

## Lieferantenerklärung für Waren mit Präferenzursprungseigenschaft Anhang 22-15 der Durchführungsverordnung (EU) 2015/2447

Der Unterzeichner erklärt, dass die in diesem Dokumente aufgeführten Waren:

## Kohlendioxid in Kapseln (CO<sub>2</sub> Kapseln), Stat. Warennummer: 28112100 (1)

die regelmäßig an die <u>Restube GmbH</u> geliefert werden, Ursprungserzeugnisse <u>Österreichs</u> (2) sind und den Ursprungsregeln für den Präferenzverkehr mit <u>CH, LI,</u> <u>NO, IS, TR, FO, AL, BA, ME, MK, RS, XK, MD, XC/XL, DZ, MA, TN, EG, PS, IL, SY,</u> <u>JO, LB, CL, CO, MX, PE, ZA, KR, GE, CM, UA, EC, GH, CI, CA, JP, CARIFORUM,</u> <u>ESA, MAR(AKP), APS, ÜLG, CAM, WPS (3)</u> entsprechen.

Er erklärt Folgendes (4):

O Kumulierung angewendet mit ..... (Name des Landes / der Länder)

X Keine Kumulierung angewendet

Diese Erklärung gilt für alle weiteren Sendungen dieser Waren im Zeitraum vom 01.01.2019 bis 31.12.2019.

Der Unterzeichner verpflichtet sich, die <u>Restube GmbH</u> umgehend zu unterrichten, wenn diese Erklärung ihre Geltung verliert.

Er verpflichtet sich, den Zollbehörden alle von ihnen zusätzlich verlangten Belege zur Verfügung zu stellen.

Wien, 21. Oktober 2019 (5)

Doris Sereinig / Customer Service (6)

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Fußnoten:

- (1) Sind nur bestimmte der aufgeführten Waren betroffen, so sind sie eindeutig zu kennzeichnen; auf diese Kennzeichnung ist mit folgendem Vermerk hinzuweisen: " .... Dass die in diesem Dokument aufgeführten und mit ... gekennzeichneten Waren Ursprungserzeugnisse ...".
- (2) Europäische Union, Land, Ländergruppe oder Gebiet, in der/dem die Waren ihren Ursprung haben.

(7)

- (3) Land, Ländergruppe oder Gebiet.
- (4) Nur auszufüllen soweit erforderlich für Waren mit Präferenzursprungseigenschaft im Rahmen präferenzieller Handelsbeziehungen mit einem der Länder, mit dem die Paneuropa-Mittelmeer-Ursprungskumulierung Anwendung findet.

(5) Ort und Datum.

(6) Name und Stellung in der Firma.

(7)Unterschrift.

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## CARBON DIOXIDE in non-refillable gas cylinders

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## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name Safety data sheet no.	<ul><li>Carbon dioxide in non-refillable gas cylinders</li><li>ICO.SD.001.e.04</li></ul>
Chemical description CAS no. EG no. Index no. Chemical formula	: Carbon dioxide : 124-38-9 : 204-696-9 : : CO <sub>2</sub>
Registration number	<ul> <li>Listed in Annex IV/V of regulation no. EC 1907/2006 (REACH). Exempted from registration.</li> </ul>

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For various industrial applications. Perform risk assessment pr	rior to use.
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### 1.3. Details of the supplier of the safety data sheet

A-1217 Vienna, Austria Phone: +43 1 25099-1803	Company identification	: iSi Components GmbH Website: www.isi.cc Kuerschnergasse 6A E-mail: ico@isi.co A-1217 Vienna, Austria Phone: +43 1 250	<u>m</u>
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## 1.4. Emergency telephone number

Emergency telephone number	: Poison information hotline	Tel.: +431 406 43 43
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## Section 2: Hazards identification

2.1. Classification of the subs	2.1. Classification of the substance of mixture			
Classification according to EC 1272/2008 (CLP / GHS)				
Physical hazards	: Gas under pressure: Liquefied gas – H280: Contains gas under pressure; may			
	explode, if heated.			

#### 2.2. Label elements

Labelling according to EC 1272/20 Hazard pictogram(s)	008 (CLP /	GHS)	
- nazaru pictogram(s)		$\diamond$	
Hazard pictogram codes	:	GHS04	
Signal word	:	Warning	
Hazard statement	:	H280: Conta	ins gas under pressure; may explode if heated.
Precautionary statements			
– General	:	P102:	Keep out of reach of children.
– Storage	:	P410+P403:	Protect from direct sunlight. Store in a well-ventilated place.

