

# VINSON AND SIDLEY 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).

Once you leave Union Glacier, you must adapt your clothing for potentially extreme conditions at Mount Vinson or Mount Sidley including severe storms and temperatures as low as -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 the 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 woolnet, Silk or sun hoody but NO COTTON

### Examples

Patagonia Capilene, Smartwool, Ibex, Icebreaker, Aclima woolnet hybrid crew neck

### Description

Your first layer consists of a lightweight or midweight 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. 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 heavyweight (expedition weight) base layer top and bottom or lightweight stretch fleece top and bottom. Light syntetic puffy pant or jacket are also work as a second layer. Tops with hoods are great as they seal the neck to keep you warmer.

### Optional Additional Layer: Windshirt

A lightweight uncoated nylon windshirt can be worn as an outer layer when it's not too cold and reduces friction when layering on top of it.  
ex: Patagonia houdini



## 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.



## Wind Layer

### Materials

Softshell or Hardshell

### Examples

Arc'teryx Gamma MX,

### Description

Your fourth layer should be highly wind-resistant and breathable. We recommend a stretch softshell jacket and pants as softshells tend to be more breathable and more comfortable. However, some climbers prefer waterproof hardshells like Gore-tex, which are sufficient, as long as they include pit zips and side-leg zips for venting. Wind protection is the most important factor for this layer and the jacket needs to have a hood. Make sure to have a size that is able to fit all layers under the jacket.



## Polar Insulation Layer

### Materials

Down or Synthetic Insulation

### Examples

Rab Neutrino Pro Jacket, Kumbu Down Jacket, Grade VII (Patagonia), Pumori Summit Series (The North Face), Expedition 8000 Jacket, Infinity Down Jacket. Mountain Hardwear Compressor Pant, Volant Pant (Feathered Friend).

### Description

Your outer layer is crucial for insulation and protection in extreme Antarctic conditions. You'll need a hooded down jacket (800 fill, minimum 28 oz/800 g) with a hard shell, large enough to fit over all other layers, and long enough to cover your backside.

Pants should be down or synthetic insulated with full-length side zips for easy removal without taking off boots or crampons. They must also have a functional opening for toilet use.

## 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:**  
Wide brim sun hat,  
baseball hat, or trucker hat



**Item 3:**  
Neck Gaiter or Buff

**Materials:**  
Fleece or Polyester  
Microfiber



**Item 4:**  
Balaclava or Face Mask

**Materials:**  
Power Stretch Fleece or  
Windstopper

The face is especially vulnerable to cold injury and complete face protection is essential. Try combinations of balaclava, face mask, hat, and goggles together to ensure that there are no gaps—often a crescent shape between the edge of the goggle and a face mask or balaclava is hard to cover. You must be able to breathe freely and moisture from your breath must be able to escape (so that goggles do not fog).

### Warm Hat

A warm hat that provides 100% UV protection to shield you from the sun while keeping you warm.

### Sun Hat

A sun hat or baseball cap, paired with a bandana and a sun hood, to protect you from the sun.

### Face Mask System

A variety of face masks is recommended. It must cover all exposed skin and have good ventilation to prevent goggles from fogging up. Some are compatible with sunglasses. We recommend the Outeru Faceglove, which can be molded to fit your face, or the Outdoor Research Windstopper Face Mask.

### Buff or Neck Gaiter

A buff or neck gaiter is a versatile and essential item to protect your face, ears, and neck from the sun. It can also be used as a balaclava. Carry several as replacements, or make a small hole near the mouth for easier breathing without condensation buildup.

## 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. Category 4 or able to change between 2 to 4.

#### 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. Snow reflects up to 85% of solar radiation and the UV index increases 10% with every 1,000m gain in altitude so it is of utmost importance you

protect your eyes. We recommend a photochromic or Category 4 polarised lenses with an anti-fog. Your sunglasses should have dark color lenses and are good for overcast or flat light conditions.

### Goggles



#### Materials

100% UV Protection

#### Examples

Julbo, Oakley, Smith

#### Description

Quality goggles are essential for extremely cold or stormy conditions. You'll need at least two pairs, each with a different lens tint—one for low-light conditions and one with a dark lens for sunny days. Alternatively, you can bring two identical frames with interchangeable lenses. Keep in mind that light conditions can change rapidly while climbing, and it can be challenging to change lenses with gloves on. Dark or mirrored lenses work best for bright light to reduce eye strain, while gold or amber lenses enhance contrast in overcast or flat light conditions.

