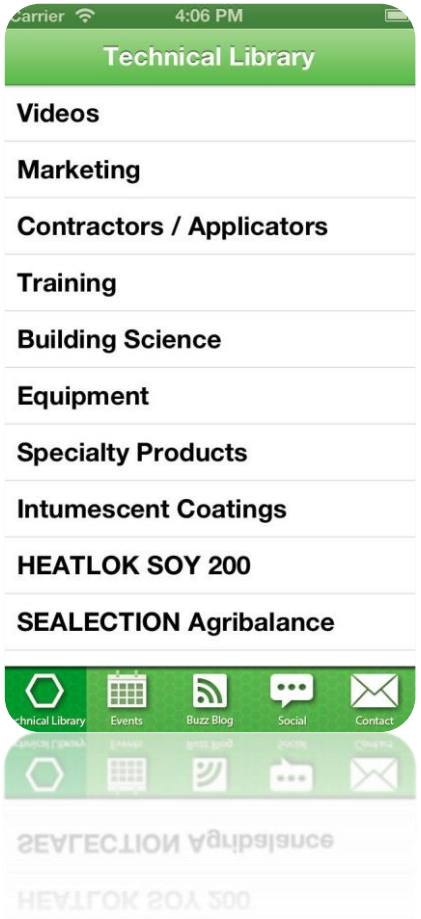
DEMILEC

EXPERIENCE THE DIFFERENCE



If you have not already done so, please download the Demilec app now

Google Play Store:

https://play.google.com/store/search?q=demilec

iOS App Store :

https://itunes.apple.com/us/app/demilec/id977362993?mt=8

DEMILEC

EXPERIENCE THE DIFFERENCE

The Demilec Difference

About Demilec

Over 30 years as an Industry Leader

Manufacturing Polyurethane Sprayfoam and Coatings

Certifications

Global Company

175 EMPLOYEES in NORTH AMERICA

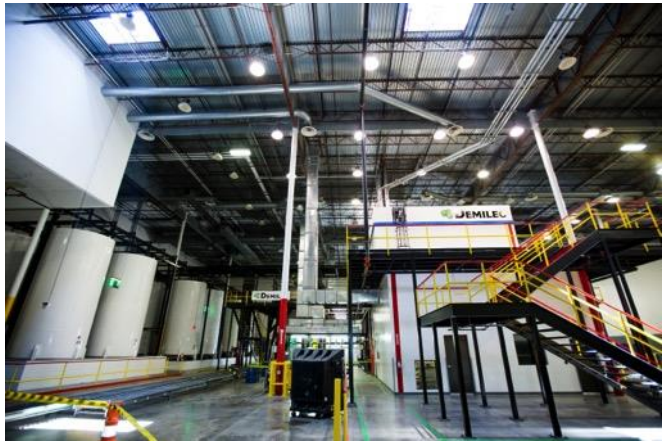
Intl. Distributors: 4 EUROPE, 2 AUSTRALIA

DEMILEC

EXPERIENCE THE DIFFERENCE

Our Legacy

- Over 30 Years Experience in Spray Foam Insulation & Polyurea Coatings
- Demilec Name: **DEMI**CHEL + **L'EC**UYER = DEMILEC
- 1983 Opened Operations in Montreal, Canada w/ 5 employees
- 1987: Acquisition of Demilec by M. LARIVIÈRE
- 1993: Premilec Foundation
- 1997 Expanded Operations into U.S.
- 1999: Demilec USA Plant Construction at 2925 Galleria Arlington TX
- 2000: Polyol Plant Construction
- 2014 Recycled 300 million plastic bottles in Heatlok Soy - Milestone
- 2014 Opened 224K sq. ft. State-of-the-Art Facility in Arlington, TX (500K drums Annual Capacity)
- 2015: SCP hires current management team with extensive spray foam and insulation experience
- 2017: Demilec launches Heatlok HFO
- 2018: Demilec is acquired by Huntsman
- 2018: Demilec launches Heatlok HFO Pro