#### 2.3. Other hazards

:	Asphyxiant in high concentrations.
	Contact with solid CO <sub>2</sub> (dry ice) or liquid CO <sub>2</sub> may cause cold burns/ frost bite.



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## Section 3: Composition/information on ingredients

#### 3.1. Substance / 3.2. Mixture

Substance name	Content	CAS no.	EC no.	Index no.	REACH registration no.	Classification (GHS / CLP)
Carbon dioxide	100%	124-38-9	204-696-9		See note	Press. Gas (Liq.) H280

 Does not contain any other components or impurities which could affect the classification of this product.

 Note:
 Listed in Appendix IV/V REACH, exempt from registration.

 For full text of H statements:
 see section 16

### Section 4: First aid measures

### 4.1. Description of first aid measures

•	
Inhalation	<ul> <li>Remove victim to uncontaminated area wearing self-contained respiratory equipment. Keep victim warm and rested.</li> </ul>
	Call a doctor. Attempt artificial respiration, if the victim stops breathing.
Skin contact	: Spray any cold burns immediately with water for at least 15 minutes. Cover with a sterile dressing. Consult a doctor.
Eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes.
Ingestion	: Ingestion is not considered a possible route of exposure.

### 4.2. Most important symptoms and effects, both acute and delayed

High concentrations of CO <sub>2</sub> may cause asphyxiation. Symptoms can include loss of mobility/ consciousness. Victim may not be aware of asphyxiation.
Low concentrations of cause increased respiration and headache.

### 4.3. Indication of any immediate medical attention and special treatment needed

: None.

## Section 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray or fog.
Unsuitable extinguishing media	: Do not use water jet to extinguish.

#### 5.2. Special hazards arising from the substance or mixture

Specific hazards	:	Exposure to fire may cause cylinder to burst/explode.
Hazardous combustion products	:	None.

#### 5.3. Advice for firefighters

Specific methods	:	Adopt firefighting measures to the surroundings of the fire.
		Cylinder may burst/explode if exposed to direct flame and thermal radiation by
		fire, respectively.



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		Move away from cylinder and cool with water from a safe position. Prevent contaminated quench water from entering sewer systems, basements, work pits or any other areas.
		If possible, attempt to stop gas release.
Special protective equipment for fire	:	In confined spaces use self-contained breathing apparatus.
fighters		Fire fighters shall use standard protective clothing and equipment.
		Guidelines:
		EN 137 – Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.
		EN 469 – Protective clothing for firefighters - Performance requirements for protective clothing for firefighting.
		EN 659 – Protective gloves for firefighters.

## Section 6: Accidental release measures

## 6.1. Personal precautions, protective equipment and emergency procedures

:	Attempt to stop gas release.
	Evecuate area.
	Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
	Provide adequate ventilation.
	Prevent from entering sewer systems, basements, work pits or any other areas where accumulation could be hazardous.

### 6.2. Environmental precautions

: Attempt to stop gas release.

## 6.3. Methods and material for containment and cleaning up

: Provide adequate ventilation.

### 6.4. Reference to other sections

: See also section 8 and section 13.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

Safe use of product	: Only experienced and properly instructed persons should handle gases under pressure.
	The substance must be handled in accordance with good industrial hygiene and safety procedures.
	Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. If in doubt, consult supplier.
	Ensure the complete gas system was (or is regularly) checked for leaks before use.
	Do not smoke while handling product.



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Safe handling of pressurized cylinder	: Refer to supplier's handling instructions.
	Only use equipment suitable for this product and its pressure and temperature specified. If in doubt, consult supplier.
	Do not allow backfeed into cylinder.
	Never use direct flame or electrical heating devices to raise the pressure of a cylinder.
	Never attempt to refill an empty cylinder.
	Never attempt to transfer gases from one cylinder to another.
	Emerging gas will cause the cylinder to freeze.
	Do not touch a discharging or recently discharged cylinder with bare hands.
	Do not use cylinder as roller or support, or for any other purpose than to contain the gas as supplied.
	Do not subject cylinder to mechanical shocks which may cause damage to their integrity.

