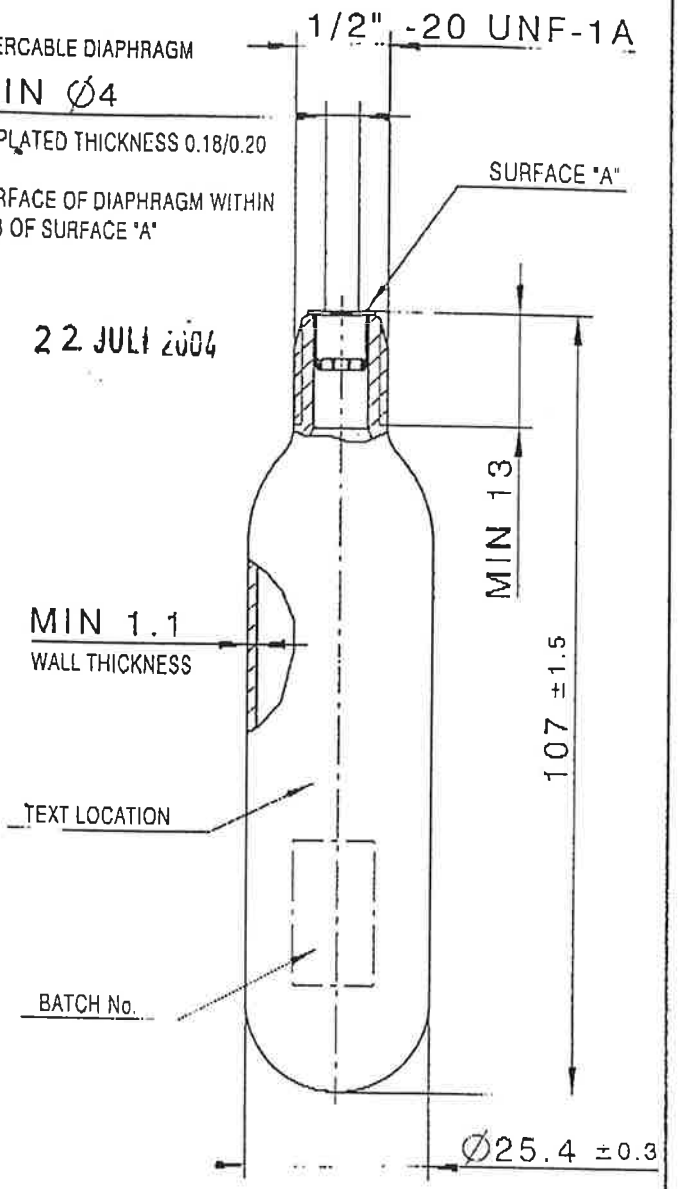
24 GRAMS CO2 / 32 ml

1/2" UNF THREADED NECK

ARTICLE No. 34202

THIS DRAWING REPLACES

*) DRWG No. 34202 ISSUE: 6
*) DRWG No. UL 34202 ISSUE: 5



MASS OF GAS GASMASSE MASSE DE REMPLISSAGE	24 +0.4 −1 g CO2
WATER CAPACITY VOLUMEN VOLUME	32.5ml MIN
FILLING DENSITY FÜLLDICHTE DENSITE DE REMPLISSAGE	0.75kg/l MAX
TEST PRESSURE = PRESSURE OF CONTENTS AT PRÜFDRUCK = INNENDRUCK BEI PRESSION DE CONTROLE = PRESSION INTERNE A	65 +8 −4 °C
BURST PRESSURE OF CYLINDER BERSTDRUCK DES ZYLINDERS PRESSION D'ECLATEMENT DE LA BOUTEILLE	56MPa MIN
CAP PIERCING FORCE (iSi SPEC VIA.P.001.X) KAPPENANSTECHKRAFT FORCE DE PERCUTION	260N MAX
CAP PIERCING WORK (iSi SPEC VIA.P.001.X) ARBEIT BEIM DURCHSTECHEN DER KAPPE TRAVAIL POUR LA PERFORATION DU CAPUCHON	0.35Nm MAX
SURFACE TREATMENT OBERFLÄCHENBEHANDLUNG TRAITEMENT DE SURFACE — IN ACCORDANCE WITH DIN 50961	Fe/Zn 5Cd

