

# REQUIRED CLOTHING AND EQUIPMENT LIST



Conditions in Antarctica change drastically throughout our season and vary depending on your location. At Union Glacier, the climate is very dry and generally sunny but wind chill can impact temperatures greatly with early November being as cold as -22°F (-30°C). Average mid-season temperatures range from -12°F to 30°F (-24°C to -1°C).

If you leave Union Glacier, you must adapt your clothing for more extreme conditions at the emperor penguin colony or the South Pole. South Pole temperatures rarely climb above -13°F (-25°C) and with wind chill, can feel like -40°F (-40°C).

To be prepared for all conditions, it is important to have a selection of items you can mix and match. The layering system described below will keep you safe and comfortable in all conditions—it is also the same system utilized by our Antarctic field staff.

**You do not need to wear ALL of these layers ALL of the time.** Dress for the weather conditions and activity level you expect to encounter and bring extra layers with you in your backpack in case conditions change.



## Base Layer

### Materials

Polyester, Merino Wool, or Silk but NO COTTON

### Examples

Patagonia Capilene or Smartwool

### Description

Your first layer consists of a long-sleeved thermal top and bottom. We recommend materials that wick moisture away from your body like polyester or merino wool. If you cannot wear artificial fibers or wool, silk is an alternate option. Cotton traps moisture and can cause you to chill more rapidly. If your experience involves an aerobic activity like climbing or skiing, choose a lightweight fabric. If your experience is less active, choose a mid-weight fabric for warmth. Zip T-necks are a great option as they allow ventilation. Bring undergarments, sports bras, and/or camisoles in a similar wicking material.



## Mid Layer

### Materials

Polyester, Merino Wool, Stretch Fleece, Grid Fleece

### Examples

Patagonia R1 Fleece or Rab Power Stretch

### Description

Your second layer consists of a long-sleeved heavy-weight (expedition weight) base layer top and bottom or lightweight stretch fleece top and bottom. Tops with hoods are great as they seal the neck to keep you warmer.



## Insulation Layer

### Materials

Fleece, Down, or Synthetic Insulation (Primaloft, Thinsulate)

### Examples

Patagonia R2 or Nano, Rab Microlight

### Description

Your third layer should be a jacket that is thin, light in weight, and provides insulation. You can choose from either a mid to heavyweight fleece, a lightweight down, or a lightweight synthetic insulation. This should be a full-zip jacket but a hood is not essential.

### Optional Additional Layer: Vest

A fleece, down, or synthetic insulation vest can add insulation without much weight.



## Windproof Layer

### Materials

Softshell or Hardshell

### Examples

Arc'teryx Gamma MX, Black Diamond Sharp End

### Description

Your fourth layer should be a windproof jacket and pants. For guests visiting the emperor penguin colony, we recommend waterproof/windproof hardshells like Gore-tex. For all other guests, windproof softshells tend to be more breathable and more comfortable. No matter which type of shell you choose, wind protection is the most important factor for this layer and the jacket needs to have a hood.



## Polar Insulation Layer\*

### Materials

Down or Synthetic Insulation

### Examples

Rab Neutrino Pro Jacket, Marmot 8000M Parka & Pants

### Description

Your outermost layer provides crucial insulation in extreme cold or wind and protection against the worst Antarctic conditions. You will need a hooded down jacket that is large enough to go over all of your other layers. Look for a minimum of 800 fill down and a minimum weight of 28 oz (800 g). It should be long enough to cover your backside.

Pants should be down or synthetic insulated with full side-zips. Make sure they are large enough to fit over your other layers.

*\*Item(s) available to rent for an additional fee.*

## Head

You will need several options to cover your head, neck, and face (mouth and nose) depending on the temperature, wind conditions, and sun exposure.



**Item 1:**  
Hat or Beanie that Covers Ears

**Materials:**  
Wool or Fleece



**Item 2:**  
Neck Gaiter or Buff

**Materials:**  
Fleece or Polyester Microfiber



**Item 3:**  
Balaclava or Face Mask

**Materials:**  
Power Stretch Fleece or  
Windstopper

## Eyes

Quality eyewear is essential to prevent snow blindness. **Sunglasses or goggles must be worn at all times outside.**

### Sunglasses and Hard Case



#### Materials

Non-metal frames with 100% UV protection

#### Examples

Julbo, Smith, Oakley

#### Description

Your sunglasses should have dark colored lenses and full side coverage. Look for sunglasses with side-flaps (mountaineering or glacier glasses) or sport sunglasses with big lenses, wide sides, and a contoured shape that prevents light from entering at the sides. Non wraparound sunglasses provide little or no protection from peripherally focused UV radiation.

Avoid metal frames as they can freeze to your skin and bring a hard case to protect your sunglasses in your luggage.