### 7.2. Conditions for safe storage, including any incompatibilities

: Keep out of reach of children.
Store cylinder in a well-ventilated place at less than 50°C.
Store cylinder in a location free from risk of fire and away from sources of heat and ignition.
Periodically check cylinder for general conditions and leakage.
Do not store cylinder in conditions likely to encourage corrosion.
Observe all regulations and local requirements regarding storage of gas cylinders.

## 7.3. Specific end use(s)

: None.

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

OEL (Occupational Exposure Limits)	:	TWA (EC): MAK (AUSTRIA):	5,000 ppm / 9,000 mg/m <sup>3</sup> 5,000 ppm / 9,000 mg/m <sup>3</sup>
DNEL (Derived No-Effect Level)	:	MAK CEILb(AUSTRIA): No data available.	10,000 ppm / 18,000 mg/m <sup>3</sup>
PNEC (Predicted No-Effect Concentration)	:	No data available.	

#### 8.2. Exposure controls

8.2.1. Appropriate engineering controls	:	Ensure adequate air ventilation.
		Provide adequate general and local ventilation to ensure that defined occupational exposure limits are not exceeded.
		Systems under pressure should be regularly checked for leakages.
		Oxygen detectors should be used when asphyxiating gases may be released.
		Preferably use permanent leak tight connections.
8.2.2. Individual protection measures, e.g. personal protective	:	A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that

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equipment	matches the relevant risk.
	The following recommendations should be considered:
	<ul> <li>Select PPE based on the task being performed and risks involved.</li> </ul>
Eye/face protection	: Wear eye protection with side shields
	Guideline: EN 166 – Personal eye protection
Skin protection	:
<ul> <li>Hand protection</li> </ul>	Wear working gloves while handling gas cylinders.
	Guideline: EN 388 – Protective gloves against mechanical risks.
– Other	Wear safety shoes while handling gas cylinders.
	Guideline: EN ISO 20345 – Personal protective equipment – Safety footwear.
<ul> <li>Respiratory protection</li> </ul>	<ul> <li>Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.</li> </ul>
	Guideline: EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.
Thermal hazards	: No precautionary measures necessary.
8.2.3. Environmental exposure controls	: For waste disposal see section 13.

## Section 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Appearance Physical state at 20°C/ 101,03kPa Colour	:	Gas. Colourless.
Odour	:	Odourless.
Odour threshold	:	Odour threshold is subjective and inadequate to warn of overexposure.
pH value		Not applicable.
Molar mass [g/mol]	:	44
Melting point [°C]	:	-56.6
Boiling point [°C]	:	-78.5
Critical temperature [°C]	:	31.0
Flash point	:	Not applicable to gases and gas mixtures.
Evaporation rate (ether = 1)	:	Not applicable to gases and gas mixtures.
Flammability range	:	Non flammable.
Vapour pressure at 20°C [bar]	:	57.3
Relative density, gas (air = 1)	:	1.52
Relative density, liquid (water = 1)	:	0.82
Solubility in water [mg/l]	:	2,000 (completely soluble)
Partition coefficient n-octanol/water [log Kow]	:	0.83
Autoignition temperatur [°C]	:	Not applicable.
Viscosity [20°C]	:	No data available.
Explosive properties	:	Not applicable.
Oxidizing properties	:	None.



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## 9.2. Other information

: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

Sec	Section 10: Stability and reactivity		
10.1.	Reactivity		
		No reactivity hazard other than the effects described in sub-section below.	
10.2.	Chemical stability		
		Stable under normal conditions.	
10.3.	Possibility of hazardous reaction	S	
		None.	
10.4.	Conditions to avoid		
		None.	
10.5.	Incompatible materials		
		None. For additional information - see ISO 11114.	
10.6.	Hazardous decomposition produ	cts	
		None	

## Section 11: Toxicological information

### 11.1. Information on toxicological effects

Acute Toxicity	:	In high concentrations may cause rapid circulatory deterioration even at normal levels of oxygen concentration.
		Symptoms are headache, nausea and vomiting, which may lead to unconsciousness and even death.
Skin corrosion/irritation	:	No known effects from this product.
Serious eye damage/irritation	:	No known effects from this product.
Respiratory or skin sensitisation	:	No known effects from this product.
Germ cell mutagenicity	:	No known effects from this product.
Carcinogenicity	:	No known effects from this product.
Reproductive toxicity	:	No known effects from this product.
Spezific Target Organ Toxicity – single exposure		No known effects from this product.
Spezific Target Organ Toxicity – repeated exposure	:	No known effects from this product.
Aspiration hazard	:	Not applicable for gases and gas mixtures.



