GC 21

Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011) Date of issue: 21/09/2016

Version: 23.1

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

1.1. Product identifier

Product form Name Product code Mixture GC 21 BU Direct Fastening

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

Use of the substance/mixture

Propellant for direct fastening tools Gas can for use exclusively with the Hilti GX 120 tool

1.3. Details of the supplier of the safety data sheet

Supplier Hilti (South Africa) (Pty) Ltd. 2 Tugela Lane, Waterfall Logistics Precinct 1685 Midrand - South Africa T +2711 237300 - F +2711 2373111 Customercare.za@hilti.com Department issuing data specification sheet Hilti Entwicklungsgesellschaft mbH Hiltistrasse 6 86916 Kaufering - Deutschland T +49 8191 906310 - F +49 8191 90176310 df-hse@hilti.com

1.4. Emergency telephone number

Emergency number

Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +2711 237300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS (Rev. 4, 2011) Aerosol 1 H222;H229

Full text of hazard classes and H-statements : see section 16

2.2. Label elements

| Labelling according to the United Nations GHS | δ (Rev. 4, 2011) |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard pictograms (GHS-UN) | GHS02 |
| Signal word (GHS-UN) | Danger |
| Hazard statements (GHS-UN) | H222 - Extremely flammable aerosol H229 - Pressurised container: May burst if heated |
| Precautionary statements (GHS-UN) | P102 - Keep out of reach of children P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P211 - Do not spray on an open flame or other ignition source P251 - Do not pierce or burn, even after use P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C, 122 °F |

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2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product identifier | % | Classification according to the United Nations GHS |
|-----------|--------------------|----------|-----------------------------------------------------------------------------------------|
| Isobutane | (CAS No) 75-28-5 | 70 - <80 | Flam. Gas 1, H220 Compressed gas, H280 |
| propene | (CAS No) 115-07-1 | 10 - <20 | Pyr. Gas Not classified Flam. Gas 1, H220 Compressed gas, H280 |
| Propane | (CAS No) 74-98-6 | 5 - 10 | Flam. Gas 1, H220 Compressed gas, H280 Acute Tox. Not classified (Inhalation:gas) |
| Butane | (CAS No) 106-97-8 | 2.5 - 5 | Flam. Gas 1, H220 Compressed gas, H280 Acute Tox. Not classified (Inhalation:gas) |

Full text of H-phrases: see section 16

SECTION 4: First aid measures

| 4.1. Description of first aid measures | 5 |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general | Remove/Take off immediately all contaminated clothing. |
| First-aid measures after inhalation | Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. |
| First-aid measures after eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. |
| First-aid measures after ingestion | Get immediate medical advice/attention. |
| | |

| 4.2. | Most im | portant | symptoms | and | effects, | both | acute | and | delay | /ed |
|------|---------|---------|----------|-----|----------|------|-------|-----|-------|-----|
| | | | | | | | | | | |

Symptoms/injuries after inhalation

Shortness of breath.

burns and injuries.

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

No additional information available

| SECTION 5: Firefighting measured | res |
|------------------------------------------|---------------------------------------------------------------------------------------------|
| 5.1. Extinguishing media | |
| Suitable extinguishing media | Water spray. Carbon dioxide. Dry powder. Foam. Sand. |
| Unsuitable extinguishing media | Do not use a heavy water stream. |
| 5.2. Special hazards arising from the su | ubstance or mixture |
| Fire hazard | Extremely flammable aerosol. |
| Explosion hazard | Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of |

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| 5.3. Advice for firefighters | |
|--------------------------------|-----------------------------------------------------------------------------------------------|
| Precautionary measures fire | Fight fire remotely due to the risk of explosion. |
| Firefighting instructions | DO NOT fight fire when fire reaches explosives. Evacuate area. |
| Protection during firefighting | Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 6: Accidental release measures

| 6.1. Personal precautions, protective | e equipment and emergency procedures |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------|
| General measures | Evacuate area. No flames, no sparks. Eliminate all sources of ignition. |
| 6.1.1.For non-emergency personnel Emergency procedures | Ventilate spillage area. Avoid breathing vapours. Evacuate unnecessary personnel. |
| 6.1.2.For emergency responders | |
| Protective equipment | Do not attempt to take action without suitable protective equipment. Breathing apparatus. |
| | |
| Emergency procedures | Ventilate area. |
| | |

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning upMethods for cleaning upDo not flush with water.

| SECTION 7: Handling and storage | ge |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1. Precautions for safe handling | |
| Additional hazards when processed | Hazardous waste due to potential risk of explosion. Pressurized container: Do not pierce or burn, even after use. |
| Precautions for safe handling | Do not eat, drink or smoke when using this product. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| Hygiene measures | Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |
| 7.2. Conditions for safe storage, includ | ing any incompatibilities |
| Technical measures | Proper grounding procedures to avoid static electricity should be followed. |
| Storage conditions | Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place. |
| Incompatible materials | Heat sources. Direct sunlight. |
| Storage temperature | 5 - 25 °C |
| Heat and ignition sources | Keep away from heat and direct sunlight. |
| Prohibitions on mixed storage | Do not store with DX powder cartridges. |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls

Ensure good ventilation of the work station.