DEMILEC
EXPERIENCE THE DIFFERENCE

The Demilec Difference

- Polyol Vertical Integration
  - Polyester based
    - ONLY manufacturer of spray foam systems to manufacture
    - Made from recycled plastic bottles and used X ray film
    - Provides for superior fire performance and R value
  - Natural Oil based
    - LEADING manufacturer of Natural Oil based polyols
    - Soy oils not destined for food stream consumption
  - LEED project impact higher than any other manufacturer
  - Enables broader options during formulations
    - Leads to higher R value
    - Leads to better yield

DEMILEC
EXPERIENCE THE DIFFERENCE

Product Profile: Heatlok® HFO Pro

- **High 1” R = 7.4**
  - Industry leading
  - Strong Cell Structure from Demilec polyols trapping blowing agent
- **Superior Yield through HFO**
  - Yield estimates of 5,000 b.f.
  - 20% higher than Heatlok Soy 200+
- **Ultra-low Greenhouse Gas Blowing Agent**
  - Solstice® Liquid Blowing Agent
  - GWP of 1, 99.9% lower than HFC blowing agents
  - Conforms to Montreal Protocol
- **Focus is on External Spray**
  - ABAA Approval
  - NFPA 285 (Brick, Stone, and Masonry)
- **Superior Adhesion and Compressive Strength**
  - Single pass: 3”
  - Two immediate passes: 2”+2”

Product	Heatlok HFO PRO
Description	Closed Cell Foam
Density	2.2
lbs./set	1000
Yield Estimate (board Ft./set)	5000+
R/inch	7.4
ER	565

DEMILEC
EXPERIENCE THE DIFFERENCE

Product Profile: Heatlok® HFO Pro

Chemical storage and handling

LIQUID COMPONENT PROPERTIES*		
PROPERTY	**A-PMDI ISOCYANATE**	**HEATLOK HFO PRO RESIN**
Shelf Life of unopened drum properly stored	12 months	6 months
Storage Temperature	50 – 100°F (10 – 38°C)	59 – 77°F (15 – 25°C)

Flushing Procedures

- Follow the published flushing procedure on the Demilec website. Never flush water through the A-side (iso side). Failure to properly flush will result in off-spec foam and does not comply with the ICC Evaluation Service Report and does not qualify for the Demilec Limited Lifetime Warranty.

DEMILEC
EXPERIENCE THE DIFFERENCE

Product Profile: Heatlok® HFO Pro

- Processing Parameters

RECOMMENDED PROCESSING CONDITIONS*		
Initial Primary Heater Setpoint Temperature	105 – 115°F	41 – 46°C
Initial Hose Heat Setpoint Temperature	105 – 115°F	41 – 46°C
Initial Processing Setpoint Pressure	1200 – 1400 psi	8274 – 9653 kPa
Substrate & Ambient Temperature	Summer > 50°F Winter > 15°F	Summer > 10°C Winter > -9°C
Moisture Content of Substrate	≤19%	≤19%
Moisture Content of Concrete	Concrete must be cured, dry and free of dust and form release agents.	

*Foam application temperatures and pressures can vary widely depending on temperature, humidity, elevation, substrate, equipment and other factors. While processing, the applicator must continuously observe the characteristics of the sprayed foam and adjust processing temperatures and pressures to maintain proper cell structure, adhesion, cohesion and general foam quality. It is the sole responsibility of the applicator to process and apply Heatlok HFO Pro within specification.