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## Section 12: Ecological information

12.1. Toxicity

Example 2 Depending on the technical specification the chromate layer which protects the cylinder's zinc plating may contain chromium in the oxidation state of VI.

 12.2. Persistence and degradability

 Example 2 No ecological damage caused by this product.

 12.3. Bio-accumulative potential

 Example 2 No ecological damage caused by this product.

12.4. Mobility in soil

: No ecological damage caused by this product.

### 12.5. Results of PBT- and vPvB assessment

: Not classified as PBT or vPvB.

## 12.6. Other adverse effects

Effect on ozone layer	:	None.
Global warming potential [CO <sub>2</sub> = 1]	:	1
Effect on the global warming	:	When discharged in large quantities may contribute to the greenhouse effect.

## Section 13: Disposal considerations

## 13.1. Waste treatment information

	<ul> <li>Do not discharge into any place where its accumulation could be dangerou May be vented to atmosphere in a well-ventilated place.</li> <li>Dispose of emptied cylinders only.</li> <li>Cylinders are made of recyclable steel and hence a valuable resource. Em cylinders should therefore always be recycled.</li> </ul>	
List of hazardous waste codes (from Commission Decision 2001/118/EC)	<ul> <li>Adhere to local waste regulations when disposing of emptied cylinders. Never dispose of cylinders in an uncontrolled manner (e.g. dumping at sea). Consult your supplier, if you require advice.</li> <li>16 05 05: Gases in pressure containers other than those mentioned in 16 05 04.</li> </ul>	

### 13.2. Additional information

None.

:



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Section 14: Transport information		
4.1 UN number		
UN number of filling gas	: 1013	
14.2 UN proper shipping name		
Land transport (ADR/RID)	: According to the requirements set out in the relevant version of the ADR. See Annex.	
Sea transport (IMDG)	: According to the requirements set out in the relevant version of the IMDG- Code. See Annex.	
Air transport (ICAO-TI / IATA-DGR)	: According to the requirements set out in the relevant version of the ICAO-TI / IATA-DGR. See Annex.	

### 14.3 Transport hazard class(es)

: See	Annex.
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#### 14.4 Packing group

: Not applicable.

### 14.5 Environmental hazards

		Not applicable.
14.6 Special precautions for user		
	:	Avoid transport on vehicles where the load space is not separated from the driver's compartment.
		Ensure the vehicle driver is aware of the potential hazards of the load and

Lisure the vehicle driver is aware of the potential hazards of the load an
knows what to do in the event of an accident or an emergency.

- Before transporting the gas cylinders:
- Ensure there is adequate ventilation.
   Ensure the gas cylinders are firmly secured.

# 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

:

Not applicable.

## Section 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations	
Destated at the second	

<ul> <li>Restrictions on use</li> <li>Seveso directive 96/82/EG</li> </ul>	None.     Not covered.
National regulations <ul> <li>National legislation</li> </ul>	Ensure that all national/local regulations are observed.

### 15.2. Chemical safety assessment

: No Chemical Safety Assessment has been carried.



Section 16: Other information

# SAFETY DATA SHEET

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Indication of changes	:	This Safety Data Sheet has been worked out to comply with Regulation (EU) No. 453/2010.	
Training advice	:	The hazard of asphyxiation is often overlooked and must be stressed during operator training.	
Full text of H-statements in section 2 and 3	:	H280: Contains gas under pressure; may explode if heated.	
Further information		This safety data sheet has been produced in accordance with the applicable European directives.	
		It applies to all countries which have adopted these directives as part of their national legislation.	
Disclaimer of liability		The information contained in this safety data sheet has been obtained from sources which we consider reliable.	
		Details given in this document are believed to be correct at the time of going to press.	
		The conditions or methods for handling, storage, use or disposal of the product are not under our control and also possibly out of our information. Because of this and other reasons no liability for injury or damage resulting from its handling, storage, use or disposal can be accepted.	
		This safety data sheet has been worked out for this specific product and may only be used in conjunction with this product.	
		Should this product be part of another product the information contained in this document may be inappropriate.	

