

OstoSeal: Waterproof and reusable ostomy pouch shower cover

Client: Mrs. Tami Mlodik

Advisor: Prof. Duc-Huy Nguyen

Team Members:

Eve Vosters (evosters@wisc.edu) - BWIG

Cassity Dechenne (dechenne@wisc.edu) - Co-Leader

Addison Tanner (artanner@wisc.edu) - Co-Leader

Kira Schienke (kschienke@wisc.edu) - Communicator

Lilli Tanner (ltanner5@wisc.edu) - BSAC

Lana Schardt (lschardt@wisc.edu) - BPAG

Date: October 1st, 2026 - October 8th, 2026

Problem statement

This project will work towards the creation of a safe, comfortable and effective ostomy pouch and wafer adhesive cover meant to keep the two components dry during showering. Current methods of keeping ostomy pouches and adhesives are often unreliable or inconvenient which negatively impacts the users quality of life. This cover is intended to work with a schedule of at least daily showers, and must be durable and easy enough to use in order to accommodate this stipulation. This device should be firmly waterproof and compact to support a schedule of daily use. Also, it must fit the variety of pouch sizes and waistline shapes and sizes that a person could have.

Brief status update

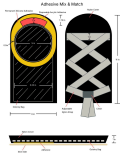
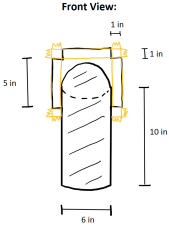
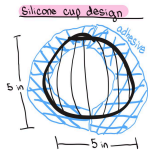
- We have written a preliminary design report to detail project specifics and prototype testing.
- We are in the process of ordering materials for a prototype.

Difficulties/advice requests

None at this time

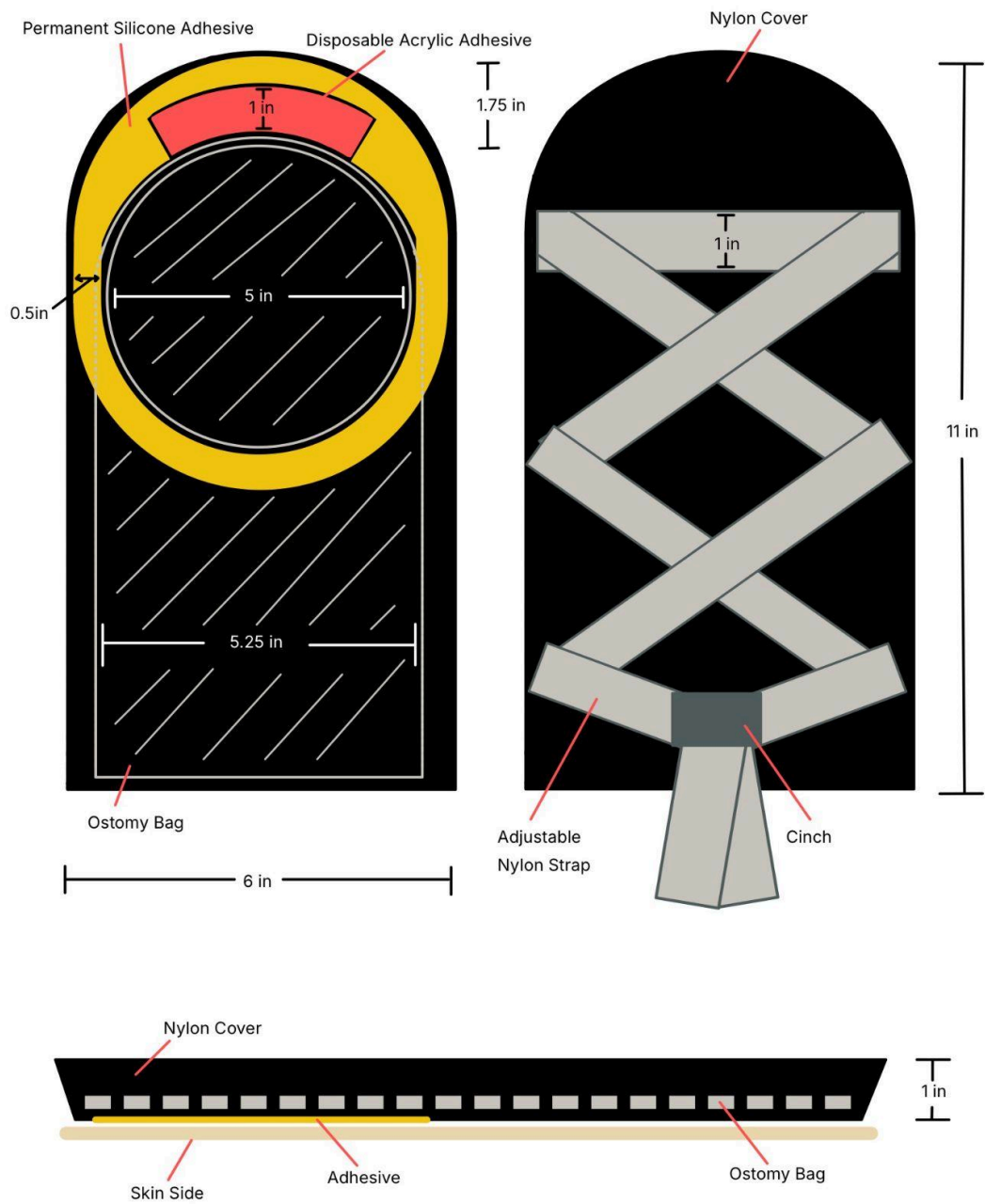
Current design

Ostomy Shower Pouch Design Matrix

		Adhesive Mix and Match 		Adhesive Strips on Flaps 		Silicone Cup Design 	
Criteria	Weight	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Waterproofness	25	4/5	20	5/5	25	2/5	10
Ease of Use	20	4/5	16	3.5/5	14	5/5	20
Reusability	15	3/5	9	2/5	6	5/5	15
Comfort	15	4/5	12	4/5	12	2/5	6
Ease of Fabrication	10	3/5	6	4/5	8	5/5	10
Adjustability	10	5/5	10	2/5	4	0/5	0
Cost	5	4/5	4	5/5	5	5/5	5
Total	100	Sum	76	Sum	74	Sum	66