Product Profile: Heatlok® HFO High Lift

- **Next generation technology**
  - Achieve higher board footage
  - Obtain an R-49 rating with a 6.5” inch lift
  - **13.5% less chemical used** vs. current product
  - Additional LEED points through the use of recycled and renewable raw materials (Soy Oil, Recycled plastic)
- **Cost Savings through Performance**
  - Lower cost per R-Value
  - Less spray time per job improves labor efficiency
  - Higher drum yield means less down time
  - Lower spray temps add life to your equipment

Product	Heatlok HFO
Description	Closed Cell Foam
Density	2.2
lbs./set	1000
Yield Estimate (board Ft./set)	5000+
R/inch	7.4
ESR	4073

DEMILEC
EXPERIENCE THE DIFFERENCE

Product Profile: Heatlok® HFO High Lift

Chemical storage and handling

LIQUID COMPONENT PROPERTIES*		
PROPERTY	**A-PMDI ISOCYANATE**	**HEATLOK HFO HL RESIN**
Shelf Life of unopened drum properly stored	12 months	6 months
Storage Temperature	50 – 100°F (10 – 38°C)	59 – 77°F (15 – 25°C)

Flushing Procedures

- Follow the published flushing procedure on the Demilec website. Never flush water through the A-side (iso side). Failure to properly flush will result in off-spec foam and does not comply with the ICC Evaluation Service Report and does not qualify for the Demilec Limited Lifetime Warranty.

DEMILEC
EXPERIENCE THE DIFFERENCE

Product Profile: Heatlok® HFO High Lift

- Processing Parameters

RECOMMENDED PROCESSING CONDITIONS*		
Initial Primary Heater Setpoint Temperature	105 – 115°F	41 – 46°C
Initial Hose Heat Setpoint Temperature	105 – 115°F	41 – 46°C
Initial Processing Setpoint Pressure	1200 – 1400 psi	8274 – 9653 kPa
Substrate & Ambient Temperature	Summer > 50°F Winter > 15°F	Summer > 10°C Winter > -9°C
Moisture Content of Substrate	≤19%	≤19%
Moisture Content of Concrete	Concrete must be cured, dry and free of dust and form release agents.	

*Foam application temperatures and pressures can vary widely depending on temperature, humidity, elevation, substrate, equipment and other factors. While processing, the applicator must continuously observe the characteristics of the sprayed foam and adjust processing temperatures and pressures to maintain proper cell structure, adhesion, cohesion and general foam quality. It is the sole responsibility of the applicator to process and apply Heatlok HFO High Lift within specification.