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8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection

In case of repeated or prolonged contact wear

| Туре | Material | Permeation | Thickness (mm) | Penetratio n | Standard |
|-------------------|-------------------------|----------------------------------------------------|----------------|-----------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,4 | | EN 374 |
| Eye protection | | Chemical goggles or safety glasses. EN 166. EN 170 | | | |
| Туре | Use | Characteristics | Standard |] | |

| Use | Characteristics | Standard |
|---------|-----------------|----------------|
| Droplet | clear | EN 166, EN 170 |

Skin and body protection

Safety glasses

When using setting tools, sufficient ear protection must be worn



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Physical state | Gas |
|--------------------------------------------|------------------------------------------------------------------------------------|
| Appearance | Aerosol. |
| Colour | Colourless. |
| Odour | characteristic. |
| Odour threshold | No data available |
| рН | No data available |
| Relative evaporation rate (butylacetate=1) | No data available |
| Melting point | No data available |
| Freezing point | No data available |
| Boiling point | No data available |
| Flash point | No data available |
| Auto-ignition temperature | No data available |
| Decomposition temperature | No data available |
| Flammability (solid, gas) | No data available |
| Vapour pressure | 3000 hPa |
| Relative vapour density at 20 °C | No data available |
| Relative density | No data available |
| Density | 0.56 g/cm ³ (DIN 51757) |
| Solubility | insoluble in water. |
| Log Pow | No data available |
| Viscosity, kinematic | No data available |
| Viscosity, dynamic | No data available |
| Explosive properties | Product is not explosive. In use, may form flammable/explosive vapour-air mixture. |
| Oxidising properties | No data available |
| Explosive limits | No data available |

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9.2. Other information

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

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Sparks. Open flame. Direct sunlight. Overheating.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| Acute toxicity (oral) | Not classified |
|----------------------------------------------------|-------------------------------------------------|
| Skin corrosion/irritation | Not classified |
| Serious eye damage/irritation | Not classified |
| Respiratory or skin sensitisation | Not classified |
| Germ cell mutagenicity | Not classified |
| Carcinogenicity | Not classified |
| Reproductive toxicity | Not classified |
| Specific target organ toxicity (single exposure) | Not classified |
| Specific target organ toxicity (repeated exposure) | Not classified |
| Aspiration hazard | Not classified |
| GC 21 | |
| Vaporizer | Container fitted with a sealed spray attachment |

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

| SECTION 13: Disposal considerations | | | | |
|-------------------------------------|---------------------------------------------------------------------------------------------|--|--|--|
| 13.1. Waste treatment methods | | | | |
| Regional legislation (waste) | Disposal must be done according to official regulations. | | | |
| Waste treatment methods | Dispose of contents/container in accordance with licensed collector's sorting instructions. | | | |
| Waste disposal recommendations | Container under pressure. Do not drill or burn even after use. | | | |
| Additional information | Flammable vapours may accumulate in the container. | | | |

SECTION 14: Transport information

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

| ADR | IMDG | ΙΑΤΑ | RID |
|---------------------------------------|----------------------------------------------------------------|---------------------------------------|---------------------------------------|
| 14.1. UN number | | | |
| 1950 | 1950 | 1950 | 1950 |
| 14.2. UN proper shipping na | me | | |
| AEROSOLS | AEROSOLS | Aerosols, flammable | AEROSOLS |
| Transport document descrip | tion | | |
| UN 1950 AEROSOLS, 2.1, (D) | UN 1950 AEROSOLS, 2.1 | | |
| 14.3. Transport hazard class | (es) | | |
| 2.1 | 2.1 | 2.1 | 2.1 |
| | 2 | | |
| 14.4. Packing group | | | |
| 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 |
| | No supplementary | information available | · |

14.6. Special precautions for user

- Overland transport

Classification code (ADR)5FSpecial provisions (ADR)190, 327, 344, 625

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| Limited quantities (ADR) | 11 |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packing instructions (ADR) | P207, LP02 |
| Mixed packing provisions (ADR) | MP9 |
| Tunnel restriction code (ADR) | D |
| - Transport by sea | |
| Special provisions (IMDG) | 63, 190, 277, 327, 344, 959 |
| Limited quantities (IMDG) | SP277 |
| Packing instructions (IMDG) | P207, LP02 |
| EmS-No. (Fire) | F-D |
| EmS-No. (Spillage) | S-U |
| Stowage category (IMDG) | None |
| Stowage and segregation (IMDG) | Protected from sources of heat For AEROSOLS with a maximum capacity of 1 litre: Category A. Segregation as for class 9 but 'Separated from' class 1 except division 1.4. For AEROSOLS with a capacity above 1 litre: Category B. Segregation as for the appropriate sub-division of class 2. For WASTE AEROSOLS: Category C. Clear of living quarters. Segregation as for the appropriate sub-division of class 2. |
| MFAG-No | 126 |
| - Air transport | |
| PCA packing instructions (IATA) | 203 |
| PCA max net quantity (IATA) | 75kg |
| Special provisions (IATA) | A145, A167 |
| - Rail transport | |
| Special provisions (RID) | 190, 327, 344, 625 |
| Limited quantities (RID) | 1L |
| Packing instructions (RID) | P207, LP02 |
| Carriage prohibited (RID) | No |
| , , | |

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

SECTION 15: Regulatory information

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

No additional information available

SECTION 16: Other information

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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