-----End of Document-----



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# TRANSPORT NOTES on CARBON DIOXIDE in non-refillable gas cylinders

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## 1. Land transport

## ADR/RID

• UN number		UN 1013		
<ul> <li>Name and description</li> </ul>	:	CARBON DIOXIDE		
Class	:	2		
	:			
Classification code	:	2A		
<ul> <li>Special provisions</li> </ul>	:	584		
		"This gas is not subject to the requirements of ADR when		
		- it contains not more than 0.5% air in the gaseous state;		
		<ul> <li>it is contained in metal capsules (sodors, sparklets) free from defects which may impair their strength;</li> </ul>		
		<ul> <li>the leakproofness of the closure of the capsules is ensured;</li> </ul>		
		- a capsule contains not more than 25 g of this gas;		
		<ul> <li>a capsule contains not more than 0.75 g of this gas per cm3 of capacity."</li> </ul>		
Limited quantities	:	120 ml		
<ul> <li>Excepted quantities</li> </ul>	:	E1		
optional for cylinders ≤50 ml:				
• UN number	:	UN 2037		
Name and description	:	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable		
<ul> <li>Class</li> </ul>	:	2		
Classification code	:	5A		
Special provisions	:	191		
		"Receptacles, small, with a capacity not exceeding 50 ml, containing only non-toxic constituents are not subject to the requirements of ADR."		

## 2. Sea transport

## GGVSee/IMO-IMDG code

• UN number	: UN 1013
Proper shipping name	: CARBON DIOXIDE
Class or division	: 2.2
Subsidiary risk(s)	: -
Special provisions	: -
Limited quantities	: 120ml
Excepted quantities	: E1



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optional for	<sup>.</sup> cylinders	≤50 ml:
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<ul> <li>UN number</li> </ul>	: UN 2037
Proper shipping name	: RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
Class or division	: 2
Subsidiary risk(s)	: -
Special provisions	: 191
	"Receptacles with a capacity not exceeding 50 mL containing only non- toxic constituents are not subject to the provisions of this (IMO-IMDG) Code."

## 3. Air transport

ΙΑΤΑ		
<ul> <li>UN or ID number</li> </ul>	:	UN 1013
<ul> <li>Proper shipping name/ description</li> </ul>	:	Carbon dioxide
<ul> <li>Class or division (subsidiary risk)</li> </ul>	:	2.2
Excepted quantities	:	E1
<ul> <li>Limited quantities</li> </ul>	:	Forbidden
optional for cylinders ≤50 ml:		
• UN or ID number		UN 2037
<ul> <li>Proper shipping name/ description</li> </ul>	:	Receptacles, small, containing gas (non-flammable) without a release device, non-refillable
<ul> <li>Class or division (subsidiary risk)</li> </ul>	:	2.2
Special provisions	:	A98
		"Aerosols, gas cartridges and receptacles, small, containing gas with a capacity not exceeding 50 mL, containing no constituents subject to these Regulation other than a Division 2.2 gas, are not subject to these Regulations when carried as a cargo unless their release could cause extreme annoyance or discomfort to crew members so as to prevent the correct performance of duties.
		The words "Not restricted" and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued."

Please note – there may apply different provisions for the air-transport of non-refillable cylinders in the USA.

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#### TABLE 2.3.A Provisions for Dangerous Goods Carried by Passengers or Crew (Subsection 2.3)

Dangerous goods must not be carried in or as passengers or crew, checked or carry-on baggage, except as otherwise provided below. Dangerous goods permitted in carry-on baggage are also permitted "on one's person", except where otherwise specified.

