



DX-Cartridge

Safety Data Sheet

according to GB/T 16483 and GB/T 17519

Version 4.1

Revision date: 2026/01/08

Issue date: 2026/01/08

Supersedes:

SECTION 1 Chemical product and company identification

Product identifier

| | |
|---------------------------------|-----------------------------|
| Product form | Article |
| Name | DX-Cartridge |
| Product code | BU Direct Fastening |
| Chemical Chinese name | - |
| Chemical English name | - |
| Recommended use of the chemical | CARTRIDGES FOR TOOLS, BLANK |
| Restricted use of the chemical | For professional use only |

Details of the supplier of the safety data sheet

| | |
|---------------------------------|--|
| Supplier | Department issuing data specification sheet |
| Hilti (China) Ltd. | Hilti AG |
| 8F, Tower 2, No.58 Yao Yuan Rd. | Feldkircherstraße 100 |
| Pudong District | 9494 Schaan - Liechtenstein |
| 200126 Shanghai - China | T +423 234 2111 |
| T +86 21 6016 7316 | product.compliance-direct.fastening@hilti.com |

Emergency telephone number

| | |
|------------------|---------------------------------------|
| Emergency number | Emergency CONTACT (24-Hour-Number) |
| | GBK GmbH Global Regulatory Compliance |
| | +49 (0)6132-84463 |

| Country | Organisation/Company | Address | Emergency number |
|---------|---|---------|------------------|
| China | 中国境内化学事故应急咨询电话 / chemical accident emergency consultation service hotline (24/7) | | +86 532 83889090 |

SECTION 2 Hazards identification

Emergency overview

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Keep only in the original container in a cool, well ventilated place away from :
Direct sunlight, Heat, Store in a dry place, Strong bases, Strong acids. Keep away
from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Fire or projection hazard. For further information refer to section 8: "Exposure
controls/personal protection". Treat symptomatically

GHS hazard classification

Physical hazards Explosives, Division 1.4
Other hazards not mentioned above are Not applicable or No data is available.

Label elements

Hazard pictograms (GHS CN)



Signal word (GHS CN) Warning.

Hazard statements (GHS CN) H204 - Fire or projection hazard.

Precautionary statements (GHS CN)

Prevention measures P210 - Keep away from heat, hot surfaces, sparks, open
flames and other ignition sources. No smoking.
P250 - Do not subject to shock, friction, grinding.
P280 - Wear eye protection.
Incident response P370+P380+P375 - In case of fire: Evacuate area. Fight
fire remotely due to the risk of explosion.
P372 - Explosion risk in case of fire.
Safe storage P401 - Store in accordance with in accordance with
local regulations on explosives.

Physical and chemical hazards

Fire or projection hazard

Health hazards

Symptoms/effects Not expected to present a significant hazard under
anticipated conditions of normal use

Environmental hazards

No additional information available

Other hazards

Category of the pyrotechnic article: other pyrotechnic articles Cat. P1
(BAM EC-Type-Examination Certificate No. 0589.PYR.3800/12 or 0589.PYR.3804/12
respectively)
This article contains hazardous substances or preparations not intended to be
released under normal or reasonably foreseeable conditions of use.
The dismantling of the article is prohibited!
Keep away from ignition sources (including static discharges)

SECTION 3 Composition/information on ingredients

Product form Article.

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| | |
|----------|---|
| Comments | <p>max. net explosives weight each cartridge in mg: Caliber 6.8/11 (cal .27 short) white: 130; brown: 140; green: 160; yellow: 180; red: 230; titanium: 230; black: 260 Caliber 6.8/18 (cal .27 long) green: 190; yellow: 220; blue: 300; red: 330; black: 410 Caliber 6.3/10 (cal. 25) green 120; yellow: 190; red: 230; black: 250 Caliber 5.5/16 (cal .22) grey: 105; brown: 120; green: 175; yellow: 210; red: 270.</p> <p>Within the cartridges the explosive ingredients (gun powder and priming composition) are hermetically separated from the environment. They will be only opened with effort and under destruction of the article.</p> <p>Propellant powder: glycerol trinitrate containing nitrocellulose powder Mass per cartridge: essentially dependent on the required power (100-400 mg).</p> <p>Exposed propellant powder outside a cartridge is harmful if swallowed and highly flammable; without tamping no explosion risk.</p> <p>Packed safety cartridges don't represent a significant risk.</p> <p>In case of reaction no dangerous fragments or projectiles will be formed.</p> <p>Mechanical or thermal attempts to expose the primer composition lead to an immediate reaction of the dangerous ingredients.</p> |
|----------|---|

| Ingredient(s) | Concentration or concentration ranges (w/w %) | CAS No. |
|---------------------|---|------------|
| cellulose nitrate | 5 - 17 | 9004-70-0 |
| glycerol trinitrate | 2 - 7 | 55-63-0 |
| Lead styphnate | 0.1 - 3 | 15245-44-0 |
| Barium nitrate | 0 - 3 | 10022-31-8 |
| copper | 0 - 2 | 7440-50-8 |
| zinc | 0 - 2 | 7440-66-6 |
| Diphenylamine | 0 - 1 | 122-39-4 |
| tetrazene | 0 - 1 | 109-27-3 |