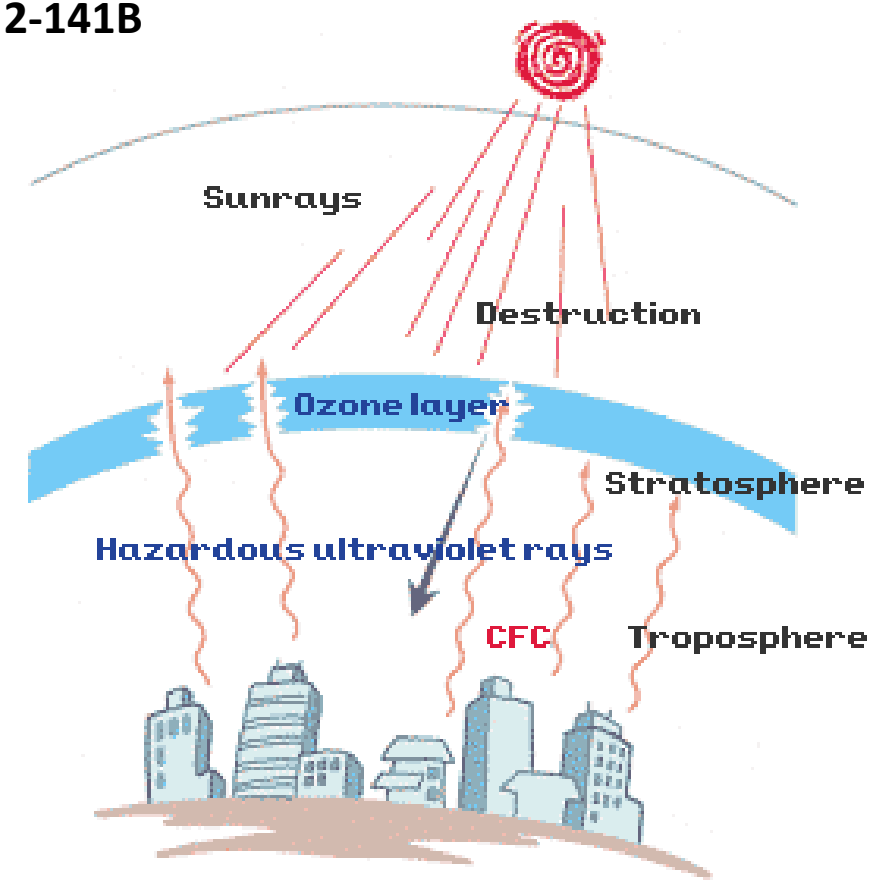
SPF Blowing Agent Regulatory History

GENERATION	EXAMPLES	Ozone Depletion Potential (ODP, 1.0 = maximum) Global Warming Potential (GWP, carbon dioxide = 1.0)
First Generation 1950s – 1980s	CFCs → "Freon"	ODP = 1.0 GWP = 4,750
Second Generation 1980s – 1990s	HCFCs → 141b	ODP = 0.12 GWP = 725.0
Third Generation 2000 - 2019	HFCs → 245fa & 365/227	ODP = 0.0 GWP = 1,030
Fourth Generation 2020 –	HFOs → Honeywell Solstice® DuPont Formacel®	ODP = 0.0 GWP = < 7.0

