





49 CFR 175.10 - Hazardous Materials Passenger and Crew Exceptions






In general, US Department of Transportation (DOT) regulations prohibit passengers and crewmembers from carrying hazardous materials (dangerous goods) aboard commercial aircraft. The table below lists the exceptions that allow passengers and crewmembers to carry a limited amount of personal-use hazardous materials in carry-on and/or checked baggage. Though allowable by DOT regulations (see 49 CFR, section 175.10), some of the items listed here may, at times, be prohibited in the aircraft cabin by Transportation Security Administration (TSA) rules. Individual airlines and other nations may also have more restrictive rules on what passengers can carry aboard the aircraft.

§ 175.10(a) Exception	Location			Operator Approval required?	PIC must be notified?	Restrictions
	Checked Baggage	Carry-on Baggage	On one's person			
<p>(1) (i) Medicinal and toilet articles – including flammable and non-flammable aerosols.</p> 	Yes	Yes	Yes	No	No	<p>a) For personal use</p> <p>b) May not exceed 2 kgs (70 ounces) by mass or 2 L (68 fluid ounces) per person.</p> <p>c) Each container may not exceed 0.5 kg (18 ounces) by mass or 500 ml (17 fluid ounces) by volume.</p> <p>d) Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release</p> <p>e) Materials that are not medicinal/toilet articles or described in the other exceptions, such as: spray paints, aerosol laundry starch, insecticides, drain cleaners, camping fuel, etc. are not permitted.</p> <p>Note: Current TSA Security Regulations restrict the amount of liquids, aerosols or gels allowed in a passenger's carry-on baggage.</p> <p>This restriction does not affect the amount allowed in a check baggage. Check TSA regulations for current restrictions.</p>
<p>(ii) Additional nonflammable aerosols that are not medicinal or toilet articles</p> 	Yes	Yes	Yes	No	No	<p>a) Non-toiletry aerosols that contain nonflammable & non-toxic gas –in checked baggage only.</p> <p>b) Aerosols without caps or other protective features around the release device/button are not allowed.</p>





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(2) One book of safety matches or one lighter 	No	Yes	Yes	No	No	a) For personal use b) Carried on one's person or in carry-on baggage only. c) Lighter fuel, lighter refills, and lighters containing unabsorbed liquid fuel (other than liquefied gas) are not permitted on one's person or in carry-on or checked baggage. d) Torch lighters, utility lighters, strike anywhere matches, lighter refills and lighter fluid are not allowed.
(3) Pacemakers or similar battery-powered devices and radiopharmaceuticals contained in the body.	N/A	N/A	Yes	No	No	
(4) Alcoholic beverages 	Yes	Yes	Yes	No	No	a) Not more than 70% alcohol by volume. b) Must be in unopened retail packaging. c) Not to exceed 5 liters (1.3 gallons) per person. d) Carried in carry-on or checked baggage. Note: Current TSA Security Regulations restrict the amount of liquids, aerosols or gels allowed in a passenger's carry-on baggage. This restriction does not affect the amount allowed in a check baggage. Check TSA regulations for current restrictions
(5) Flammable perfumes and colognes from the airport / airline duty free shops.	No	Yes	Yes	No	No	a) Purchased through duty-free sales. b) Carried on one's person or in carry-on baggage.



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	Checked Baggage	Carry-on Baggage	On one's person			
<p>(6) One set of hair curlers or a cordless curling iron with a flammable gas cartridge installed in the device.</p> 	Yes	Yes	Yes	No	No	<p>a) No more than one per person b) Allowed in carry-on or checked baggage. c) Must have safety cover in place d) Spare gas refills for such curlers are not permitted in carry-on or checked baggage.</p>
<p>(7) Small personal mercury thermometer in a protective case.</p> 	Yes	Yes	Yes	No	No	<p>a) For personal use b) Carried in a protective case c) Carry-on or checked baggage.</p>
<p>(8) Small arms ammunition</p> 	Yes	No	No	No	No	<p>a) Checked baggage only b) Securely packed in boxes or other packaging to prevent movement. Loose ammunition is not allowed. c) Ammunition clips and magazines must also be securely boxed. d) 11 pounds maximum per person..</p>
<p>(9) One Self-defense Spray</p> 	Yes	No	No	Yes	No	<p>US regulations allow for the carriage of self-defense spray in a checked bag only. However international regulations do not allow. Therefore most US carriers do not allow in checked baggage</p>
<p>(10) 2.5 kg (5.5lb) or less dry ice</p> 	Yes	Yes	Yes	No	No	<p>a) 2.5kg (5.5lbs) or less per person as either checked or carry-on baggage. b) For personal use only c) Must be labeled as "Dry Ice" or "Carbon Dioxide, solid". d) Must Show amount of Dry Ice e) Must allow for the safe venting of gas f) Show the contents being cooled</p>