SECTION 4 First-aid measures

Description of necessary first-aid measures

| | |
|-------------------------------------|---|
| First-aid measures general | In all cases of doubt, or when symptoms persist, seek medical attention |
| First-aid measures after inhalation | Allow affected person to breathe fresh air. Allow the victim to rest |

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|---------------------------------------|--|
| 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 persists |
| First-aid measures after ingestion | Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention |

Most important symptoms/effects

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

Advices for first aid responders

First aid workers will be equipped with suitable personal protective equipment.

Notes for the doctor

| | |
|-----------------------------------|-------------------------------------|
| Other medical advice or treatment | No additional information available |
|-----------------------------------|-------------------------------------|

SECTION 5 Fire-fighting measures

Extinguishing media

| | |
|--------------------------------|---------------------------------|
| Suitable extinguishing media | Dry powder Water spray |
| Unsuitable extinguishing media | Do not use a heavy water stream |

Specific hazards

| | |
|--|--|
| Hazardous decomposition products in case of fire | Carbon monoxide Carbon dioxide (CO ₂) Nitrous gasses |
|--|--|

Advice for firefighters and protective measures

| | |
|--------------------------------|--|
| Firefighting instructions | Use water spray or fog for cooling exposed containers Exercise caution when fighting any chemical fire Prevent fire fighting water from entering the environment |
| Protection during firefighting | Do not enter fire area without proper protective equipment, including respiratory protection |

SECTION 6 Accidental release measures

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 |
| Personal Precautions, Protective Equipment and Emergency Procedures | No additional information available |

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For non-emergency personnel

| | |
|----------------------|--|
| Protective equipment | Wear recommended personal protective equipment |
| Emergency procedures | Evacuate unnecessary personnel |

For emergency responders

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

Environmental precautions

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

Methods and material for containment and cleaning up

| | |
|----------------------|-------------------------------------|
| Methods for cleaning | No additional information available |
| For containment | No additional information available |

Prevention measures for secondary accidents

| | |
|---|--|
| Prevention Measures for Secondary Accidents | No additional information available |
| Other information | For further information refer to section 8: "Exposure controls/personal protection" For further information refer to section 13 |

SECTION 7 Handling and storage

Handling

| | |
|-----------------------------------|--|
| Precautions for safe handling | Do not subject to grinding, shock, friction Take precautionary measures against static discharge. 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 |
| Local and general ventilation | No additional information available |
| Additional hazards when processed | Hazardous waste due to potential risk of explosion |

Storage

| | |
|---------------------------------------|---|
| 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. |
| Material used in packaging/containers | No additional information available |
| Incompatible products | Strong bases. Strong acids. |
| Storage temperature | 5 - 25 ° C |
| Information on mixed storage | Keep away from : Ignition sources Do not store with: Store according to local legislation |

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Storage area

Store away from heat

SECTION 8 Exposure controls / Personal protection equipment

Occupational exposure limits

glycerol trinitrate (55-63-0)

China - Occupational Exposure Limits

| | |
|----------------------|-----------------------|
| Local name | 硝化甘油 # Nitroglycerine |
| OEL MAC | 1 mg/m ³ |
| Remark (CN) | 皮 |
| Regulatory reference | GBZ 2.1-2019 |

copper (7440-50-8)

China - Occupational Exposure Limits

| | |
|----------------------|--|
| Local name | 铜 (按 Cu 计) # Copper, as Cu |
| OEL PC-TWA | 1 mg/m ³ 尘 # dust 0.2 mg/m ³ 烟 # fume |
| Regulatory reference | GBZ 2.1-2019 |

Diphenylamine (122-39-4)

China - Occupational Exposure Limits

| | |
|----------------------|----------------------|
| Local name | 二苯胺 # Diphenylamine |
| OEL PC-TWA | 10 mg/m ³ |
| Regulatory reference | GBZ 2.1-2019 |

Biological limit values

No additional information available

Monitoring methods

No additional information available

Appropriate engineering controls

No additional information available

Personal protective equipment

| | |
|---|--|
| Personal protective equipment | When using cartridge operated tools, sufficient ear protection must be worn. |
| Thermal hazard protection | No information available |
| Environmental exposure controls | Avoid release to the environment. |
| Other information | Do not eat, drink or smoke during use |
| Hand protection | Not required for normal conditions of use |
| Eye protection | Chemical goggles or safety glasses ISO 16321-1 |
| Skin and body protection | When using cartridge operated tools, sufficient ear protection must be worn. |
| Respiratory protection | Respiratory protection not required in normal conditions |
| Personal protective equipment symbol(s) | |