PARTS LIST

CYLINDER MATERIAL	W-No.1.0338 EN 10139 DC04
UNFILLED CYLINDER	C0032030
CAP MATERIAL	W-No.1.0338 EN 10139 DC04
CAP	80117

CO2-(ISI SPEC 0192, E290)-99,95% PURITY CO2 V/V

NOTES

1. INTERNAL SURFACE SHALL BE CLEAN, DRY AND FREE OF RUST AND/OR LOOSE PARTICLES
2. STORAGE TEMPERATURE LIMITS: -30°C TO +65°C

Issue	Date	Change	Name
07	02-06-19	n.Drg.	KPR

THIS DRAWING REPLACES

DRWG No. *) ISSUE: *)

iSi Components GmbH
AN iSi GROUP COMPANY
Kürschnergasse 8a
A-1217 Vienna
AUSTRIA

ALL DRAWING DIMENSIONS IN mm | SCALE 1:1

DRAWING STD. ISO 2768 mK

TITLE
24 g CO2 / 32 ml THREADED NECK CYLINDER
24 g CO2 / 32 ml ZYLINDER MIT HALSGEWINDE
BOUTEILLE DE 24 g CO2 / 32 ml AVEC FILETAGE

DRWG No. 34202 | ISSUE: 07

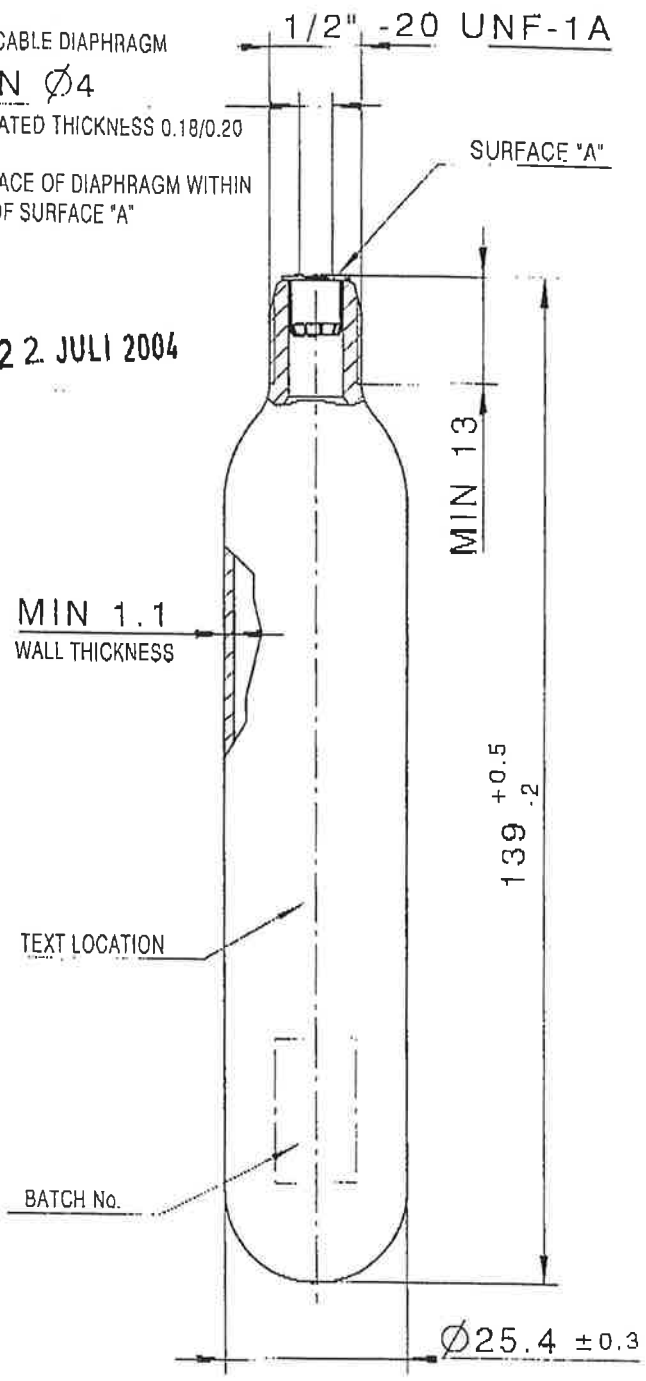
33 GRAMS CO2 / 45 ml

1/2" UNF THREADED NECK

ARTICLE No. 35202

THIS DRAWING REPLACES

*) DRWG No. 35202 ISSUE: 2
*) DRWG No. UL 35202 ISSUE: 5



22. JULI 2004

MASS OF GAS GASMASSE MASSE DE REMPLISSAGE		33 ±1g CO2
WATER CAPACITY VOLUMEN VOLUME		45.5ml MIN
FILLING DENSITY FÜLLDICHTE DENSITE DE REMPLISSAGE		0.75kg/l MAX
TEST PRESSURE = PRESSURE OF CONTENTS AT PRÜFDRUCK = INNENDRUCK BEI PRESSION DE CONTROLE = PRESSION INTERNE A		65^{+5}_{-0}°C