## Goggles



### Materials

100% UV Protection

### Examples

Julbo, Oakley, Smith

### Description

Goggles are necessary for very cold or stormy conditions. Dark or mirrored lenses are best for bright light and reduce eye strain. Look for a goggle with double lenses or a coating to help prevent fogging. If you wear prescription glasses, check to make sure your goggles fit over them comfortably.

## Hands

### Liner Gloves



### Materials

Polyester, Merino Wool, Silk, Power Stretch Fleece

### Examples

Seirus, Outdoor Research, Icebreaker, The North Face

### Description

Liner gloves can be layered under other gloves or mittens for additional warmth. They also protect you if you need to take off an outer glove or mitten in cold temperatures. Having two pairs allows you to switch out liners as they become damp.

### Midweight Insulated Gloves



### Materials

Waterproof Breathable Outer with Built-in Insulation

### Examples

Marmot Randonnee Glove, Black Diamond Pursuit Gloves

### Description

Look for a midweight waterproof breathable glove that has either fixed insulation or fleece lining. This glove should have good dexterity and allow you to take photographs or hold trekking poles easily.

## Oversized Thick Insulation Mittens



### Materials

Down or Synthetic Insulation

### Examples

Marmot 8000 Meter Mitt, Mountain Equipment Redline Mitt, Outdoor Research Alti Mitts

### Description

Like your outer jacket and pants, these down or synthetic insulated mittens are your ultimate protection against the coldest Antarctic conditions. Mittens will keep your hands warmer than gloves but can make taking photos challenging. You should be able to wear two pairs of liner gloves under your mittens so your hands will be protected if you take off a mitten for photography. Make sure your mittens have wrist loops to keep them attached to you if you take them off in high wind.

## Feet

### Thin Liner Socks



### Materials

Wool, Polyester, or Silk—NO COTTON

### Examples

Smartwool, Bridgedale, Thorlo, Terramar

### Thick Heavyweight Socks



### Materials

Wool or Wool Blend Socks

### Examples

Smartwool, Bridgedale, Thorlo, Darn Tough

### -100°F (-73°C) Rated Snow Boots with Removable Liners\*



### Materials

Waterproof Outer and Removable Insulated Liner

### Examples

Sorel Glacier XT, Baffin Impact or Endurance

### Description

You will need boots that are very comfortable and very well insulated. We strongly recommend that you buy boots rated down to -100°F (-73°C) as -40°F (-40°C) boots are often not warm enough. Make sure your boots fit with two pairs of socks—one liner sock and one heavyweight sock. The boots should have built in gaiters and removable liners which can be taken out at night to dry.

*\*Item available to rent for an additional fee.*

## Light Winter Boot or Heavy Hiking Boot



### Materials

Waterproof Outer and Insulation

### Examples

The North Face, Scarpa, Salomon

### Description

On warmer days, you can often wear lighter weight winter boots or heavyweight hiking boots for many excursions around Union Glacier.

### Optional Footwear: Trail Running Shoes and/or Insulated Booties

It's nice to be able to take your boots off around camp and in your tent.

## Luggage

### Large or XL Duffel Bag (120-150 liter)



### Materials

Durable PU or Ballistic Nylon

### Examples

The North Face Base Camp Duffel—XL or Patagonia Black Hole 120 Duffel Bag

### Description

We recommend using an oversized duffel bag for your checked bag on your Antarctic flight. Make sure it is made of a durable material to withstand international travel and handling on snow and ice. Look for a bag with a full zipper and multiple haul handles. Do not bring wheeled suitcases to Antarctica—they are very hard to move on snow.

### Optional Item: Stuff Sacks

It's easiest to organize your clothing in your bag and tent if you have color-coded mesh or nylon stuff sacks.

### Carry-on Backpack (18" x 16" x 10" or 46 cm x 41 cm x 26 cm)



### Examples

Patagonia Lightweight Black Hole Pack 26L, Osprey Ozone Daypack 24L

### Description

All passengers are limited to one carry-on bag sized to fit under an airplane seat for the Antarctic flight. We recommend putting all of your essential items in a carry-on backpack that you can also use for daily excursions while in Antarctica.

## Equipment

### Pee Bottle(s)



#### Examples

Nalgene 32 oz or 48 oz Wide Mouth Water Bottle(s)

#### Description

All human waste is removed from Union Glacier which means you will need your own container to urinate in when you are not within reach of our toilet facilities. We recommend a wide mouth water bottle that is marked for urine or 'pee' and can be used at night in your tent or when you are on a day excursion away from camp. We recommend practicing with your pee bottle at home so you can be comfortable using it when you get to Antarctica. Females may also find a pee funnel (Freshette, SheWee, Go-Girl) helpful.

