

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

1.1. Product identifier

Product form	: Substance
Trade name	: Carbon Dioxide Gas Compressed Cartridge
EC-No.	: 204-696-9
CAS-No.	: 124-38-9
Product code	: 0207, 20208, 20216, 20240, 20277, 20279, 20287, 20382, G20309, G20310, G20311, G20312, G20313, G20314, G20315, G20316, G20317, G20327, G20328, G20331, G20440, G20441, G20446, G20447, G20461, G2131, G2132, G2133, G2134, G2149, G2150, G2153, G2156, G2158, G2159, G2166, G2170, G2173, G2176, G2178, G2179, G2373, G2429, G2507, G2508, G2537, G2541, G2543, G2581, G2582, G2618, G2620, G2628, G2631, G2642, G2644, G2673, G3160, G3516, G3517, G3518, G50094, G5040, G7500, G7510, G7520, G2062-FG, GMMQCC, GMMQCCCAN, GMMQCCINT, GRM01280, GRM01284, GRM01350, GRM01370, 5008610, 10031208, 20495-95, 10091900
Other means of identification	: Carbon dioxide generated from propane, butane or a mixture of both by combustion
REACH authorisation exemptions	: Exempted from REACH registration

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

1.2.1. Relevant identified uses

Main use category	: Consumer uses: Private households (= general public = consumers), Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Use of the substance/mixture	: Product Component

1.2.2. Uses advised against

Restrictions on use	: No additional information available, Contact manufacturer
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1.3. Details of the supplier of the safety data sheet

Supplier

ITW Global Tire Repair Europe GmbH
Carl-Benz Str. 10, 88696 Owingen, Germany
Tel 0049 7551-9200-100
Email: Comments@itwgtr.com

1.4. Emergency telephone number

Emergency number	: Chemtel: +1(813)248-0585 (International); England, Medical Toxicology Information Services: +442071880100; Wales & Ireland, National Poisons Information Service: 0844 892 0111; Scotland, National Poisons Information Centre: 0870 600 6266
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Gases under pressure : Liquefied gas H280
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Contains gas under pressure; may explode if heated.

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according to Regulation (EU) 2020/878

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS04

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H280 - Contains gas under pressure; may explode if heated.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

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

2.3. Other hazards

The product does not meet the PBT and vPvB classification criteria

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Conc.	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Carbon dioxide	CAS-No.: 124-38-9 EC-No.: 204-696-9	100	Press. Gas (Liq.), H280

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

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Call a poison center or a doctor if you feel unwell. Never give anything by mouth to an unconscious person.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact

: On frostbite: rinse with plenty of water, do NOT remove clothes. In case of contact with the skin : Call a physician immediately.

First-aid measures after eye contact

: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of contact with the eyes : Call a physician immediately.

First-aid measures after ingestion

: Ingestion is not considered a potential route of exposure. Get medical advice/attention if you feel unwell.

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

Symptoms/effects after inhalation

: May cause shortness of breath, tightness of the chest, a sore throat and cough. Dizziness. Loss of consciousness. Cyanosis (blue coloured blood).

Symptoms/effects after skin contact

: Contact with the liquefied gas causes frostbite.

Symptoms/effects after eye contact

: Contact with the liquid may cause frostbite and serious damage to eyes.

Symptoms/effects after ingestion

: Not expected to present a significant hazard under anticipated conditions of normal use.

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according to Regulation (EU) 2020/878

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

Artificial respiration and/or oxygen if necessary.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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| Suitable extinguishing media | : Use extinguishing agent suitable for surrounding fire. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

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| Fire hazard | : Contains gas under pressure; may explode if heated. In case of fire and/or explosion do not breathe fumes. |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. Carbon monoxide. |

5.3. Advice for firefighters

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| Firefighting instructions | : Evacuate the danger area. Move containers from fire area if it can be done without personal risk. Exercise caution when fighting any chemical fire. Fight fire with normal precautions from a reasonable distance. Use water spray or fog for cooling exposed containers. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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| General measures | : Avoid contact with skin and eyes. |
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6.1.1. For non-emergency personnel

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| Protective equipment | : Wear recommended personal protective equipment. |
| Emergency procedures | : Evacuate unnecessary personnel. Ventilate spillage area. Do not breathe gas. Avoid contact with skin and eyes. Keep away from heat. No action shall be taken without appropriate training or involving any personal risk. |

6.1.2. For emergency responders

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|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
| Emergency procedures | : Evacuate unnecessary personnel. Ventilate area. Do not breathe gas. |

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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| For containment | : Stop leak without risks if possible. |
| Methods for cleaning up | : Leave the product to evaporate. |
| Other information | : Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques. |

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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| Additional hazards when processed | : Pressurised container: May burst if heated. Following use, do not pierce or burn the packaging, even if it is empty. |
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Precautions for safe handling	: Obtain special instructions before use. Handle carefully. Ensure good ventilation of the work station. Avoid breathing gas. Wear personal protective equipment. Avoid contact with skin and eyes.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep cool. Keep away from food, drink and animal feedingstuffs. Store in accordance with local, regional, national or international regulation.
Incompatible materials	: Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Heat sources. Open flame. Sources of ignition.
Storage area	: Store away from heat. Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Carbon dioxide (124-38-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Carbon dioxide
IOEL TWA [ppm]	5000 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Ireland - Occupational Exposure Limits	
Local name	Carbon dioxide
OEL TWA [1]	9000 mg/m ³
OEL TWA [2]	5000 ppm
Regulatory reference	Chemical Agents Code of Practice 2020

