

E7512-OXXX

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	: E7512-OXXX
Synonyms	: carbon dioxide; carbon dioxide cartridge; carbon dioxide gas for inflating T-DUX and RDSS; carbon dioxide, gas cartridge, <=50ml; CO2-cartridge; compressed carbon dioxide gas for inflating RAYCHEM T-DUX and RDSS products; compressed gas used for inflation of RAYCHEM T-DUX products; RAY/4049E; RAYCHEM RDSS products compressed gas used for inflation; RAYCHEM t-dux products compressed gas used for inflation
Registration number REACH	: Exempted from registration under REACH in Annex IV (Regulation (EC) No 1907/2006)
Product type REACH	: Substance/mono-constituent
CAS number	: 124-38-9
EC number	: 204-696-9
Molecular mass	: 44.01 g/mol
Formula	: CO2

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

1.2.1 Relevant identified uses

Inflation of T-DUX and RDSS products

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

CommScope Connectivity Belgium bvba
 Diestsesteenweg 692
 B-3010
 Kessel-Lo
 ☎ +32 16 35 16 85
 #ProductCompliance@commscope.com

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):

+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Press. Gas	Liquefied gas	H280: Contains gas under pressure; may explode if heated.

2.2. Label elements



Signal word Warning

H-statements

H280 Contains gas under pressure; may explode if heated.

P-statements

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards

May cause frostbites

SECTION 3: Composition/information on ingredients

3.1. Substances

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Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
carbon dioxide	124-38-9 204-696-9	C=100%	Press. Gas - Liquefied gas; H280	(1)(2)	Mono-constituent

(1) For H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Take victim to a doctor if irritation persists. In case of frostbites: Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

After eye contact:

Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

After ingestion:

Not applicable.

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

4.2.1 Acute symptoms

After inhalation:

Carbon dioxide, which is normally present in air at a concentration of approximately 300 ppm (0.03%), regulates the breathing function. An increase in the concentration will increase the breathing rate. Changes in the breathing rate may not be noticed until the concentration reaches 20,000 ppm (2%), when the rate will increase to about 50% above normal. Prolonged exposure to this level of carbon dioxide may cause dizziness, headache, disorientation and loss of coordination. At high concentrations, over 10%, carbon dioxide may cause asphyxiation and respiratory paralysis. Breathing an atmosphere rich in carbon dioxide can cause immediate loss of consciousness and 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.

After skin contact:

Frostbites.

After eye contact:

Frostbites.

After ingestion:

Not applicable.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

No hazardous combustion products known.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion.

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5.3.2 Special protective equipment for fire-fighters:

Insulating gloves. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Insulating gloves. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Tip the container on one side to stop the leakage. Carbon dioxide is heavier than air and will collect in ducts, drains and low lying areas.

6.3. Methods and material for containment and cleaning up

Not applicable.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Store in a cool area. Ventilation at floor level. Keep out of direct sunlight. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, oxidizing agents, reducing agents, (strong) bases, metal powders.

7.2.3 Suitable packaging material:

Steel.

7.2.4 Non suitable packaging material:

Aluminium.

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Carbon dioxide	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	5000 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	9000 mg/m ³

Belgium

Carbone (dioxyde de)	Time-weighted average exposure limit 8 h	5000 ppm (A)
	Time-weighted average exposure limit 8 h	9131 mg/m ³ (A)
	Short time value	30000 ppm (A)
	Short time value	54784 mg/m ³ (A)

La mention "A" signifie que l'agent libère un gaz ou une vapeur qui n'ont en eux-mêmes aucun effet physiologique mais peuvent diminuer le taux d'oxygène dans l'air. Lorsque le taux d'oxygène descend en dessous de 17-18 % (vol/vol) le manque d'oxygène provoque des suffocations qu'aucun symptôme préalable n'annonce

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Kooldioxide	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	4919 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	9000 mg/m ³

France

Carbone (dioxyde de)	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	5000 ppm
	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	9000 mg/m ³

Germany

Kohlenstoffdioxid	Time-weighted average exposure limit 8 h (TRGS 900)	5000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	9100 mg/m ³

UK

Carbon dioxide	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	5000 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	9150 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	15000 ppm
	Short time value (Workplace exposure limit (EH40/2005))	27400 mg/m ³

USA (TLV-ACGIH)

Carbon dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	5000 ppm
	Short time value (TLV - Adopted Value)	30000 ppm

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

Product name	Test	Number
Carbon Dioxide	NIOSH	6603
Carbon Dioxide	OSHA	ID 172

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

If applicable and available it will be listed below.

