

# Excelfrax® Microporous Insulation Fabrication Guidelines



Excelfrax® Microporous Insulation can be fabricated utilizing commonly available tools. The following guidelines were prepared to provide assistance in the best methods and techniques to use to properly fabricate Excelfrax.

Before beginning any fabrication of Excelfrax, please read Unifrax Material Safety Data Sheet number M0395. This document is available on our website ([www.unifrax.com](http://www.unifrax.com)) or by calling our customer service department at 716-278-3800.

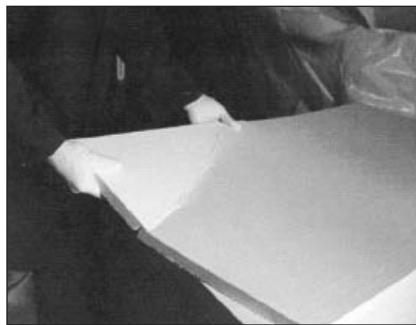
## General Guidelines When Working with Excelfrax

- Wear NIOSH-approved respiratory protection when dust levels are unknown or exceed regulatory limits. Please refer to MSDS number M0395.
- Use latex, nitrile, or vinyl gloves to avoid contact with skin.
- Use proper dust collection techniques. Please refer to MSDS number M0395.
- With power tools, use high cutting velocities to enhance edge cuts.
- Cut with utility knife, circular saw, table saw, band saw, or wood saw.
- Use hard metal tooling due to the abrasiveness of the material.
- Sawing – feed slowly and always support material.
- Drilling – Always support material.
- Milling – Work parallel and even to enhance edge cuts.
- Excelfrax is hygroscopic. Please use hand lotion before handling material, wash hands after using material, and apply hand lotion after using material.

## Handling and Storage



Store Excelfrax in clean, dry area away from any moisture.

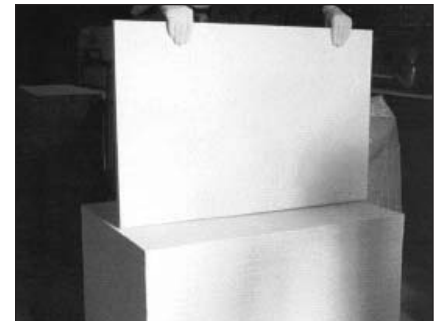


Do not lift Excelfrax by the corner.

## To remove Excelfrax from the pallet:



1. Slide board to expose one edge of the board.



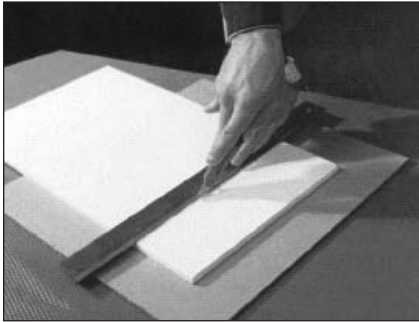
2. Stand board on edge.



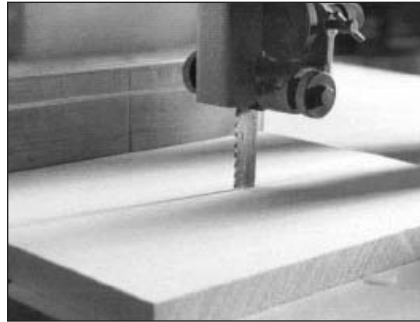
3. Place both hands under board to properly support material.

## Cutting

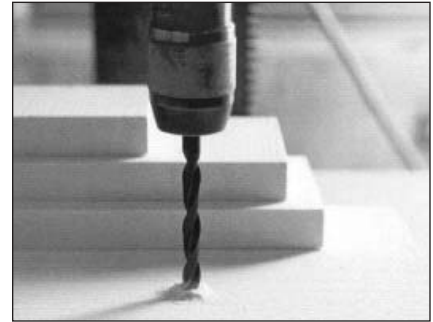
- Can use utility knife for thicknesses less than or equal to  $\frac{3}{4}$ ".
- Electric cutting saw for thicknesses greater than  $\frac{3}{4}$ ".
- Excelfrax 1800 Board can be die cut in thicknesses up to  $\frac{1}{2}$ ".
  - Use sharp, tungsten steel tooling.
  - Fill die center with soft rubber to aid in ejection of part.