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	Checked Baggage	Carry-on Baggage	On one's person			
(11) One Self-inflating life jacket / vest carried by a passenger 	Yes	Yes	Yes	Yes	No	a) One self-inflating life jacket per person. b) Not more than two small gas cartridges installed in jacket. c) No more than two spare cartridges allowed. d) Life jacket and its spares may be in carry-on or checked baggage
(12) Carbon dioxide gas cylinders 	Yes	Yes	Yes	No	No	a) Carbon dioxide gas cylinders - when worn by passengers for the operation of mechanical limbs. b) Spare cylinders allowed to ensure an adequate supply for duration of trip c) Allowed in checked or carry-on??
(13) Mercurial barometer or thermometer 	No	Yes	Yes	No	No	a) A mercurial barometer or thermometer carried by a representative of a government weather bureau or similar official agency. b) Must be advised by passenger that they are carrying the barometer/thermometer. c) Only allowed in carry-on baggage. d) Must be packaged in a strong outer packaging having a sealed inner liner or a bag of strong, leak-proof and puncture-resistant material. e) Pilot-In-Command must be advised.
(14) Electrically powered heat producing articles 	No	Yes	Yes	Yes	No	a) Must obtain operator approval. b) Only allowed as carry-on baggage c) The heat producing component or energy source must be removed to prevent unintentional activation during flight. d) Any battery that is removed must be protected against short circuit by placement in original retail packaging or by otherwise insulating terminals.




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§ 175.10(a) Exception	Location			Operator Approval required?	PIC must be notified?	Restrictions
	Checked Baggage	Carry-on Baggage	On one's person			
<p>(15) A wheelchair or other battery-powered mobility aid equipped with a non-spillable battery</p> 	Yes	No	No	Yes	Yes	<ul style="list-style-type: none"> a) Allowed as checked baggage only. b) Visual inspection reveals no obvious defects to battery. c) The battery is disconnected and the battery terminals are protected to prevent short circuits, <u>unless</u> the wheelchair or mobility aid design provides one effective means of preventing unintentional activation. d) The battery is secured to the chair or mobility aid
<p>(16) A wheelchair or other battery-powered mobility aid equipped with a spillable battery</p> 	Yes	No	No	Yes	Yes	<ul style="list-style-type: none"> a) Allowed as checked baggage only. b) Visual inspection reveals no obvious defects to battery. c) The battery is disconnected and terminals are insulated to prevent short circuits. d) The wheelchair or mobility aid is loaded, stowed, secured and unloaded in an upright position or the battery is removed. e) The pilot-in-command is advised, either orally or in writing, prior to departure, as to the location of the battery aboard the aircraft.




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	Checked Baggage	Carry-on Baggage	On one's person			
<p>(17) A wheelchair or other battery-powered mobility aid equipped with a medium size lithium-ion battery (less than 300Wh).</p> 	Yes	Yes	No	Yes	Yes	<ul style="list-style-type: none"> a) Allowed as checked or carry-on b) Lithium ion battery MUST be less than 300Wh. c) Lithium ion battery must be of a type that successfully passed each test in the UN Manual of Tests and Criteria as specified in §173.185 of this subchapter, unless approved by the Associate Administrator; d) Visual inspection of the wheelchair or mobility aid reveals no obvious defects; e) Battery terminals protected from short circuits (e.g., by being enclosed within a battery container that is securely attached to the mobility aid); f) Pilot-in-command is advised, either orally or in writing, prior to departure, as to the location of wheelchair or mobility aid aboard the aircraft; and g) The wheelchair or mobility aid is loaded, stowed, secured and unloaded in an upright position and in a manner that prevents unintentional activation and protects it from damage. <p>Lithium ion spares for the device must be carried in the same manner as all spare lithium batteries:</p> <ul style="list-style-type: none"> – 2 spare Lithium-Ion Batteries up to 300wh each battery per person. – ONLY permitted as carry-on baggage (must be in cabin) <p>See battery section of this handout for details on the carriage of spare lithium batteries.</p>