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the oxygen concentration in the air. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Do not eat, drink or smoke during work.

a) Respiratory protection:

Insufficient ventilation: wear respiratory protection.

b) Hand protection:

Gloves.

c) Eye protection:

Safety glasses.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Gas
Odour	Odourless
Odour threshold	Not applicable
Colour	Colourless

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Particle size	Not applicable (gas)
Explosion limits	Not applicable
Flammability	Non combustible
Log Kow	0.83
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	No data available
Relative vapour density	1.5
Vapour pressure	57000 hPa ; 20 °C
Solubility	water ; 0.15 g/100 ml ethanol ; soluble ether ; soluble acetone ; soluble methanol ; soluble toluene ; soluble heptane ; soluble methyl acetate ; soluble
Relative density	Not applicable (gas)
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Critical temperature	31 °C
Critical pressure	73.8 bar 73815 hPa
Absolute density	Not applicable (gas)
Sublimation temperature	-78.5 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Substance has acid reaction.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May react violently with various metal oxides or reducing metals (e.g. aluminium, magnesium, titanium, zirconium). Mixtures with alkali metals are shock sensitive. May cause violent polymerisation of acrylaldehyde or ethyleneimine.

10.4. Conditions to avoid

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents, reducing agents, (strong) bases, metal powders.

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

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No (test) data available

Conclusion

Not classified for acute toxicity

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Corrosion/irritation

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No (test) data available

Conclusion

Not classified as irritating to the respiratory system

Not classified as irritating to the skin

Not classified as irritating to the eyes

Respiratory or skin sensitisation

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No (test) data available

Conclusion

Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

Specific target organ toxicity

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No (test) data available

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

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No (test) data available

Mutagenicity (in vivo)

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No (test) data available

Carcinogenicity

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No (test) data available

Reproductive toxicity

E7512-0XXX

No (test) data available

Conclusion CMR

Not classified for reprotoxic or developmental toxicity

Not classified for mutagenic or genotoxic toxicity

Not classified for carcinogenicity

Toxicity other effects

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No (test) data available

Chronic effects from short and long-term exposure

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Long-term exposure to levels between 0.5% and 2% of carbon dioxide can affect the body acid-base balance, causing acidosis and can affect calcium metabolism.

SECTION 12: Ecological information

12.1. Toxicity

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	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		35 mg/l	96 h	Salmo gairdneri			Literature study; Lethal

Conclusion

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Harmful to fishes

pH shift

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

Biodegradability: not applicable

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
		0.83		

Conclusion

Low potential for bioaccumulation (Log Kow < 4)

12.4. Mobility in soil

No (test) data on mobility of the substance available

12.5. Results of PBT and vPvB assessment

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

12.6. Other adverse effects

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Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Included in the list of substances which may contribute to the greenhouse effect (IPCC)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

16 05 05 (gases in pressure containers and discarded chemicals: gases in pressure containers other than those mentioned in 16 05 04). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Refer to manufacturer/supplier for information on recovery/ recycling. Remove waste in accordance with local and/or national regulations. Do not discharge into the sewer.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 04 (metallic packaging).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

Transport	Not subject
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14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

Special provisions	
Limited quantities	

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Specific mention	Receptacles with a capacity not exceeding 50 ml containing only non-toxic constituents are not subject to the provisions of ADR: Special provision 191
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Rail (RID)

14.1. UN number

Transport	Not subject
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14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

Special provisions	
Limited quantities	
Specific mention	Receptacles with a capacity not exceeding 50 ml containing only non-toxic constituents are not subject to the provisions of RID: Special provision 191

Inland waterways (ADN)

14.1. UN number

Transport	Not subject
-----------	-------------

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

Special provisions	
Limited quantities	
Specific mention	Receptacles with a capacity not exceeding 50 ml containing only non-toxic constituents are not subject to the provisions of ADN: Special provision 191

Sea (IMDG/IMSBC)

14.1. UN number

Transport	Not subject
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14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	
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14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	
Specific mention	Receptacles with a capacity not exceeding 50 ml containing only non-toxic constituents are not subject to the provisions of IMDG: Special provision 191

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	
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Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Not subject
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14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	
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14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

Special provisions	
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	
Specific mention	Receptacles with a capacity not exceeding 50 ml containing only non-toxic constituents are not subject to the provisions of IATA: Special provision A98

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
	Not applicable (inorganic)

Plant protection products

Included in implementing Regulation (EU) No 540/2011, annex part A

National legislation Belgium

No data available

National legislation The Netherlands

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	9
	B (3)

National legislation France

No data available

National legislation Germany

WGK	nwg; Classification non-water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 1)
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National legislation United Kingdom

No data available

Other relevant data

No data available

15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:

H280 Contains gas under pressure; may explode if heated.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from

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time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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