Per	mitted in or a	s carry-on	baggage	
Permitted in c	or as checked	baggage		
The approval of the operato	or is required			
Alcoholic beverages, when in retail packagings, containing more than 24% but not more than 70% alcohol by volume, in receptacles not exceeding 5 L, with a total net quantity per person of 5 L.	NO	YES	YES	NO
Ammunition (cartridges for weapons), securely packaged (in Div. 1.4S, UN 0012 or UN 0014 only), quantities not exceeding 5 kg gross weight per person for that person's own use. Allowances for more than one person must not be combined into one or more packages.	in YES	YES	NO	NO
Avalanche rescue backpack, one (1) per person, containing a cartridge of compressed gas in Div. 2.2. May also be equipped with a pyrotechnic trigger mechanism containing no more than 200 mg net of Div. 1.4S. The backpack must be packed in such a manner that it cannot be accidentally activated. The airbags within the backpacks must be fitted with pressure relief valves.	YES	YES	YES	NC
Batteries, spare/loose, including lithium metal or lithium ion cells or batteries, for portable electron devices must be carried in carry-on baggage only. For lithium metal batteries the lithium metal content must not exceed 2 g and for lithium ion batteries the Watt-hour rating must not exceed 100 Wh. Articles which have the primary purpose as a power source, e.g. power banks are considered as spare batteries. These batteries must be individually protected to prevent short circuits. Each person is limited to a maximum of 20 spare batteries.		NO	YES	NC
Camping stoves and fuel containers that have contained a flammable liquid fuel, with empty fuel tank and/or fuel container (see 2.3.2.5 for details).	YES	YES	NO	NC
<b>Chemical Agent Monitoring Equipment</b> , when carried by staff members of the Organization for the Prohibition of Chemical Weapons on official travel (see 2.3.4.4).	YES	YES	YES	NC
<b>Disabling devices</b> such as mace, pepper spray, etc. containing an irritant or incapacitating substance a forbidden on the person, in checked and carry-on baggage.	re	FORBIDDEN		
Dry ice (carbon dioxide, solid), in quantities not exceeding 2.5 kg per person when used to pack perishables not subject to these Regulations in checked or carry-on baggage, provided the baggage (package) permits the release of carbon dioxide gas. Checked baggage must be marked "dry ice" or "carbon dioxide, solid" and with the net weight of dry ice or an indication that there is 2.5 kg or less dry ic	YES	YES	YES	NC
e-cigarettes (including e-cigars, e-pipes, other personal vaporizers) containing batteries must be individually protected to prevent accidental activation.	NO	NO	YES	NC
Electro shock weapons (e.g. Tasers) containing dangerous goods such as explosives, compressed gases, lithium batteries, etc. are forbidden in carry-on baggage or checked baggage or on the person.		FORBIDDEN		
Fuel cells containing fuel, powering portable electronic devices (e.g. cameras, cellular phones, laptop computers and camcorders), see 2.3.5.10 for details.	NO	NO	YES	NC
Fuel cell cartridges, spare for portable electronic devices, see 2.3.5.10 for details.	NO	YES	YES	NC
Gas cartridges, small, non-flammable containing carbon dioxide or other suitable gas in Division 2.2, to two (2) small cartridges fitted into a self-inflating safety device such as a life jacket or vest. Not more than one (1) device per passenger and up to two (2) spare small cartridges per person, not more than fo (4) cartridges up to 50 mL water capacity for other devices (see 2.3.4.2).	e	YES	YES	<mark>NC</mark>
Gas cylinders, non-flammable, non-toxic worn for the operation of mechanical limbs. Also, spare cylinders of a similar size if required to ensure an adequate supply for the duration of the journey.	NO	YES	YES	NC
Hair curlers containing hydrocarbon gas, up to one (1) per passenger or crew-member, provided that the safety cover is securely fitted over the heating element. These hair curlers must not be used on boar the aircraft at any time. Gas refills for such curlers are not permitted in checked or carry-on baggage.		YES	YES	NC
Heat producing articles such as underwater torches (diving lamps) and soldering irons (See 2.3.4.6 for details).	YES	YES	YES	NC
Insulated packagings containing refrigerated liquid nitrogen (dry shipper), fully absorbed in a porou material containing only non-dangerous goods.	s NO	YES	YES	NC
Internal combustion or fuel cell engines, must meet A70 (see 2.3.5.15 for details).	NO	YES	NO	NC
Lamps, energy efficient when in retail packaging intended for personal or home use.	NO	YES	YES	NC
Lithium Batteries: Security-type equipment containing lithium batteries (see 2.3.2.6 for details).	YES	YES	NO	NC