BURST PRESSURE OF CYLINDER BERSTDRUCK DES ZYLINDERS PRESSION D´ECLATEMENT DE LA BOUTEILLE		56MPa MIN
CAP PIERCING FORCE (iSi SPEC VIA.P.001.X) KAPPENANSTECHKRAFT FORCE DE PERCUTION		260N MAX
CAP PIERCING WORK (iSi SPEC VIA.P.001.X) ARBEIT BEIM DURCHSTECHEN DER KAPPE TRAVAIL POUR LA PERFORATION DU CAPUCHON		0.35Nm MAX
SURFACE TREATMENT OBERFLÄCHENBEHANDLUNG TRAITEMENT DE SURFACE	IN ACCORDANCE WITH DIN 50961	Fe/Zn 5Cd

PARTS LIST

CYLINDER MATERIAL	W-No.1.0338 EN 10139 DC04
UNFILLED CYLINDER	C0045030
CAP MATERIAL	W-No.1.0338 EN 10139 DC04
CAP	80117

CO2-(ISI SPEC 0192, E290)-99,95% PURITY CO2 V/V

NOTES

1. INTERNAL SURFACE SHALL BE CLEAN, DRY AND FREE OF RUST AND/OR LOOSE PARTICLES
2. STORAGE TEMPERATURE LIMITS: -30°C TO +65°C

Issue	Date	Change	Name
06	02-06-19	n.Drg.	KPR

THIS DRAWING REPLACES
DRWG No. *) ISSUE: *)

iSi Components GmbH
AN iSi GROUP COMPANY

ALL DRAWING DIMENSIONS IN mm
DRAWING STD. ISO 2768 mK
SCALE 1:1

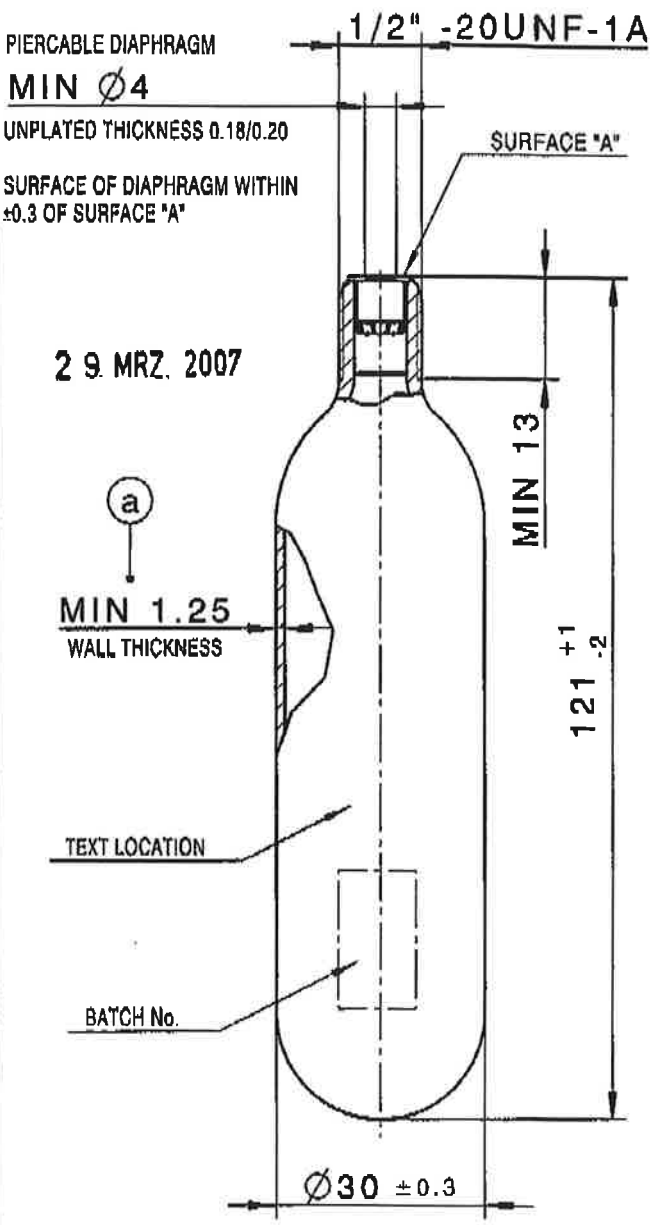
TITLE
33 g CO2 / 45 ml THREADED NECK CYLINDER
33 g CO2 / 45 ml ZYLINDER MIT HALSGEWINDE
BOUTEILLE DE 33 g CO2 / 45 ml AVEC FILETAGE