Excelfrax 1800 Board can be cut with a utility knife for thicknesses  $\frac{3}{4}$ " and thinner. It can also be cut with a table saw or band saw. You can also drill holes or rout the board as shown:



Band Saw.



Drilling.

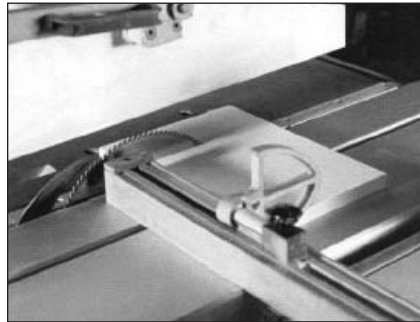
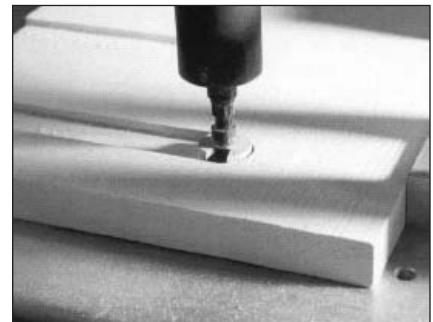


Table Saw.



Routing.

## Edge Protecting and Encapsulating

In order to aid in handling and to avoid contact with moisture, aluminum foil and fiberglass scrim can be used to cover or edge protect Excelfrax. The following photos depict the steps required to perform these functions:

### Excelfrax 1800 Flexliner

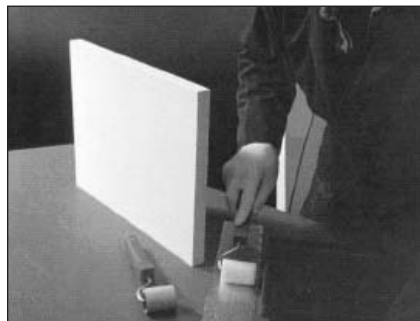


After cutting Excelfrax 1800 Flexliner, seal cut edge with adhesive-backed foil tape to completely enclose the material.

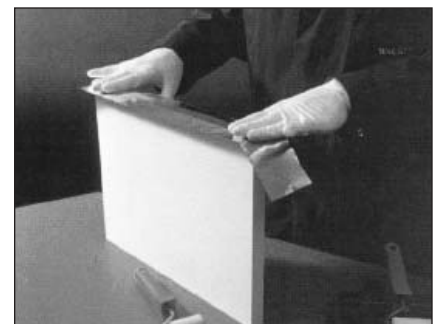
### Excelfrax 1800 Board

Excelfrax 1800 Board can be protected by the use of aluminum foil or fiberglass scrim to enhance handling and to resist moisture. The following photos depict the process for adhering the coverings to the Excelfrax 1800 Board:

#### ■ ALUMINUM FOIL PROTECTION



1. Apply sodium silicate adhesive to aluminum foil strip with paint roller.

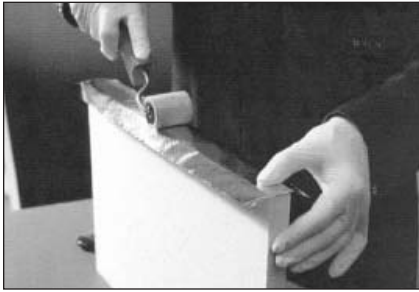


2. Place aluminum foil strip on board edge.



3. Cut foil at corners to enhance installation.

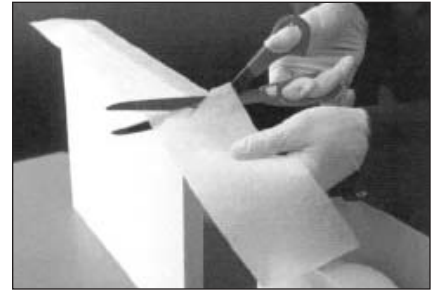
## Edge Protecting and Encapsulating (continued)



4. Roll aluminum foil into place.



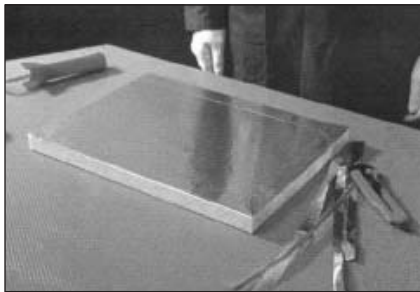
8. Trim aluminum foil with standard utility knife.