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<p>(18) Lithium Ion Batteries (Rechargeable) installed in personal portable electronic devices</p> 	Yes	Yes	Yes	No	No	<p>a) Carried by passengers or crew members for personal use.</p> <p>b) Lithium-Ion Battery installed in a device, up to 8 grams lithium equivalent content per battery. (Rechargeable).</p> <p>c) When installed in device may be transported in both carry-on and checked luggage.</p>
<p>Spare Lithium Ion Batteries (Rechargeable) when carried as spares</p> 	No	Yes	Yes	No	No	<p>a) Carried by passengers or crew members for personal use.</p> <p>b) 2 spare Lithium-Ion Battery allowed up to 8 grams lithium equivalent content per battery, per person.</p> <p>c) Must be in original packaging or place tape across the battery's contacts and put each battery in its own protective case or plastic bag.</p> <p>d) Only permitted as carry-on baggage.</p>
<p>Extended-life rechargeable lithium batteries.</p> 	No	Yes	Yes	No	No	<p>a) No more than 300 Wh per battery, spare or installed.</p> <p>b) Spare batteries limited to two per person.</p> <p>c) Carry-on baggage only</p>


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§ 175.10(a) Exception Lithium Metal Battery (Non-Rechargeable) under 2 grams per battery – installed. 	Yes	Yes	Yes	No	No	a) Carried by passengers or crew members for personal use. b) Up to 2 grams lithium per battery. c) When installed in device may be transported in both carry-on and checked luggage. d) Lithium metal battery with over 2 grams lithium metal not permitted
Spare Lithium Metal (Non-Rechargeable) Battery under 2 grams lithium per battery 	No	Yes	Yes	No	No	a) Carried by passengers or crew members for personal use. b) Spares Lithium Metal Battery allowed up to 2 grams lithium equivalent content per battery. c) Must be in original packaging or place tape across the battery's contacts and put each battery in its own protective case or plastic bag. d) Only permitted as carry-on baggage. Note: Lithium metal (<u>Non-Rechargeable</u>) batteries that contain 2 grams or more of lithium metal are forbidden from passenger aircraft regardless if installed in device
(19) Personal Fuel cell cartridge systems 	No	Yes	Yes	No	No	a) Maximum quantity of fuel in any fuel cell cartridge must not exceed 200 ml (liquid) or 200g (solid). b) <u>May not</u> be refilled during flight. c) Must be marked by the manufacturer in English: "APPROVED FOR CARRIAGE IN AIRCRAFT CABIN ONLY." d) Allowed in carry-on baggage. e) Limited to two spare batteries per person.

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(20) Permeation devices	Yes	No	No	No	No	a) Permeation devices for calibrating air quality monitoring equipment when carried in checked baggage provided the devices are constructed and packaged in accordance with § 173.175.
(21) An internal combustion or fuel cell engine or a machine or apparatus containing an internal combustion or fuel cell engine 	Yes	No	No	No	No	a) Allowed as checked baggage only b) The engine contains no liquid or gaseous fuel. An engine may be considered as not containing fuel when the engine components and any fuel lines have been completely drained, sufficiently cleaned of residue, and purged of vapors to remove any potential hazard and the engine when held in any orientation will not release any liquid fuel c) The fuel tank contains no liquid or gaseous fuel. A fuel tank may be considered as not containing fuel when the fuel tank and the fuel lines have been completely drained, sufficiently cleaned of residue, and purged of vapors to remove any potential hazard; d) It is not equipped with a wet battery (including a non-spillable battery), a sodium battery or a lithium battery; and e) It contains no other hazardous materials subject to the requirements of regulation.
(22) Non-infectious specimens transported in accordance with §173.4b(b). 	Yes	Yes	No	No	No	

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(23) One Dry shipper containing fully absorbed liquid nitrogen. 	Yes	Yes	No	No	No	b) One dry shipper per passenger. c) All liquid nitrogen is fully absorbed in a porous material d) The design of the insulated packaging would not allow the build-up of pressure. e) Does not contain any other regulated dangerous goods (such as an infectious substance). f) Check or carry-on baggage



CAUTION

Dangerous goods not permitted for carriage by passengers or crew in checked or carry-on baggage by 49 CFR 175.10 are not permitted for such carriage even when authorized by section 2.3 of the IATA Dangerous Goods Regulations. For example, the carriage of avalanche rescue backpacks by passenger for crew (see 2.3.4.4) is not authorized.