DRWG No. 35202 ISSUE: 06

38 GRAMS CO2 / 52 ml

1/2" UNF THREADED NECK

ARTICLE No. 36203



29. MRZ. 2007

MASS OF GAS GASMASSE MASSE DE REMPLISSAGE		38^{+1}_{-2}g CO2
WATER CAPACITY VOLUMEN VOLUME		52ml MIN
FILLING DENSITY FÜLLDICHTE DENSITE DE REMPLISSAGE		0.75kg/l MAX
TEST PRESSURE = PRESSURE OF CONTENTS AT PRÜFDRUCK = INNENDRUCK BEI PRESSION DE CONTROLE = PRESSION INTERNE A		65^{+5}_{-0}°C
BURST PRESSURE OF CYLINDER BERSTDRUCK DES ZYLINDERS PRESSION D'ECLATEMENT DE LA BOUTEILLE		56MPa MIN
CAP PIERCING FORCE (ISI SPEC VIA.P.001.X) KAPPENANSTECHKRAFT FORCE DE PERCUTION		260N MAX
CAP PIERCING WORK (ISI SPEC VIA.P.001.X) ARBEIT BEIM DURCHSTECHEN DER KAPPE TRAVAIL POUR LA PERFORATION DU CAPUCHON		0.35Nm MAX
SURFACE TREATMENT OBERFLÄCHENBEHANDLUNG TRAITEMENT DE SURFACE	IN ACCORDANCE WITH DIN 50961	Fe/Zn 5Cd

PARTS LIST

CYLINDER MATERIAL	W-No.1.0338 EN 10139 DC04
UNFILLED CYLINDER	C0052030
CAP MATERIAL	W-No.1.0338 EN 10139 DC04
CAP	80117

CO2-(ISI SPEC 0192, E290)-99,95% PURITY CO2 V/V

NOTES

1. INTERNAL SURFACE SHALL BE CLEAN, DRY AND FREE OF RUST AND/OR LOOSE PARTICLES
2. STORAGE TEMPERATURE LIMITS: -30°C TO +65°C

Issue	Date	Change	Name
09	02-11-27	a	KPR
08	02-06-19	n.Drg.	KPR

THIS DRAWING REPLACES

DRWG No. 36203 ISSUE: 08

ISI Components GmbH
AN ISI GROUP COMPANY

ALL DRAWING DIMENSIONS IN mm

DRAWING STD. ISO 2768 mK

SCALE 1:1

TITLE

38 g CO2 / 52 ml THREADED NECK CYLINDER
38 g CO2 / 52 ml ZYLINDER MIT HALSGEWINDE
BOUTEILLE DE 38 g CO2 / 52 ml AVEC FILETAGE