DEMILEC
EXPERIENCE THE DIFFERENCE

Evolution of Blowing Agent Molecule

GEN 2-141B



CFC's released into atmosphere by aerosols, refrigerators, foam packaging

1 - Ultraviolet light from sunlight breaks down CFC molecule, releasing chlorine

2 - Chlorine breaks down ozone molecule (O_3) to form chlorine monoxide (ClO and a free oxygen atom (O)

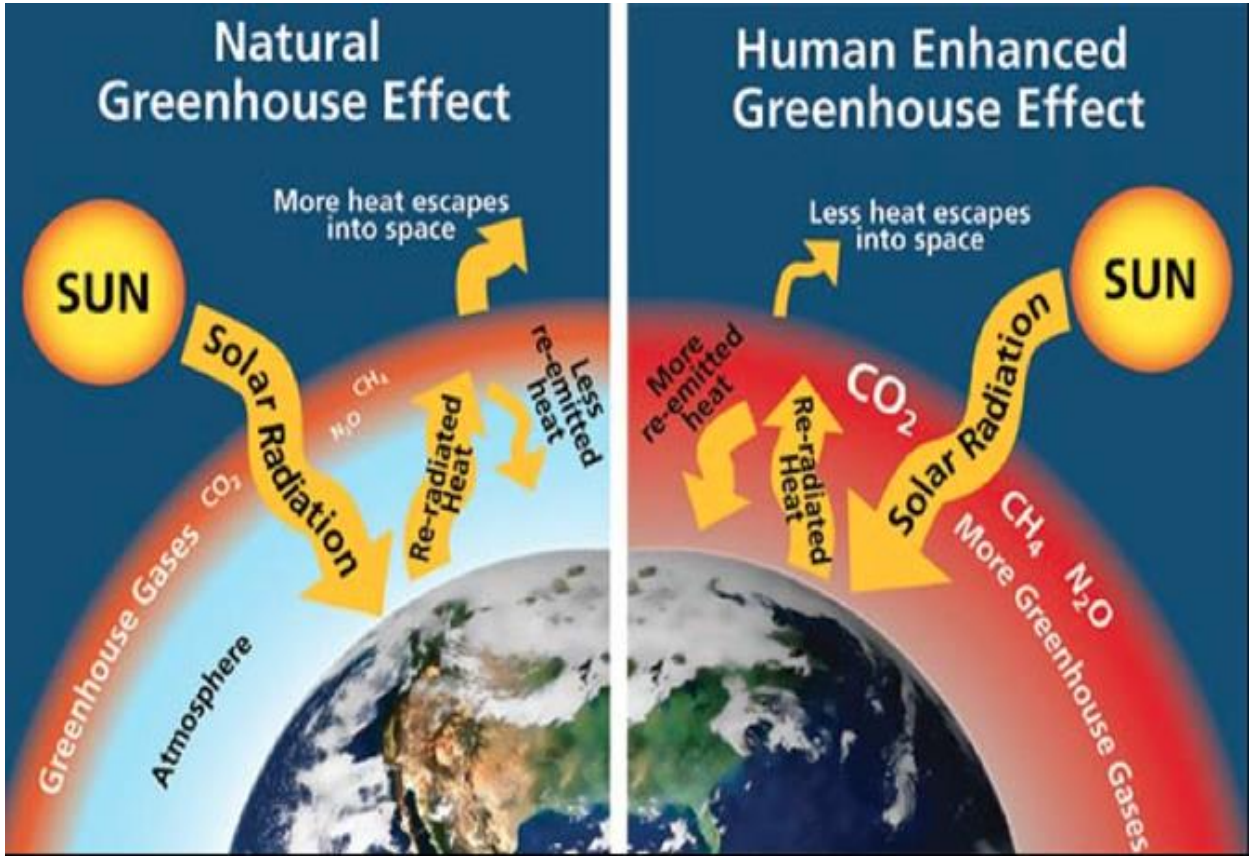
3 - Chlorine monoxide and free oxygen atom react to form oxygen and chlorine (O_2+Cl)