8.1.2. Recommended monitoring procedures

Monitoring methods	
Monitoring methods	Refer to all applicable national, international and local regulations or provisions. Workplace atmospheres. Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy. Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation. Handle in accordance with good industrial hygiene and safety procedures. Avoid all unnecessary exposure.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. ISO 16321-1

8.2.2.2. Skin protection

Skin and body protection:

No special requirements

Hand protection:

Chemical resistant gloves (according to European standard ISO 374-1 or equivalent). Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment. Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: Colourless.
Appearance	: Liquefied compressed gas.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: -56.6 °C
Freezing point	: Not applicable
Boiling point	: -78 °C (101.3 kPa)
Flammability	: Not flammable
Explosive limits	: Not applicable
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not applicable
Viscosity, kinematic	: Not applicable
Solubility	: Soluble. Water: 2000 g/l (20 °C)
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 5730 kPa (20 °C)
Vapour pressure at 50°C	: Not available
Density	: 0.00197 g/cm³ (101.3 kPa)

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Relative density	: Not applicable
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Pressurised container: May burst if heated.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Protect from sunlight. Overheating. High temperature. Heat.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

Carbon dioxide (124-38-9)	
Viscosity, kinematic	Not applicable

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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

12.2. Persistence and degradability

Carbon dioxide (124-38-9)

Persistence and degradability

Biodegradability in water: no data available.

12.3. Bioaccumulative potential

Carbon dioxide (124-38-9)

Bioaccumulative potential

No bioaccumulation potential.

12.4. Mobility in soil

Carbon dioxide (124-38-9)

Ecology - soil

No additional information available.

12.5. Results of PBT and vPvB assessment

Carbon dioxide (124-38-9)

The product does not meet the PBT and vPvB classification criteria

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects

Other adverse effects

: No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions. Disposal must be carried out using appropriate EWC code. Do not pierce or burn, even after use.

Product/Packaging disposal recommendations

: Dispose in a safe manner in accordance with local/national regulations.

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Ecology - waste materials

: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1013	UN 1013	UN 1013	UN 1013	UN 1013
14.2. UN proper shipping name				
CARBON DIOXIDE	CARBON DIOXIDE	Carbon dioxide	CARBON DIOXIDE	CARBON DIOXIDE
Transport document description				
UN 1013 CARBON DIOXIDE, 2.2, (C/E)	UN 1013 CARBON DIOXIDE, 2.2	UN 1013 Carbon dioxide, 2.2	UN 1013 CARBON DIOXIDE, 2.2	UN 1013 CARBON DIOXIDE, 2.2
14.3. Transport hazard class(es)				
2.2	2.2	2.2	2.2	2.2
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

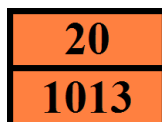
14.6. Special precautions for user

Special transport precautions

: Keep away from heat

Overland transport

Classification code (ADR) : 2A
Special provisions (ADR) : 378, 584, 653, 660, 662
Limited quantities (ADR) : 120ml
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P200
Mixed packing provisions (ADR) : MP9
Portable tank and bulk container instructions (ADR) : (M)
Tank code (ADR) : PxBN(M)
Tank special provisions (ADR) : TA4, TT9
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36
Hazard identification number (Kemler No.) : 20
Orange plates :



Tunnel restriction code (ADR)

: C/E

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Transport by sea

Special provisions (IMDG)	: 378
Limited quantities (IMDG)	: 120 ml
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P200
EmS-No. (Fire)	: F-C
EmS-No. (Spillage)	: S-V
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Liquefied, non-flammable gas.Heavier than air (1.5). Cannot remain in the liquid state above 31°C.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 200
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 200
CAO max net quantity (IATA)	: 150kg
Special provisions (IATA)	: A202
ERG code (IATA)	: 2L

Inland waterway transport

Classification code (ADN)	: 2A
Special provisions (ADN)	: 378, 584, 653, 662
Limited quantities (ADN)	: 120 ml
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: 2A
Special provisions (RID)	: 378, 584, 653, 660, 662
Limited quantities (RID)	: 120ml
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P200
Mixed packing provisions (RID)	: MP9
Portable tank and bulk container instructions (RID)	: (M)
Tank codes for RID tanks (RID)	: PxBN(M)
Special provisions for RID tanks (RID)	: TA4, TT9, TM6
Transport category (RID)	: 3
Special provisions for carriage - Loading, unloading and handling (RID)	: CW9, CW10, CW36
Colis express (express parcels) (RID)	: CE3
Hazard identification number (RID)	: 20

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

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REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

1.1. Product identifier. 2.3. Other hazards. 8.2.2. Personal protection equipment. 11.2. Information on other hazards. 12.6. Endocrine disrupting properties.

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration

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Abbreviations and acronyms:	
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Data sources : ECHA (European Chemicals Agency). REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Supplier's safety documents.

Training advice : Training staff on good practice.

Full text of H- and EUH-statements:	
H280	Contains gas under pressure; may explode if heated.
Press. Gas (Liq.)	Gases under pressure : Liquefied gas

Safety Data Sheet (SDS), EU_grey

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.