DRWG No. 36203 ISSUE: 09

60 GRAMS CO2 / 85 ml

1/2" UNF THREADED NECK

ARTICLE No. 38200

THIS DRAWING REPLACES

*) DRWG No. 38200 ISSUE: 6
*) DRWG No. UL 38200 ISSUE: 4

MASS OF GAS GASMASSE MASSE DE REMPLISSAGE	60^{+4}_{0} g CO2
WATER CAPACITY VOLUMEN VOLUME	85ml MIN
FILLING DENSITY FÜLLDICHTE DENSITE DE REMPLISSAGE	0.75kg/l MAX
TEST PRESSURE = PRESSURE OF CONTENTS AT PRÜFDRUCK = INNENDRUCK BEI PRESSION DE CONTRÔLE = PRESSION INTERNE A	65^{+8}_{-0}°C
BURST PRESSURE OF CYLINDER BERSTDRUCK DES ZYLINDERS PRESSION D'ECLATEMENT DE LA BOUTEILLE	56MPa MIN
CAP PIERCING FORCE (iSi SPEC VIA.P.001.X) KAPPENANSTECHKRAFT FORCE DE PERCUTION	260N MAX
CAP PIERCING WORK (iSi SPEC VIA.P.001.X) ARBEIT BEIM DURCHSTECHEN DER KAPPE TRAVAIL POUR LA PERFORATION DU CAPUCHON	0.35Nm MAX
SURFACE TREATMENT OBERFLÄCHENBEHANDLUNG TRAITEMENT DE SURFACE — IN ACCORDANCE WITH DIN 50961	Fe/Zn 5Cd