4 - Chlorine then breaks down more ozone

DEMILEC
EXPERIENCE THE DIFFERENCE

Evolution of Blowing Agent Molecule

GEN 3-245FA



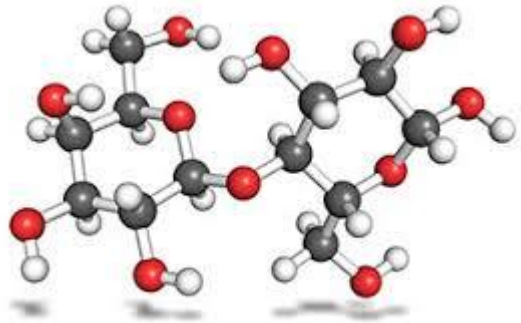
DEMILEC
EXPERIENCE THE DIFFERENCE

Evolution of Blowing Agent Molecule

- 4th Generation Blowing Agent
- Industrywide elimination of HFC Blowing Agent
  - Montreal Protocol for Stratospheric Ozone Protection
  - EPA cutoff date of January 1st, 2020
- Low GWP materials
  - Drive Low GWP Specification
  - Not all manufacturers will be able to offer a Low GWP product

Honeywell

SOLSTICE® LIQUID BLOWING AGENT

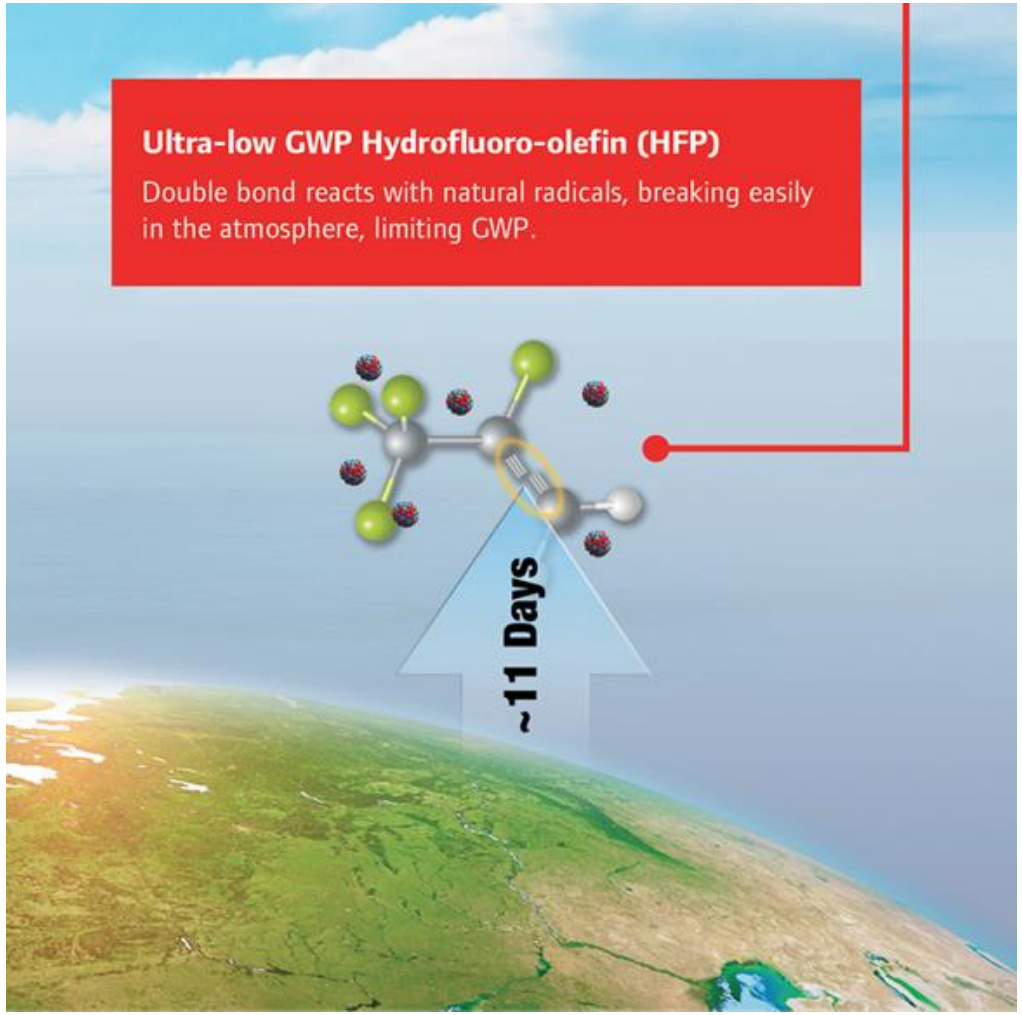


DEMILEC

EXPERIENCE THE DIFFERENCE

Evolution of Blowing Agent Molecule

