumes and vapors that might be generated.
- Care must also be taken when using sealants, solvents or flammable adhesive during installation.

### Storage

- Protect stored insulation from water damage or other abuse.
- Protect from welding sparks and open flame.
- Packages are not designed for outside storage.

### Preparation

- Apply Knauf KwikFlex Pipe and Tank Insulation on clean, dry surfaces.

### Application

For easy installation of Knauf KwikFlex Pipe and Tank Insulation simply follow these guidelines.

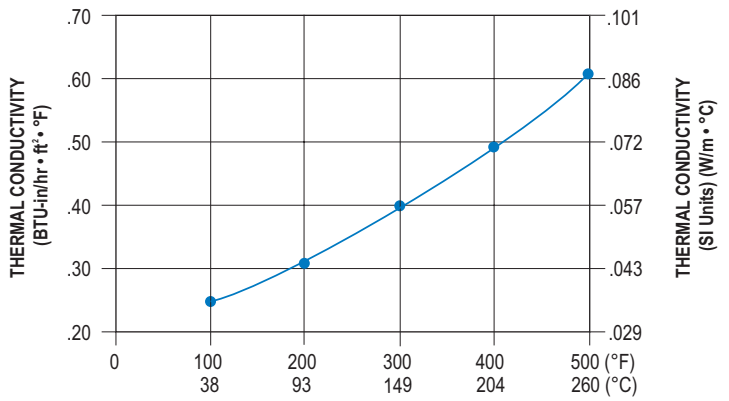
- Refer to the Stretchout Chart to find the appropriate length to cut for the specific pipe size. Be sure to add an additional 2" (51 mm) to 4" (102 mm) for your staple flap.
- Cut your stretchout length and wrap the material around the iron pipe to ensure the proper fit.
- Staple the lap on 3" (76 mm) centers with outward clinching staples.
- Butt edges shall be firmly secured, and butt strips matching the jacket shall be applied at each joint.

## Stretch-Outs*

| Nominal Iron Pipe Size | Iron Pipe Outside Diameter | Thickness | | | |
|---|---|---|---|---|---|
| | | 1" (25 mm) | 1 1/2" (38 mm) | 2" (51 mm) | 3" (76 mm) |
| 10" (254 mm) | 10 3/4" (273 mm) | 40 1/8" (1019 mm) | 43 1/4" (1099 mm) | 46 3/8" (1178 mm) | 52 5/8" (1337 mm) |
| 12" (305 mm) | 12 3/4" (324 mm) | 46 3/8" (1178 mm) | 49 1/2" (1257 mm) | 52 3/4" (1340 mm) | 59" (1499 mm) |
| 14" (356 mm) | 14" (356 mm) | 50 3/8" (1280 mm) | 53 1/2" (1359 mm) | 56 5/8" (1438 mm) | 62 7/8" (1597 mm) |
| 16" (406 mm) | 16" (406 mm) | 56 5/8" (1438 mm) | 59 3/4" (1518 mm) | 62 7/8" (1597 mm) | 69 1/8" (1756 mm) |
| 18" (457 mm) | 18" (457 mm) | 62 7/8" (1597 mm) | 66" (1676 mm) | 69 1/4" (1756 mm) | 75 1/2" (1918 mm) |
| 20" (508 mm) | 20" (508 mm) | 69 1/8" (1756 mm) | 72 3/8" (1838 mm) | 75 1/2" (1918 mm) | 81 3/4" (2076 mm) |
| 22" (559 mm) | 22" (559 mm) | 75 1/2" (1918 mm) | 78 5/8" (1997 mm) | 81 3/4" (2076 mm) | 88" (2235 mm) |
| 24" (610 mm) | 24" (610 mm) | 81 3/4" (2076 mm) | 84 7/8" (2156 mm) | 88" (2235 mm) | 94 3/8" (2397 mm) |
| 26" (660 mm) | 26" (660 mm) | 88" (2235 mm) | 91 1/8" (2315 mm) | 94 3/8" (2397 mm) | 100 5/8" (2556 mm) |
| 28" (711 mm) | 28" (711 mm) | 94 3/8" (2397 mm) | 97 1/2" (2477 mm) | 100 5/8" (2556 mm) | 106 7/8" (2715 mm) |
| 30" (762 mm) | 30" (762 mm) | 100 5/8" (2556 mm) | 103 3/4" (2635 mm) | 106 7/8" (2715 mm) | 113 1/8" (2873 mm) |
| 32" (813 mm) | 32" (813 mm) | 106 7/8" (2715 mm) | 110" (2794 mm) | 113 1/8" (2873 mm) | 119 1/2" (3035 mm) |
| 34" (864 mm) | 34" (864 mm) | 113 1/8" (2873 mm) | 116 1/4" (2953 mm) | 119 1/2" (3035 mm) | 125 3/4" (3194 mm) |
| 36" (914 mm) | 36" (914 mm) | 119 1/2" (3035 mm) | 122 5/8" (3115 mm) | 125 3/4" (3194 mm) | 132" (3353 mm) |
| 38" (965 mm) | 38" (965 mm) | 125 3/4" (3194 mm) | 128 7/8" (3273 mm) | 132" (3353 mm) | 138 1/4" (3512 mm) |
| 40" (1016 mm) | 40" (1016 mm) | 132" (3353 mm) | 135 1/8" (3432 mm) | 138 1/4" (3512 mm) | 144 5/8" (3673 mm) |
| 42" (1067 mm) | 42" (1067 mm) | 138 1/4" (3512 mm) | 141 1/2" (3594 mm) | 144 5/8" (3673 mm) | 150 7/8" (3832 mm) |