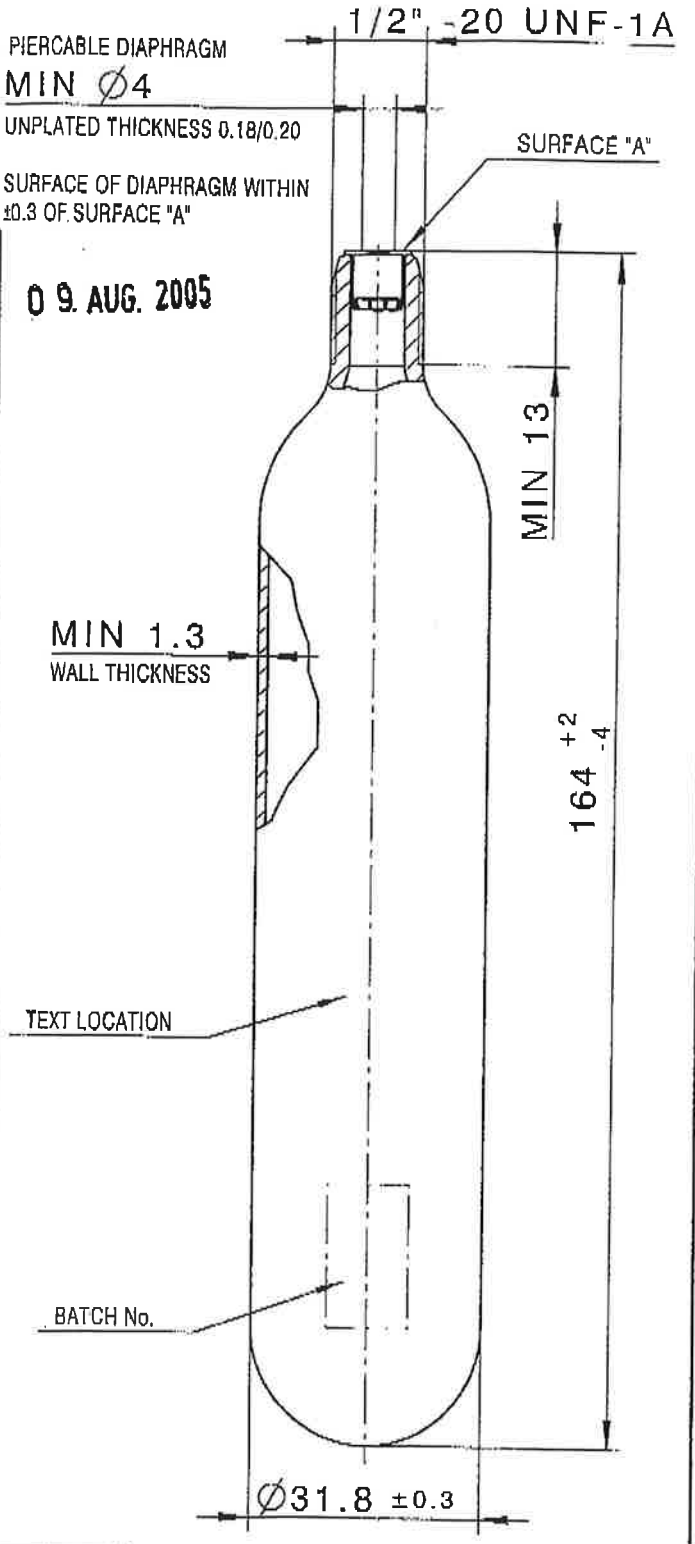
PARTS LIST

CYLINDER MATERIAL	W-No.1.0338 EN 10139 DC04
UNFILLED CYLINDER	C0085030
CAP MATERIAL	W-No.1.0338 EN 10139 DC04
CAP	80117

CO2-(ISI SPEC 0192, E290)-99,95% PURITY CO2 V/V

NOTES

1. INTERNAL SURFACE SHALL BE CLEAN, DRY AND FREE OF RUST AND/OR LOOSE PARTICLES
2. STORAGE TEMPERATURE LIMITS: -30°C TO +65°C



Issue	Date	Change	Name
07	02-06-19	n.Drg.	KRR

THIS DRAWING REPLACES

DRWG No. *) ISSUE: *)

iSi Components GmbH
AN iSi GROUP COMPANY

ALL DRAWING DIMENSIONS IN mm | SCALE 1:1

DRAWING STD. ISO 2768 mK

TITLE

60 g CO2 / 85 ml THREADED NECK CYLINDER
60 g CO2 / 85 ml ZYLINDER MIT HALSGEWINDE
BOUTEILLE DE 60 g CO2 / 85 ml AVEC FILETAGE

DRWG No. 38200 ISSUE: 07

MATERIAL SAFETY DATA SHEET Carbon Dioxide CO_2

31.07.2012

Product:	Carbon Dioxide (CO_2), Receptacles (gas cartridges) without a release device, non refillable, with a filled gas mass of not more than 25g and a maximum filling density of 0.75kg/l.
Reference:	Substance Identification (UN) No. 1013
Code:	Hazchem Code 2XE

1. IDENTIFICATION OF THE PREPARATION AND THE COMPANY

Chemical Name:	Carbon Dioxide (CO_2)
Applications:	Inflation of Life Jackets
Supplier:	iSi Components GmbH
Emergency Phone:	+ 43 1 250 99 700

2. COMPOSITION/ INFORMATION OF INGREDIENTS

Carbon Dioxide is supplied in cylinders as a liquid under its own vapour pressure which varies with temperature. It is non-toxic, non flammable and heavier than air.

3. HAZARDS IDENTIFICATION

Toxicity: occupational exposure standard. (OES) 5000 vpm. Asphyxiant vapour.
Danger to life at 10-20% v/v in air. Danger to persons lying on the floor as the vapour is heavier than air.
Liquefied gas in container under vapour pressure of about 56 bar (g).
Note: Carbon Dioxide cannot exist as a liquid at atmospheric pressure.
Large volume increase on phase change – one volume of liquid or solid will give about 500 or 900 volumes of gas, respectively, at ambient conditions.
Slightly corrosive in the presence of moisture.
Solid on skin may cause cold burns.

4. FIRST AID MEASURES

Eyes:	If substance has got into the eyes, immediately wash out with plenty of water for several minutes.
Skin:	Irrigate affected area with tepid water for five minutes. Apply a sterile dressing and treat as a thermal burn. Seek medical advice and ensure that the possibility of severe internal burns from exposure to very low temperature is clearly understood.
Inhalation:	Minimising personal risk, immediately remove victim to uncontaminated area. Ensure there is no obstruction to the airways. If breathing is weak or stopped, apply artificial respiration with simultaneous administration of oxygen, preferably using oxygen resuscitator. Summon ambulance. Keep warm and rested.
Ingestion:	No statement

5. FIRE FIGHTING MEASURES

In general, vacate area, call emergency services. If unable to extinguish fire keep containers cool with water hosed from a safe distance. Inform the emergency services of the nature of the product and the possibility of rupture (the cylinder is fitted with a burst cap which will rupture and allow contents to completely discharge if heat causes the carbon dioxide pressure to exceed the maximum permissible service level). Severe danger of rocketing containers.

6. ACCIDENTAL RELEASE MEASURES

If container in enclosed area, evacuate the area. Arrange for area to be ventilated and check atmosphere before re-entry. Move container to safe area.