GEN 4- Honeywell's Solstice®



DEMILEC
EXPERIENCE THE DIFFERENCE

DEMILEC
EXPERIENCE THE DIFFERENCE

Tips & Traps

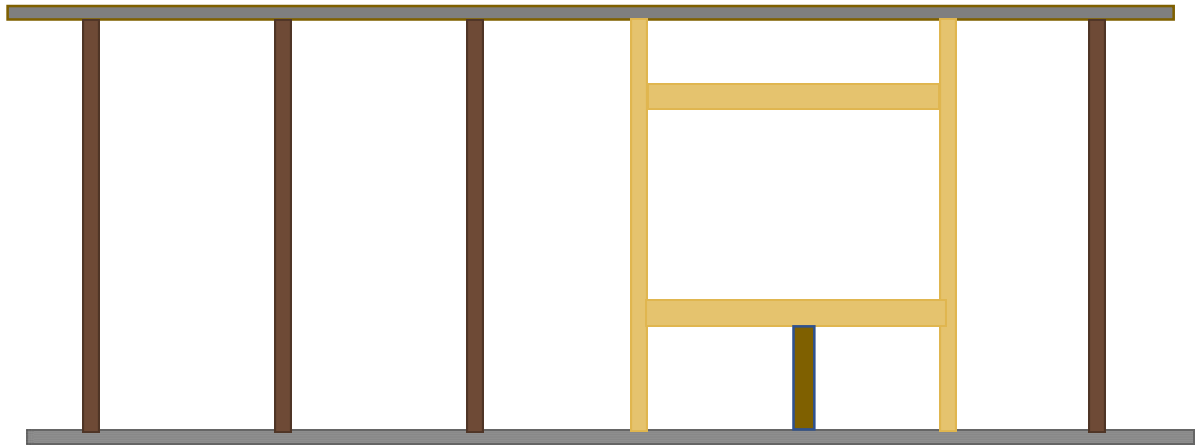
Trips & Traps

- Not including the ACTUAL opaque wall area (remove studs, windows, non-insulated areas)

- Not considering areas of the design which tend to “over-blow” (corners, hidden areas)

DEMILEC
EXPERIENCE THE DIFFERENCE

How do I Measure?



30 ft. X 8 ft. wall section with 1 window

<u>Method A</u>

(30’ X 8’ X 3.8”) – (32”X 32”)

912 – 27 = 885 board ft.

<u>Method B</u>

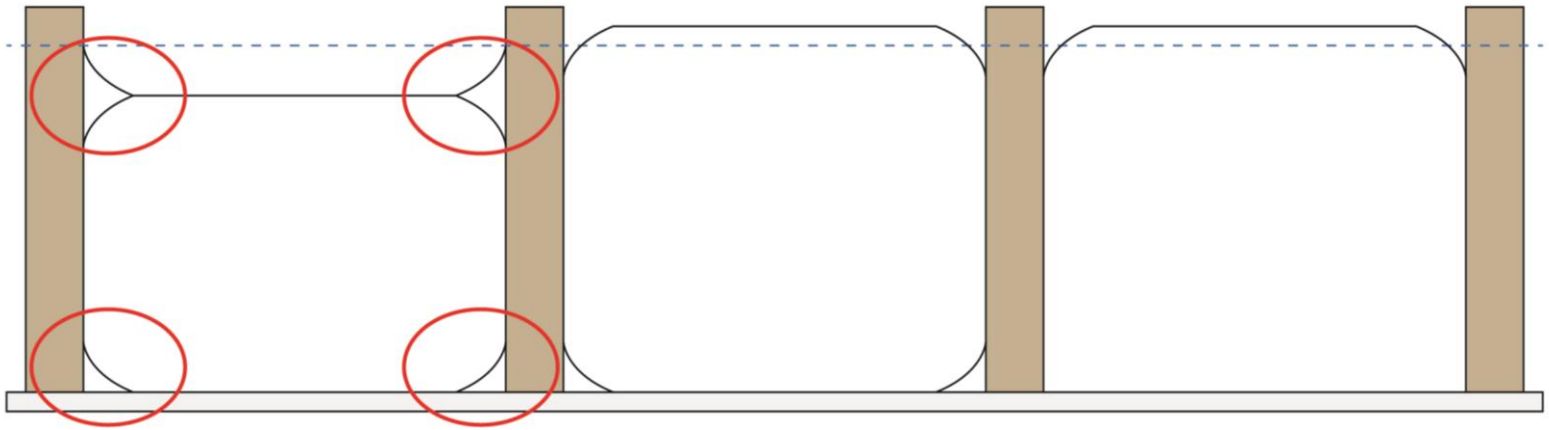
(30’ X 8’ X 3.8”) – (32” X 32”) – (6.5 X 8’ X 3.8 X 1.75”) – (2 X 30’ X 3.8” X 1.75”)

912 – 27 – 2.4 – 1.5 = 880 board ft.

