

DX-Cartridge UN0323

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 01/28/2016

Revision date: 01/22/2016

Supersedes: 05/18/2015

Version: 2.1

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

1.1. Product identifier

| | |
|--------------|---------------------|
| Product form | Article |
| Name | DX-Cartridge UN0323 |
| Product code | BU Direct Fastening |

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Hilti (Canada) Corp.
2360 Meadowpine Boulevard
L5N 6S2 Mississauga, Ontario - Canada
T +1905 8139200
1-800-363-4458 toll free - F +1 905 813 9009

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 | Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries) |
|------------------|---|

SECTION 2: Hazards identification

The dismantling of the article is prohibited! This article contains hazardous substances or preparations not intended to be released under normal or reasonably foreseeable conditions of use.

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS (Rev. 4, 2011)

Expl. 1.4 H204
Full text of hazard classes and H-statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS (Rev. 4, 2011)

Hazard pictograms (GHS-UN)



GHS01

Signal word (GHS-UN)

Warning

Hazard statements (GHS-UN)

H204 - Fire or projection hazard

Precautionary statements (GHS-UN)

P210 - Keep away from heat. - No smoking
P250 - Do not subject to shock
P280 - Wear eye protection

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

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| Name | Product identifier | % | Classification (GHS-CA) |
|---------------------|---------------------|---------|--|
| glycerol trinitrate | (CAS No) 55-63-0 | 3 - 10 | Not classified |
| lead styphnate | (CAS No) 15245-44-0 | 0.1 - 5 | Not classified |
| Barium nitrate | (CAS No) 10022-31-8 | 0 - 5 | Not classified |
| diphenylamine | (CAS No) 122-39-4 | 0 - 1 | Not classified |
| Tetrazen | (CAS No) 109-27-3 | 0 - 0.2 | Serious eye damage/eye irritation, Category 2A, H319 |

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures after inhalation | Allow breathing of fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. |
| First-aid measures after eye contact | Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist. |
| First-aid measures after ingestion | Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. |

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

| | |
|-------------------|--|
| Symptoms/injuries | Not expected to present a significant hazard under anticipated conditions of normal use. |
|-------------------|--|

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Firefighting instructions | Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. |
| 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 equipment and emergency procedures

| | |
|------------------|---|
| General measures | Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. |
|------------------|---|

6.1.1. For non-emergency personnel

| | |
|----------------------|---------------------------------|
| Emergency procedures | Evacuate unnecessary personnel. |
|----------------------|---------------------------------|

6.1.2. For emergency responders

| | |
|----------------------|--|
| Protective equipment | Equip cleanup crew with proper protection. |
| Emergency procedures | Ventilate area. |

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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Pick up loose cartridges only by hand.
Exposed ingredients must be swept up carefully and phlegmatized in a water container, labelled according the regulations, wipe down with water the contaminated area. Store away from other materials.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

Hazardous waste due to potential risk of explosion.

Precautions for safe handling

Do not subject to grinding, shock, friction. Take precautionary measures against static discharge. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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, including any incompatibilities

Storage conditions

Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Store in a dry place.

Incompatible products

Strong bases. Strong acids.

Incompatible materials

Sources of ignition. Direct sunlight.

Storage temperature

5 - 25 °C

Prohibitions on mixed storage

KEEP SUBSTANCE AWAY FROM: highly flammable materials. ignition sources.

Storage area

Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Personal protective equipment

Avoid all unnecessary exposure. Safety glasses. Protective clothing.



Eye protection

Safety glasses.

Skin and body protection

When using setting tools, sufficient ear protection must be worn.

Other information

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Solid

Colour

According to product specification.

Odour

No data available

Odour threshold

No data available

pH

No data available

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| | |
|--|----------------------------|
| 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 | No data available |
| Relative vapour density at 20 °C | No data available |
| Relative density | No data available |
| Solubility | No data available |
| Log Pow | No data available |
| Viscosity, kinematic | No data available |
| Viscosity, dynamic | No data available |
| Explosive properties | Fire or projection hazard. |
| Oxidising properties | No data available |
| Explosive limits | No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity Not classified

| glycerol trinitrate (55-63-0) | |
|-------------------------------|------------------------|
| ATE US (oral) | 5.000 mg/kg bodyweight |
| ATE US (dermal) | 5.000 mg/kg bodyweight |
| ATE US (dust,mist) | 0.050 mg/l/4h |

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| | |
|---|--|
| Barium nitrate (10022-31-8) | |
| LD50 oral rat | 355 mg/kg (Rat) |
| ATE US (oral) | 355.000 mg/kg bodyweight |
| lead styphnate (15245-44-0) | |
| ATE US (oral) | 500.000 mg/kg bodyweight |
| ATE US (dust,mist) | 1.500 mg/l/4h |
| diphenylamine (122-39-4) | |
| ATE US (oral) | 100.000 mg/kg bodyweight |
| ATE US (dermal) | 300.000 mg/kg bodyweight |
| ATE US (dust,mist) | 0.500 mg/l/4h |
| Skin corrosion/irritation | Not classified |
| Serious eye damage/irritation | Not classified |
| Respiratory or skin sensitisation | Not classified |
| Germ cell mutagenicity | Not classifiedBased on available data, the classification criteria are not met |
| Carcinogenicity | Not classified |
| Reproductive toxicity | Not classifiedBased on available data, the classification criteria are not met |
| Specific target organ toxicity (single exposure) | Not classified |
| Specific target organ toxicity (repeated exposure) | Not classifiedBased on available data, the classification criteria are not met |
| Aspiration hazard | Not classifiedBased on available data, the classification criteria are not met |
| Potential adverse human health effects and symptoms | Based on available data, the classification criteria are not met. No harmful effects are to be expected if used properly. The contained ingredients can be harmful, but they are hermetically enclosed in the article and can not be released. The dismantling of the article is prohibited. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|--|
| Ecology - general | No harmful effects are to be expected if used properly. The contained ingredients can be harmful, but they are hermetically enclosed in the article and can not be released. The dismantling of the article is prohibited. |
|-------------------|--|