7. HANDLING AND STORAGE

Usage Precautions: Never lift a container by the cap. Use a trolley or other suitable device or technique for transporting heavy containers, even for a short distance.
Never use direct flame or electrical heating devices to raise the pressure of a container. Containers should not be subjected to temperatures above 50°C.
Never attempt to refill an empty container.
Never attempt to transfer gases from one container to another.
Do not use containers as rollers or supports, or for any other purpose than to contain the gas as supplied.
Do not subject containers to abnormal mechanical shocks which may cause damage to their integrity.

Storage Precautions: Containers should be stored in a well ventilated area.
Store containers in a location free from fire risk and away from sources of heat and ignition. Designation as a "No smoking area" is recommended.
The storage area should be kept clear and access should be restricted to authorised persons only. The area should be clearly marked as a store.
Containers in storage should be properly secured to prevent toppling or rolling.
Protect containers stored in the open against rusting and extremes of weather. Containers should not be stored in conditions likely to encourage corrosion.
Store full and empty containers separately and arrange full containers so that the oldest stock is used first.
Gas containers should be segregated in the storage area according to the various categories. Containers held in storage should be periodically checked for general condition and leakage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Protective Equipment: Ascertain that an adequate supply of water is available for first aid or fire fighting.

Protective Gloves: Recommended.
Eye Protection: Wear suitable eye protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquefied pressure gas, colourless, odourless, non-flammable
Molecular weight:	44.01
Vapour pressure (15°C)	50.85 bar
Density of gas (15°C, 1 bar):	1.8474 g/l
Specific gravity, gas (air = 1):	1.528
Critical temperature:	31.1°C
Critical pressure:	73.825 bar
Triple point (5.185 bar):	-56.6°C
Solubility of gas in water (15°, 1 bar):	1.9786 g/l

Note: All pressures are absolute.

10. STABILITY AND REACTIVITY

Stability: No statement

11. TOXICOLOGICAL INFORMATION

Carbon dioxide (which is normally present in atmospheric air at the level of approximately 350 vpm (0.035%), regulates the breathing function and an increase in concentration will cause increased breathing rate. The occupational exposure standard (OES) is 5000 vpm (0.5%), but changes in the breathing rate may not be noticed until there is a concentration of 20.000 vpm (2%) when the rate will increase to about 50% above the normal level. Prolonged exposure at this level for several hours may cause a headache and a feeling of exhaustion.
At high concentrations carbon dioxide may cause asphyxiation and can paralyse the respiratory centre. Breathing an atmosphere rich in carbon dioxide can cause immediate loss of consciousness and rapid death. Symptoms of asphyxiation may include rapid and gasping respiration, rapid fatigue, nausea, vomiting, cyanosis and may lead to loss of consciousness or death from anoxia.

12. ECOLOGICAL INFORMATION

Degradability: The chromate layer which protects the zinc-plating, contains chromium in the oxidation state of VI

13. DISPOSAL CONSIDERATIONS

Disposal Methods: Never dump at sea.
Inform waste disposal contractor of material to be disposed of zinc-plated and chrome stabilised steel.
Never dispose of a filled cylinder.

14. TRANSPORT INFORMATION

Road transport: *up to 25g and 0.75g/cm^3:*

UN no.:	UN 1013
Name:	Carbon Dioxide
Class:	2
Classification code:	2A

According to the ADR 2011, chapter 3.2, table A, column 6, special provision 584 applies (transported product is not subject to the requirements of the ADR).

Air transport: *up to 30g/30ml:*

UN no.:	UN 1013
Name:	Carbon Dioxide
Class:	2.2

According to the current IATA Dangerous Goods Regulations (Issue 52), Chapter 4.2, column F, the cylinders are dangerous goods in excepted quantities. The code for excepted quantities is "E".

Sea transport: *up to 50ml:*

UN no.:	UN 2037
Name:	RECEPTACLES; SMALL; WITH GAS (GAS CARTRIDGES) without a release device, non refillable.
Class:	2

According to the current IMDG-code 2011, chapter 3.2, column 6, special provision 191 applies (transported product is not subject to the requirements of the IMDG).

15. REGULATORY INFORMATION

Regulatory References: Gas cylinder designs are available which correspond to the requirements of EN3, Portable Fire Extinguishers, and DIN EN ISO 12402-7, Personal Flotation Devices – Part 7: Materials and components – safety requirements and test methods, and also with the requirements for inflation medium containers of UL1191, Components for Personal Flotation Devices, 4th edition.

16. OTHER INFORMATION

No statement