Look for goggles with double lenses or an anti-fog coating to help prevent fogging.

If you wear prescription glasses, consider getting prescription sunglasses with the same specifications mentioned above. For contact lens wearers, we recommend bringing prescription glacier glasses as a backup. Leashes for your glasses or goggles are essential, and nose guards are optional. If you wear prescription glasses, make sure your goggles fit comfortably over them.

# Hands

## Liner Gloves



### Materials

Polyester, Merino Wool, Silk, Power Stretch Fleece

### Examples

Black Diamond Lightweight WoolTech gloves, Stance gloves, lightweight ScreenTap gloves, OR Vigor Midweight Sensor gloves.

### 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. We do not recommend Windstopper as the membrane in Windstopper gloves makes them slow to dry out.

## Midweight Insulated Mixed Climbing Gloves



### Materials

Waterproof Breathable Outer with Built-in Insulation

### Examples

OR Super Couloir Sensor Gloves, Black Diamond Guide Glove, OR Extravert Glove.

### Description

Look for a midweight waterproof breathable glove that has either fixed synthetic insulation or fleece lining. This glove should have good dexterity and allow you to use ice axes, karabiners, and ascenders easily.

## Heavyweight Insulated Snow Gloves



### Materials

Waterproof Breathable Outer with Insulation

### Examples

Black Diamond Guide Gloves

### Description

Next you will need a heavily insulated snow glove. We highly recommend the Black Diamond Guide Glove as it is the warmest glove that still offers the necessary dexterity for alpine climbing. We recommend you bring gloves with wrist loops attached as many people have taken off an outer glove to take a photo and lost it in the wind.



## Oversized Thick Insulated Mittens



### Materials

Down or Synthetic Insulation

### Examples

Marmot 8000 Meter Mitt, Black Diamond Absolute 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 to 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

### Expedition Triple Boots with Built-in Gaiter



### Materials

Waterproof outer boot and gaiter with removable insulated inner boot

### Examples

La Sportiva Olympus Mons EVO, Millet Everest Summit GTX, Scarpa Phantom 8000 HD. (8000m boots).

### Description

You will need mountaineering boots designed for cold weather, high altitudes, and extreme expedition conditions. Ensure your boots fit well with summit socks and have extra room in the toe box for comfort on cold days. The boots should have built-in gaiters and a removable inner boot, which can be taken out at camp. You can also use inner booties inside the shells as camp shoes.

If you opt for double boots, make sure they have a very warm liner, such as those from Intuition. It's mandatory to bring overboots, like the Forty Below Purple Haze model, which must fit well with your crampon system.

### Optional Footwear



### Hiking Boots, Running Shoes, and/or Insulated Booties

It's nice to take off your polar boots around camp and in your tent. You can wear hiking or running shoes for activities around Union Glacier on warmer days. Down booties are also great for low or high camp in the mountains. These can be used without soles inside the shell of your mountaineering boots or with durable soles, like the Intuition yellow booties.

## 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

## Climbing Equipment

### Alpine Crampons



### Materials

Steel—**NO ALUMINUM**

### Examples

Petzl Vasak, Grivel G12

### Description

You will need a set of steel mountaineering crampons. A 12-point, semi-automatic style is most recommended. Be sure to fit your crampons to your boots and confirm they are the correct size before leaving home. You can use either step-in or strap-style crampons, but they must be steel, as aluminum crampons are not strong enough. Avoid using technical ice climbing crampons. \*If you are using the new Olympus Mons with the Dynafit toe, please double check your crampon fit as the wide toe size of the boot does not fit most crampons.

### Ascender



### Materials

Aluminum

### Examples

Petzl ASCENSION , Black Diamond INDEX

### Description

You will need an ascender for the fixed lined between low camp and high camp. This can be a right handed or left handed model depending on your preference.

## Pee Bottle(s)



### Examples

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

### Description

All human waste is removed from Union Glacier and all urine or 'pee' must be deposited only in marked pee holes when on Mount Vinson. This means you will need your own container to urinate in when you are not within reach of a toilet facility or a marked pee hole. We recommend a wide mouth water bottle that is clearly marked for pee only. 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.

When in Union Glacier, our staff will show you where to empty pee bottles behind the toilet facility. On Vinson, you will empty pee bottles in marked pee holes.