* Additional 2" (51 mm) to 4" (102 mm) should be added for lap.

## Thermal Efficiency (ASTM C 177)




| Mean Temperature (Si) | k | k(Si) |
|---|---|---|
| 75°F (24°C) | 0.24 | .035 |
| 100°F (38°C) | 0.25 | .036 |
| 200°F (93°C) | 0.32 | .046 |
| 300°F (149°C) | 0.39 | .056 |
| 400°F (204°C) | 0.49 | .070 |
| 500°F (260°C) | 0.61 | .088 |

## Forms Available

| Thickness | Width† | Length |
|---|---|---|
| 1" (25 mm) | 48" (1219 mm) | 52' (15.85 m) |
| 1½" (38 mm) | | 30' (9.14 m) |
| 2" (51 mm) | | 26' (7.92 m) |
| 2½" (64 mm) | | 21' (6.40 m) |
| 3" (76 mm) | | 18' (5.48 m) |

† Cut-to-length sizes also available.

### Caution

Fiber glass may cause temporary skin irritation. Wear long-sleeved, loose-fitting clothing, head covering, gloves and eye protection when handling and applying material. Wash with soap and warm water after handling. Wash work clothes separately and rinse washer. A disposable mask designed for nuisance type dusts should be used where sensitivity to dust and airborne particles may cause irritation to the nose or throat.

### Fiber Glass and Mold

Fiber glass insulation is not a food source for mold growth. However, mold can grow on almost any material when it becomes wet and contaminated. Carefully inspect any insulation that has been exposed to water. If it shows any sign of mold growth it must be discarded. If the material is wet but shows no evidence of mold, it should be dried rapidly and thoroughly. If it shows signs of facing degradation from wetting, it should be replaced.

### Notes

The chemical and physical properties of Knauf KwikFlex Pipe and Tank Insulation with ECOSE Technology represent typical average values determined in accordance with accepted test methods. The data is subject to normal manufacturing variations. The data is supplied as a technical service and is subject to change without notice. References to numerical flame spread ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

Check with your Knauf Insulation sales representative to assure information is current.

KNAUF INSULATION

it's time to save energy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