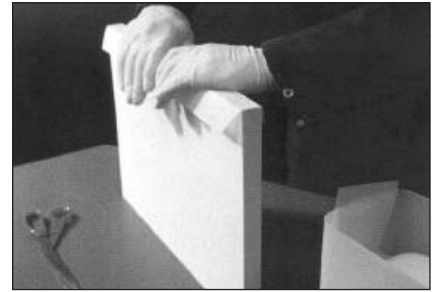
3. Cut glass scrim to size.



5. Complete on all four sides to protect all four edges of the board.



9. Excelfrax 1800 Board completely encapsulated in aluminum foil.



4. Press glass scrim into place.

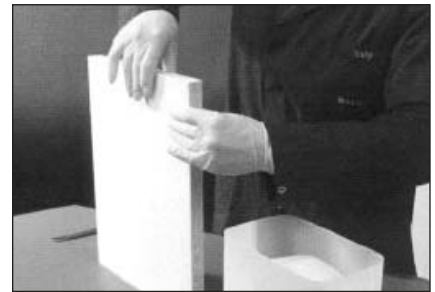


6. Cut aluminum foil to size, apply sodium silicate to foil and place aluminum foil on Excelfrax 1800 Board.

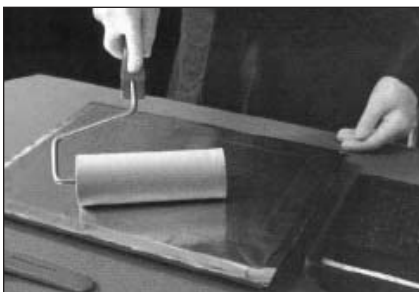
### ■ FIBERGLASS SCRIM PROTECTION



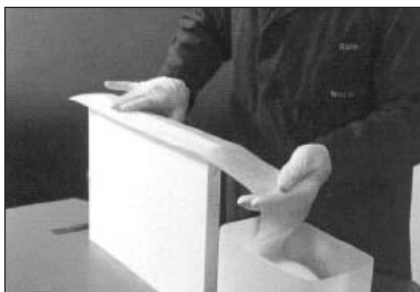
1. Pre-wet glass scrim by soaking in colloidal silica.



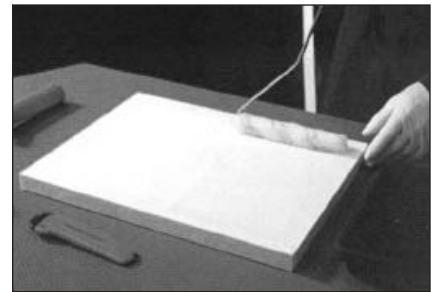
5. Complete on all four sides to protect all four edges of the board.



7. Use paint roller to press foil into place.



2. Place glass scrim on board edge.



6. Apply sodium silicate to board with paint roller.



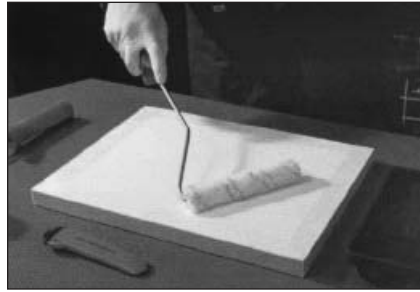
7. Pre-wet glass scrim by soaking in colloidal silica.



## Edge Protecting and Encapsulating (continued)



8. Place glass scrim on board.

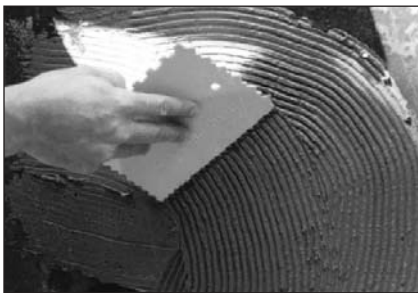


9. Use paint roller to press glass scrim into place.



10. Excelfrax 1800 Board completely encapsulated in glass scrim.

## Field Installation of Excelfrax 1800 Flexliner



1. Trowel high-temperature adhesive over existing lining.



3. Bend edges away from casing.



5. Excelfrax 1800 Flexliner in field installation.



2. Place Excelfrax 1800 Flexliner over the adhesive.



4. Press Excelfrax 1800 Flexliner into place.

For additional information about product performance or to identify the recommended product for your application, please contact the Unifrax Application Engineering Group at 716-278-3888.

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