## Luggage

### Large or XL Duffel Bags (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 oversized duffel bags for your checked bags on your Antarctic flight. Make sure they are made of a durable material to withstand international travel and handling on snow and ice. Look for bags with a full zippers and multiple haul handles.

### Lightweight Expedition Pack (80 liter)



### Description

Look for a pack that is 4.5 lb (2 kg) or less in weight. We recommend packs of at least 80 L (4500 cu in).



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



**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.

**Stuff Sacks**



**Materials**

Mesh or Nylon

**Description**

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

# VINSON AND SIDLEY 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
	<i>Optional</i>	Lightweight windshirt
<b>Insulation Layer</b>		
	1	Mid or heavyweight fleece, down, or synthetic insulation jacket
	<i>Optional</i>	Fleece, down, or synthetic insulated vest
<b>Wind Layer</b>		
	1	Hooded shell jacket
	1 pair	Shell pants
<b>Polar Insulation Layer</b>		
	1	Thick down or synthetic insulated jacket with large hood
	1 pair	Down or synthetic insulated pants with full side-zips
<b>Headwear</b>		
	1	Hat or beanie that covers ears
	1	Wide brim sun hat, baseball hat, or trucker hat
	2	Neck gaiter or Buff
	1	Balaclava and/or face mask
	<i>Optional</i>	Headband
<b>Eyewear</b>		
	1 pair	Sunglasses with side coverage and sunglass cases
	2 pairs	Goggles with different lens tints
	<i>Optional</i>	Spare contact lenses or prescription glasses, if required
<b>Gloves</b>		
	2 pairs	Liner gloves
	1 pair	Midweight insulated mixed climbing gloves
	1 pair	Heavyweight insulated snow gloves
	1 pair	Oversized thick insulated mittens
	5	Chemical hand warmers

X	#	Item
<b>Footwear</b>		
	3 pairs	Thin liner socks
	3 pairs	Thick heavyweight socks
	1 pair	Expedition triple boots with built-in gaiter
	1 pair	Steel crampons
	<i>Optional</i>	Hiking boots or running shoes
	<i>Optional</i>	Insulated booties with no-slip sole or booties for use inside of the shell of mountain boot
<b>Luggage</b>		
	1+	Extra large duffel bag(s) (120-150 liter)
	1	Lightweight expedition pack (80 liter)
	1	Carry-on backpack 18" x 16" x 10" (46cm x 41cm x 26cm)
	4-6	Stuff sacks
<b>Sleeping Equipment</b>		
	1	Sleeping bag rated -40°F (-40°C) with full-length zip
	1	Full-length lightweight inflatable mattress
<b>Climbing Equipment</b>		
	1	Mountaineering ice axe (24-30 in/60-75 cm depending on your height). Technical ice climbing axes are not suitable for Vinson or Sidley.
	1 pair	Adjustable ski poles
	3	Snapgate non-locking carabiners (Black Diamond Neutrino)
	2	Large screwgate locking HMS or Pear carabiners (Black Diamond VaporLock)
	2	Small screwgate locking HMS or Pear carabiners
	18 ft (6 m)	6 mm Perlon cord for prusiks/pack leash/sled hauling/utility
	1	Lightweight mountaineering climbing harness with adjustable leg-loops (Black Diamond Couloir, Blue Ice Choucas)
	1	Handheld ascender (Petzl) <i>*required for Vinson, optional for Sidley</i>
<b>Other Equipment</b>		
	1	32-oz Nalgene wide-mouth water bottles with cover (for avoid freezing)
	1	Thermos flask 32oz /1L light weight like : Zojirushi, Montbell
	2	32 oz Nalgene wide-mouth water bottles (marked for pee). Option to substitute for one 48 oz Nalgene wide-mouth water bottle.
	1-2	Insulated covers for Nalgene water bottles (Outdoor Research or Forty Below)
	1	Large insulated mug with lid or baby Nalgene 0.5 L
	1	Large lightweight non-breakable Tupperware bowl
	1	Long spoon or spork for eating dehydrated meals
	2	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 climb plus an additional 4 weeks' supply.
<b>X</b>	<b>#</b>	<b>Item</b>
<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>	iPod or tablet with headphones
	<i>Optional</i>	Eyeshade and earplugs for sleeping in 24-hour daylight