DEMILEC
EXPERIENCE THE DIFFERENCE

Consumption Effects

Application Technique

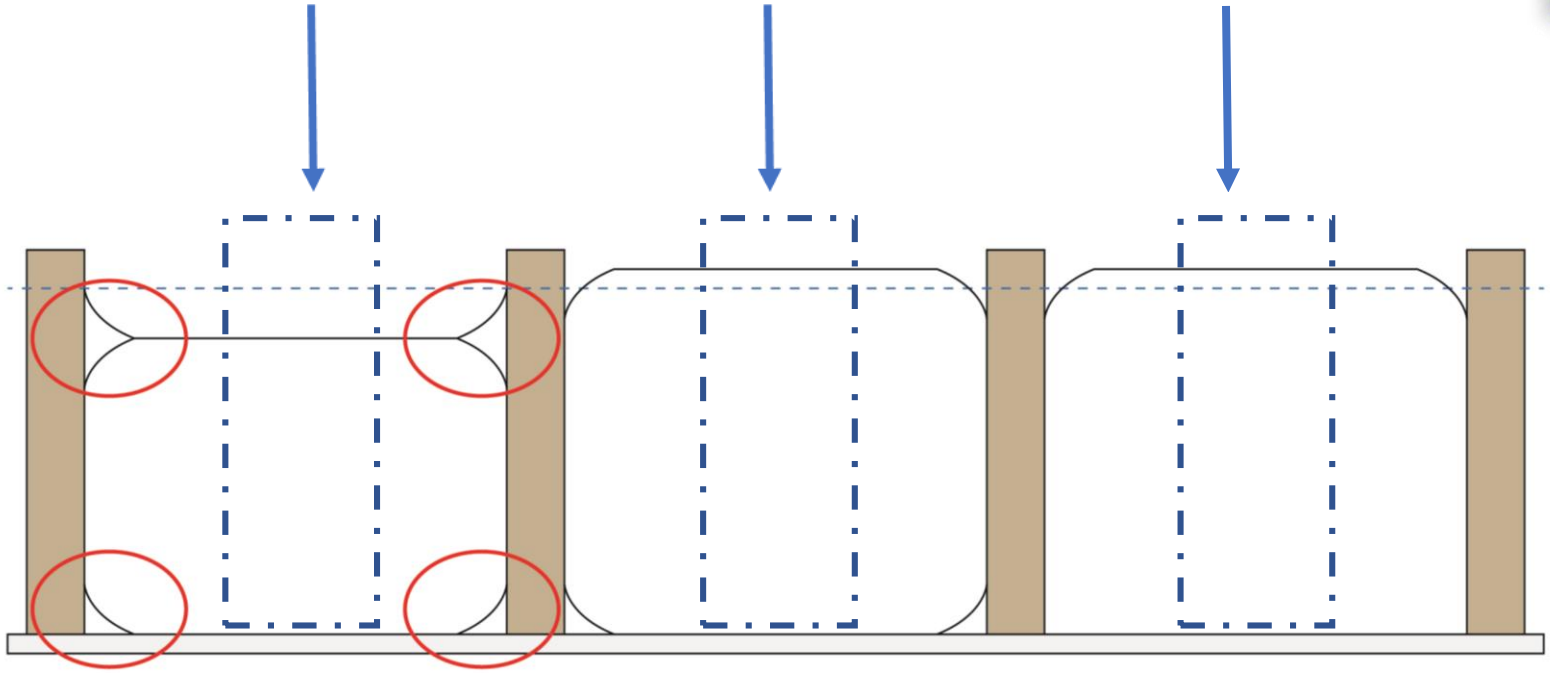


Picture Framing and Leveling	Picture Framing	Full fill – One Pass
4,200 board. Ft. / set	4,800 board. Ft. / set	5,200 board. Ft. / set

Yield will vary with field conditions. This is a representation.

DEMILEC EXPERIENCE THE DIFFERENCE

TRIPS AND TRAPS – DENSITY MEASUREMENT



3 different amounts of material to fill the stud space
Very similar density readings

DEMILEC
EXPERIENCE THE DIFFERENCE

DEMILEC

EXPERIENCE THE DIFFERENCE

Questions?

Innovative Solutions & Products for the Future