#### TABLE 2.3.A Provisions for Dangerous Goods Carried by Passengers or Crew (Subsection 2.3) (continued)

Permit	ted in or a	s carry-on	baggage	
Permitted in or a		-	00 0	
The approval of the operator is				
Lithium Batteries: Portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries, including medical devices such as portable oxygen concentrators (POC) and consumer electronics such as cameras, mobile phones, laptops and tablets, when carried by passengers or crew for personal use (see 2.3.5.9). For lithium metal batteries the lithium metal content must not exceed 2 g and for lithium ion batteries the Watt-hour rating must not exceed 100 Wh. Devices in checked baggage must be completely switched off and must be protected from damage. Each person is limited to a maximum of 15 PED. Baggage equipped with a lithium battery, other than lithium button cells, the battery must be removable. If offered as checked baggage the battery must be removed and carried in the cabin. *The operator may approve the carriage of more than 15 PED.	NO*	YES	YES	NC
Lithium batteries, spare/loose, including power banks, see Batteries, spare/loose				
<b>Lithium battery-powered electronic devices</b> . Lithium ion batteries for portable (including medical) electronic devices, a Wh rating exceeding 100 Wh but not exceeding 160 Wh. For portable medical electronic devices only, lithium metal batteries with a lithium metal content exceeding 2 g but not exceeding 8 g. Devices in checked baggage must be completely switched off and must be protected from damage.	YES	YES	YES	N
<b>Lithium batteries, spare/loose</b> with a Watt-hour rating exceeding 100 Wh but not exceeding 160 Wh for consumer electronic devices and PMED or with a lithium metal content exceeding 2 g but not exceeding 8 g for PMED only. Maximum of two spare batteries in carry-on baggage only. These batteries must be individually protected to prevent short circuits.	YES	NO	YES	N
Matches, safety (one small packet) or a small cigarette lighter that does not contain unabsorbed liquid fuel, other than liquefied gas, intended for use by an individual when carried on the person. Lighter fuel and lighter refills are not permitted on one's person or in checked or carry-on baggage.	NO		ONE'S RSON	
Note: "Strike anywhere" matches, "Blue flame" or "Cigar" lighters are forbidden.				
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with non-spillable wet batteries or with batteries which comply with Special Provision A123 or A199, (see 2.3.2.2).	YES	YES	NO	N
<b>Mobility Aids:</b> Battery-powered wheelchairs or other similar mobility devices with <b>spillable batteries or</b> <b>with lithium batteries</b> (see 2.3.2.3 and 2.3.2.4 for details).	YES	YES	NO	YE
<b>Mobility Aids:</b> Battery-powered wheelchairs or other similar mobility devices with <b>lithium ion batteries</b> (collapsible), lithium-ion battery must be removed and carried in the cabin (see 2.3.2.4(d) for details).	YES	NO	YES	YE
Non-radioactive medicinal or toiletry articles (including aerosols) such as hair sprays, perfumes, colognes and medicines containing alcohol; and	NO	YES	YES	N
Non-flammable, non-toxic aerosols in Division 2.2, with no subsidiary risk, for sporting or home use.	NO	YES	NO	N
The total net quantity of non-radioactive medicinal or toiletry articles and non-flammable, non-toxic aerosols in Division 2.2 must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. Release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents.				
Oxygen or air, gaseous, cylinders required for medical use. The cylinder must not exceed 5 kg gross weight.	YES	YES	YES	YE
Note: Liquid oxygen systems are forbidden for transport.				
Permeation devices, must meet A41 (see 2.3.5.16 for details).	NO	YES	NO	N
<b>Portable electronic devices containing non-spillable batteries</b> , batteries must meet A67 and must be 12 V or less and 100 Wh or less. A maximum of 2 spare batteries may be carried (see 2.3.5.13 for details).	NO	YES	YES	N
<b>Radioisotopic cardiac pacemakers</b> or other devices, including those powered by lithium batteries, implanted into a person or fitted externally, or radiopharmaceuticals contained within the body of a person as the result of medical treatment.	NO		NE'S SON	N
Security-type attaché cases, cash boxes, cash bags, etc. incorporating dangerous goods, such as lithium batteries and/or pyrotechnic material, except as provided in 2.3.2.6 are totally forbidden. See entry in 4.2–List of Dangerous Goods.		FORB	IDDEN	I
<b>Specimens, non-infectious</b> packed with small quantities of flammable liquid, must meet A180 (see 2.3.5.14 for details).	NO	YES	YES	N
Thermometer, medical or clinical, which contains mercury, one (1) per person for personal use, when in its protective case.	NO	YES	NO	N
<b>Thermometer or barometer, mercury filled</b> carried by a representative of a government weather bureau or similar official agency (see 2.3.3.1 for details).	YES	NO	YES	YE

#### Note:

The provisions of 2.3 and Table 2.3.A may be limited by State or operator variations. Passengers should check with their airline for the current provisions.