Please do not bring plastic pee bags, they will leak! Our staff will show you where to empty pee bottles behind the toilet facility.

### -40°F (-40°C) Rated Sleeping Bag\*



#### Materials

Down or Synthetic

#### Examples

Feathered Friends Snow Goose, Rab Expedition 1400, Wiggy's Hunter Antarctic Rectangular Sleeping Bag

#### Description

You will need a sleeping bag that is rated down to -40°F (-40°C). A full-length zipper is important.

*\*Item available to rent for an additional fee.*

# STANDARD CHECKLIST

You must bring **ALL** of the items on this list unless they are listed as **optional**. We will look for each item on this list at your Gear Check in Punta Arenas. These items may not be available for purchase in Punta Arenas and we will not let you board the aircraft to Antarctica without them.

X	#	Item
<b>Base Layer</b>		
	4 pairs	Underwear, sports bras, etc.
	2	Light or midweight tops
	2 pairs	Light or midweight bottoms
<b>Mid Layer</b>		
	1	Lightweight fleece top or expedition-weight base layer top
	1 pair	Lightweight fleece pants or expedition-weight base layer bottoms
<b>Insulation Layer</b>		
	1	Mid or heavyweight fleece, down, or synthetic insulation jacket
	<i>Optional</i>	Fleece, down, or synthetic insulated vest
<b>Windproof Layer (must also be waterproof for Emperor Penguins)</b>		
	1	Hooded shell jacket
	1 pair	Shell pants
<b>Polar Insulation Layer</b>		
	1	Thick down or synthetic insulated jacket with large hood <b>*Available to rent</b>
	1 pair	Down or synthetic insulated pants with full side-zips <b>*Available to rent</b>
<b>Headwear</b>		
	1	Hat or beanie that covers ears
	1	Neck gaiter or Buff
	1	Balaclava and/or face mask
	<i>Optional</i>	Fleece or Windstopper headband
	<i>Optional</i>	Baseball or trucker hat for sunny weather
<b>Eyewear</b>		
	1 pair	Sunglasses with side coverage
	1	Sunglass case
	1 pair	Goggles (2 pairs recommended for Emperor Penguins)
	<i>Optional</i>	Spare contact lenses or prescription glasses, if required
<b>Gloves</b>		
	2 pairs	Liner gloves
	1 pair	Midweight insulated gloves
	1 pair	Oversized thick insulated mittens
	<i>Optional</i>	Chemical hand warmers



X	#	Item
<b>Footwear</b>		
	3 pairs	Thin liner socks
	3 pairs	Thick heavyweight socks
	1 pair	Boots rated -100°F (-73°C) <b>*Available to rent</b>
	1 pair	Lightweight winter boots or heavyweight hiking boots
	<i>Optional</i>	Running shoes
	<i>Optional</i>	Insulated booties with no-slip sole
<b>Equipment</b>		
	1	Extra large duffel bag
	1	Carry-on backpack 18" x 16" x 10" (46cm x 41cm x 26cm)
	1	Sleeping bag rated -40°F (-40°C) with full-length zip <b>*Available to rent</b>
	1	32 oz Nalgene wide-mouth water bottle (for drinking)
	2	32 oz Nalgene wide-mouth water bottles (marked for pee). Option to substitute for one 48 oz Nalgene wide-mouth water bottle.
	1	Outdoor Research insulated cover for 32 oz Nalgene water bottle
	1	Lip balm with minimum SPF 50
	1	Sunscreen with minimum SPF 50
	1	Personal toilet bag with wash cloth, small towel, Wet Wipes, toothbrush, toothpaste, lotion, Band-Aids, blister kit, contact lens solution, feminine products, etc
	As needed	Personal medication. Bring enough for your experience plus an additional 4 weeks' supply.
	<i>Optional</i>	Stuff Sacks
<b>Other Optional Items</b>		
	<i>Optional</i>	<b>For Antarctica:</b> USB, or 120V A/C (North American Type A or B plugs) <b>For Chile:</b> Plug adapters and 220 V transformers
	<i>Optional</i>	US cash to purchase satellite phone cards or merchandise at Union Glacier Camp
	<i>Optional</i>	Cotton t-shirts to wear at Union Glacier Camp
	<i>Optional</i>	Lightweight journal, paperback book, sketchbook, pencils, pen, e-reader
	<i>Optional</i>	Cameras, chargers, extra batteries
	<i>Optional</i>	Knee pads for photographers
	<i>Optional</i>	iPod or tablet with noise cancelling headphones
	<i>Optional</i>	Eyeshade and earplugs for sleeping in 24-hour daylight
	<i>Optional</i>	Handkerchiefs/bandanas
	<i>Optional</i>	Pee funnel for women