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

1.1. Product identifier

CO2 Cartridge

Art.-No.

S024110, 506 0351, 506 0352, 506 0375, 506 0376, 506 0454, 506 0455, 506 0605, 506 4357, 506 4371, 506 4601, 506 9637, 510 3257, 596 0413, 596 0420, 596 0421, 596 4426, 596 4430

CAS No:	124-38-9
EC No:	204-696-9

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

Use of the substance/mixture

Tire repair material

1.3. Details of the supplier of the safety data sheet

Company name:	REMA TIP TOP AG
Street:	Gruber Strasse 65
Place:	D-85586 Poing
Telephone:	+49 (0) 8121 / 707 - 100
Responsible Department:	Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
Public Poisons Information Line: +353 (0) 1 809 2166 (8am-10pm 7 days a week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Press. Gas (Comp.); H280

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:

Hazard statements

H280 Contains gas under pressure; may explode if heated.

Precautionary statements

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

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.
This substance does not have endocrine disrupting properties with respect to non-target organisms.
Extremely cold liquid and gas under pressure. Causes severe frostbite.

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: CO_2

Molecular weight: 44 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
124-38-9	Carbon dioxide			100 %
	204-696-9			
	Press. Gas (Comp.); H280			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
Take away from danger area and lay down affected person.

After inhalation

Remove the casualty into fresh air and keep him immobile.
Consult a physician.
If patient is not breathing, apply artificial respiration.

After contact with skin

In case of frostbite rinse with plenty of water. Don't remove clothing.
In case of frostbite due to intensive contact, consult a doctor.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Seek medical treatment by eye specialist.

After ingestion

Ingestion is not considered a potential route of exposure.

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

Higher concentrations may cause asphyxia due to reduced oxygen levels.
Rapid evaporation of the liquid may cause frostbite.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product does not burn, fire-extinguishing activities according to surrounding.
Foam, carbon dioxide (CO_2), dry chemical, water-spray.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Heating will cause pressure rise with risk of bursting.

5.3. Advice for firefighters

Use breathing apparatus with independent air supply.
Protective suit.

Additional information

Cool containers at risk with water spray jet.
Vapours are heavier than air and spread along ground.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Ensure adequate ventilation.

For non-emergency personnel

Avoid contact with skin, eyes and clothing.

For emergency responders

Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For containment

No special measures required.

For cleaning up

Ventilate the room well.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Informations for disposal look up chapter 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with the skin and the eyes.
Use only in thoroughly ventilated areas.

Advice on protection against fire and explosion

No special protective measures against fire required.

Advice on general occupational hygiene

Avoid contact with eyes and skin.
Wash hands before breaks and immediately after handling the product.
When using do not eat, drink or smoke.
Do not breath vapours or spray mist.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
Use only in well-ventilated areas.

Hints on joint storage

No materials to be especially mentioned.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Tire repair material

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
124-38-9	Carbon dioxide	5000	9000		TWA (8 h)	
		15000	27000		STEL (15 min)	

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety goggles with side protection (EN 166).

Hand protection

Not required under normal use.

Skin protection

Not required under normal use.

Respiratory protection

No personal respiratory protective equipment required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Gaseous
Colour:	Colourless
Odour:	Odourless

Changes in the physical state

Melting point/freezing point:	- 56,6 °C
Boiling point or initial boiling point and boiling range:	- 78,5 °C
Sublimation point:	n.a.
Softening point:	n.a.
Flash point:	n.a.

Flammability

Solid/liquid:	Not combustible.

Explosive properties

The product is not explosive.

Lower explosion limits:	n.a.
Upper explosion limits:	n.a.
Auto-ignition temperature:	n.a.

Self-ignition temperature

Solid:	n.a.
Gas:	The product is not self-igniting.
Decomposition temperature:	n. d.
pH-Value:	n.a.
Viscosity / dynamic:	n.a.
Viscosity / kinematic:	n.a.
Flow time:	n.a.

Water solubility: (at 20 °C)	2 g/L

Solubility in other solvents

n. d.

Partition coefficient n-octanol/water:	n. d.
Vapour pressure: (at 20 °C)	57300 hPa
Density (at 20 °C):	0,75 g/cm³
Bulk density:	n.a.
Relative vapour density:	1,52

9.2. Other information

Information with regard to physical hazard classes

Sustained combustibility:	No sustained combustibility

Oxidizing properties

Non oxidizing.

Other safety characteristics

Solvent separation test:	0 %
Solvent content:	0 %
Evaporation rate:	n. d.

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Heating will cause pressure rise with risk of bursting.
Vapours are heavier than air and spread along ground.

10.5. Incompatible materials

No materials to be especially mentioned.

10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

Contact with eyes may cause irritation.
Higher concentrations may cause asphyxia due to reduced oxygen levels.
Rapid evaporation of the liquid may cause frostbite.

SECTION 12: Ecological information

12.1. Toxicity

Ecological dates are not available.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No data available

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Can be incinerated, when in compliance with local regulations.
Where possible recycling is preferred to disposal.

List of Wastes Code - residues/unused products

160505 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers other than those mentioned in 16 05 04

Contaminated packaging

Dispose of contents/container to approved disposal company or local collection.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2037
14.2. UN proper shipping name:	Receptacles, small, containing gas (gas cartridges)
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2

Classification code:	5A
Limited quantity:	1 L / 30 kg
Excepted quantity:	E0
Transport category:	3
Tunnel restriction code:	E

Other applicable information (land transport)

Special provision 191: Product is not subject to ADR/RID.

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2037
14.2. UN proper shipping name:	Receptacles, small, containing gas (gas cartridges)
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2

Classification code:	5A
Limited quantity:	1 L / 30 kg
Excepted quantity:	E0

Other applicable information (inland waterways transport)

Special provision 191: Product is not subject to ADN.

Marine transport (IMDG)

14.1. UN number or ID number:	UN 2037
14.2. UN proper shipping name:	Receptacles, small, containing gas (gas cartridges)
14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
Hazard label:	2.2

Marine pollutant:	No
Limited quantity:	1 L / 30 kg
Excepted quantity:	E0
EmS:	F-D, S-U

Other applicable information (marine transport)

Special provision 191: Product is not subject to IMDG Code.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 2037
14.2. UN proper shipping name:	Receptacles, small, containing gas (gas cartridges)
14.3. Transport hazard class(es):	2.2

14.4. Packing group: -

Hazard label: 2.2

Limited quantity Passenger:	1 kg
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	1 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	15 kg

Other applicable information (air transport)

Special provision A98: Product is not subject to IATA-DGR.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

14.7. Maritime transport in bulk according to IMO instruments

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

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

EU regulatory information

Directive 2004/42/EC on VOC in paints and varnishes:	100 %
Information according to Directive 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	- - non-hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1.

Changes in chapter:

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
MARPOL = International Convention for the Prevention of Pollution from Ships
IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals
REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
CAS = Chemical Abstract Service
EN = European norm
ISO = International Organization for Standardization
DIN = Deutsche Industrie Norm
PBT = Persistent Bioaccumulative and Toxic
vPvB = Very Persistent and very Bio-accumulative

LD = Lethal dose
LC = Lethal concentration
EC = Effect concentration
IC = Median immobilisation concentration or median inhibitory concentration

Relevant H and EUH statements (number and full text)

H280 Contains gas under pressure; may explode if heated.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.
The information describes exclusively the safety requirements for the product (s) and is based on the present level of our knowledge.
The delivery specifications are contained in the corresponding product sheet.
This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.
"(n.a. = not applicable; n.d. = not determined)"