| | |
|---|--|
| glycerol trinitrate (55-63-0) | |
| LC50 fish 1 | 2.1 mg/l (96 h; Pimephales promelas) |
| EC50 Daphnia 1 | 25 mg/l (168 h; Daphnia magna) |
| LC50 fish 2 | 1.3 mg/l (96 h; Lepomis macrochirus) |
| Threshold limit algae 1 | > 6.5 mg/l (Scenedesmus quadricauda) |
| Barium nitrate (10022-31-8) | |
| LC50 fish 1 | > 1000 mg/l (96 h; Pisces) |
| LC50 other aquatic organisms 1 | > 1000 mg/l (96 h) |
| Threshold limit other aquatic organisms 1 | > 1000 mg/l (96 h) |
| lead styphnate (15245-44-0) | |
| TLM fish 1 | 7.48 mg/l (96 h; Pimephales promelas; Lead ion) |
| Threshold limit algae 1 | 0.14 mg/l (Selenastrum capricornutum; Lead ion) |
| diphenylamine (122-39-4) | |
| LC50 fish 1 | > 20 mg/l (48 h; Leuciscus idus) |
| EC50 Daphnia 1 | 2.3 mg/l (24 h; Daphnia magna) |
| LC50 fish 2 | 2.2 - 5.1 mg/l (48 h; Oryzias latipes) |
| Threshold limit other aquatic organisms 1 | 1000 mg/l (24 h; Pseudomonas fluorescens) |
| Threshold limit algae 1 | 0.048 mg/l (72 h; Scenedesmus subspicatus; Inhibitory) |

12.2. Persistence and degradability

| | |
|-------------------------------|------------------|
| DX-Cartridge UN0323 | |
| Persistence and degradability | Not established. |

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| | |
|------------------------------------|-----------------------------------|
| 12.5. Other adverse effects | |
| Other information | Avoid release to the environment. |

| | |
|--------------------------------|---|
| Waste disposal recommendations | Dispose in a safe manner in accordance with local/national regulations. Refer to manufacturer/supplier for information on recovery/recycling. |
| Additional information | Hazardous waste due to potential risk of explosion. |
| Ecology - waste materials | Avoid release to the environment. |





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

| ADR | IMDG | IATA | RID |
|--|--|--------------------------|--------------------------|
| 14.1. UN number | | | |
| 0323 | 0323 | 0323 | 0323 |
| 14.2. UN proper shipping name | | | |
| CARTRIDGES, POWER DEVICE | CARTRIDGES, POWER DEVICE | Cartridges, power device | CARTRIDGES, POWER DEVICE |
| Transport document description | | | |
| UN 0323 CARTRIDGES, POWER DEVICE (1.4S), (E) | UN 0323 CARTRIDGES, POWER DEVICE, 1.4S | | |

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| ADR | IMDG | IATA | RID |
|---|---|---|---|
| 14.3. Transport hazard class(es) | | | |
| 1.4S | 1.4S | 1.4S | 1.4S |
|  |  |  |  |
| 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

| | |
|--------------------------------|-------------|
| Special provisions (ADR) | 347 |
| Limited quantities (ADR) | 0 |
| Packing instructions (ADR) | P134, LP102 |
| Mixed packing provisions (ADR) | MP23 |
| Tunnel restriction code (ADR) | E |

- Transport by sea

| | |
|--------------------------------|--------------------------------|
| Special provisions (IMDG) | 347 |
| Limited quantities (IMDG) | 0 |
| Packing instructions (IMDG) | P134, LP102 |
| EmS-No. (Fire) | F-B |
| EmS-No. (Spillage) | S-X |
| Stowage category (IMDG) | 01 |
| Stowage and segregation (IMDG) | Protected from sources of heat |
| MFAG-No | 114 |

- Air transport

| | |
|---------------------------------|------|
| PCA packing instructions (IATA) | 134 |
| PCA max net quantity (IATA) | 25kg |
| Special provisions (IATA) | A165 |

- Rail transport

| | |
|----------------------------|-------------|
| Special provisions (RID) | 347 |
| Limited quantities (RID) | 0 |
| Packing instructions (RID) | P134, LP102 |
| 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

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National/international regulations

No additional information available

SECTION 16: Other information

| | |
|---------------|------------|
| Date of issue | 28/01/2016 |
| Revision date | 22/01/2016 |
| Supersedes | 18/05/2015 |

Full text of H-statements:

| | |
|------|-------------------------------|
| H319 | Causes serious eye irritation |
|------|-------------------------------|

SDS_CA_Hilti

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