Leading Design

Adhesive Mix & Match



Materials and expenses

No materials or expenses at this time

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1										
									\$0.00	
									\$0.00	
Category 2										
									\$0.00	
									\$0.00	
								TOTAL:	\$0.00	

Major team goals for the last week

1. Start buying materials that will be incorporated into the design.
2. Begin the physical design process.
3. Continue contacting/meeting with the client in order to get her feedback on impending design steps.

Major team goals for the next week

1. Buy all materials needed for design at this step in the process.
2. Start design fabrication.
3. Look back at the advice given to us from the preliminary presentation to see what we can implement.

Last week's individual goals

- Addison Tanner: Work on getting materials together and purchasing them so we can begin creating our prototype. Complete the preliminary report and work on our deliverable. Conduct more research on showering with an ostomy bag along with competing products.
- Eve Vosters: Conduct testing with silicone based adhesives owned and their ability to withstand a shower. Take notes on the client's current showerproof ostomy bag prototype she is using as well as the ostomy bag she uses and record dimensions and any aspects that could be recreated in the design. Conduct more research on the act of showering with an ostomy bag and the specifics of the consequences of getting the adhesive wafer wet.
- Kira Schienke: Figure out how much material we need to purchase to conduct material testing. Find where we will source the disposable adhesive. Help the team prepare the preliminary report.
- Lana Schardt: Purchase materials for our preliminary prototype and keep accurate records of all purchases. Use our research on fabrication methods to start designing our first prototype. Help the team complete our preliminary report and deliverable. Continue research on materials and fabrication.
- Lilli Tanner: Take note of dimensions of client's ostomy bag and current cover prototype as well as use current research to refine our final design. Work with the group to complete our preliminary report. Continue researching materials and fabrication methods.
- Cassidy Dechenne: Research and purchase the materials needed for the design. Start working on the cover part of the design. Reflect on the preliminary presentation and see what needs to be done to improve on our design outlook. Continue research on ileostomies and ostomy bags.

Next week's individual goals

- Addison Tanner: Help to get our materials ordered as fast as we can so that we can begin fabricating our design. Run some tests on silicone materials when running it under water to see how adhesive they are. As always, continue to research and learn more.
- Eve Vosters: Conduct more research on waterproof materials for the bag of the ostomy pouch cover that will ensure waterproofness and comfortability when the wet material comes in contact with the clients skin. Continue revising and running tests on the silicone adhesive owned to find out more characteristics of the adhesives and its downfalls to determine what aspects of it need to be improved.
- Kira Schienke: Order materials for prototype. Conduct testing with said materials.
- Lana Schardt: Continue research and help the team begin fabricating a prototype with purchased materials. Conduct tests with the prototype outlined in our preliminary report and help collect data.
- Lilli Tanner: Help the team order materials and begin fabricating. Continue researching and help conduct tests with the materials and/or prototype to begin collecting data.
- Cassity Dechenne: Help to get materials ordered asap and start fabricating with the ordered materials. Look through the instructions for the Invention Disclosure Report and see if it is necessary. Continue research.

Timeline

 OstoSeal Project Timeline

Activities

Name	Date	Activity/Previous Week's Accomplishments	Time (h)	Week Total (h)	Sem. Total (h)
Addison Tanner	10/8/2026	• Completed the feedback fruits • Completed and edited the preliminary report in which my sections were the introduction and the preliminary designs, along with the preliminary design evaluations • Continued doing research that assisted my introduction in the report, along with what material we should use for our design	0.5 3 1	4.5	16.5
Eve Vosters	10/8/2026	• Conduct research on viable waterproof materials for the bag portion of the waterproof cover • Create a procedure for initial testing on the commonly used silicone adhesive already owned • Document findings from initial test and use findings to make improvements to procedure so an additional test can be ran in the future • Completed the feedback fruits • Contribute to the completion of the "Preliminary Report" by completing the "Conclusions" and "References" sections as well as helping to peer review and edit	1 1 0.5 1.5	4	18

		the other sections			
Kira Schienke	10/8/2026	- Completed the design section of the preliminary design report and assisted the team with editing. - Conducted research and documented annotations in team notebook.	1.5 1	2.5	14.5
Lana Schardt	10/8/2026	- Helped the team finish and edit the testing section of the preliminary design report, creating data tables when needed. - Conducted research and documented findings in team notebook.	1.5 1	2.5	13.5
Lilli Tanner	10/8/2026	- Helped the team complete the background section and edit the preliminary report - Conducted research on materials and possible fabrication methods for our prototype.	1.5 1	2.5	14.5
Cassity DeChenne	10/8/2026	- Contribute to the interpretation and results of testing procedures, along with the protocols. - Peer edit other members' sections of the preliminary report. - Continued research on materials and looked into specific purchases.	1.5 1	2.5	16.5