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SECTION 9 Physical and chemical properties

| | |
|---|---|
| Physical state | Solid |
| Appearance | No data available |
| Colour | According to product specification |
| Odour | There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. |
| pH | No data available |
| Melting point | No data available |
| Freezing point | Not applicable |
| Boiling point | Not applicable |
| Flash point | Not applicable |
| Auto-ignition temperature | Not applicable |
| Decomposition temperature | No data available |
| Flammability | Non flammable. |
| Vapour pressure | No data available |
| Relative vapour density at 20° C | No data available |
| Density | No data available |
| Solubility | No data available |
| Partition coefficient n-octanol/water (Log Pow) | No data available |
| Viscosity, kinematic | Not applicable |
| Explosive limits (vol %) | Not applicable |
| Lower explosion limit | No data available |
| Upper explosion limit | No data available |
| Radioactive | No |
| Explosive properties | Fire or projection hazard. |
| Particle size | Not available |

SECTION 10 Stability and reactivity

| | |
|------------------------------------|--|
| Chemical stability | Stable under normal conditions |
| Reactivity | Fire or projection hazard. |
| Possibility of hazardous reactions | Risk of explosion by shock, friction, fire or other sources of ignition Heating may cause an explosion. At high temperatures : > 150 ° C Response |
| Conditions to avoid | Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition |
| Incompatible materials | Strong acids Strong bases |

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| | |
|---|---|
| Hazardous decomposition products | Carbon monoxide Carbon dioxide Nitrogen oxides Metal oxides Thermal decomposition can lead to the release of irritating gases and vapours |
| Other properties | No additional information available |

SECTION 11 Toxicological information

Acute toxicity

| | |
|-----------------------------|---|
| 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) |

glycerol trinitrate (55-63-0)

| | |
|---------------------|---|
| LD50 oral | 685 mg/kg |
| LD50 dermal rat | > 9560 mg/kg bodyweight (OECD 402 method) |
| LD50 dermal | 9560 mg/kg |
| ATE CN (oral) | 5 mg/kg bodyweight |
| ATE CN (dermal) | 5 mg/kg bodyweight |
| ATE CN (gases) | 100 ppmv/4h |
| ATE CN (vapours) | 0.5 mg/l/4h |
| ATE CN (dust, mist) | 0.05 mg/l/4h |

Lead styphnate (15245-44-0)

| | |
|-----------------------------------|---|
| LD50 oral rat | > 2000 mg/kg bodyweight |
| LD50 dermal rat | > 2000 mg/kg bodyweight (OECD 402 method) |
| LC50 Inhalation - Rat (Dust/Mist) | > 5.05 mg/l/4h (OECD 403 method) |
| ATE CN (oral) | 500 mg/kg bodyweight |
| ATE CN (dust, mist) | 1.5 mg/l/4h |

Barium nitrate (10022-31-8)

| | |
|---------------------|----------------------|
| LD50 oral | 355 mg/kg |
| ATE CN (oral) | 355 mg/kg bodyweight |
| ATE CN (gases) | 4500 ppmv/4h |
| ATE CN (vapours) | 11 mg/l/4h |
| ATE CN (dust, mist) | 1.5 mg/l/4h |

zinc (7440-66-6)

| | |
|-----------------------------------|--------------------------------|
| LD50 oral rat | > 2000 mg/kg (OECD 401 method) |
| LD50 oral | 2500 mg/kg |
| LC50 Inhalation - Rat (Dust/Mist) | 5.41 mg/l/4h |
| ATE CN (oral) | 2500 mg/kg bodyweight |
| ATE CN (dust, mist) | 5.41 mg/l/4h |

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| Diphenylamine (122-39-4) | |
|--------------------------|------------------------|
| LD50 oral rat | > 800 mg/kg bodyweight |
| LD50 oral | 2480 mg/kg |
| LD50 dermal | 5000 mg/kg |
| ATE CN (oral) | 100 mg/kg bodyweight |
| ATE CN (dermal) | 300 mg/kg bodyweight |
| ATE CN (gases) | 700 ppmv/4h |
| ATE CN (vapours) | 3 mg/l/4h |
| ATE CN (dust, mist) | 0.5 mg/l/4h |

Skin corrosion/irritation

Skin corrosion/irritation Not classified (Based on available data, the classification criteria are not met)

Serious eye damage/eye irritation

Serious eye damage/irritation Not classified (Based on available data, the classification criteria are not met)

Respiratory or skin sensitisation

Respiratory or skin sensitisation Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity

Germ cell mutagenicity Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity

Carcinogenicity Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity

Reproductive toxicity Not classified (Based on available data, the classification criteria are not met)

STOT - single exposure

STOT - single exposure Not classified (Based on available data, the classification criteria are not met)

| Barium nitrate (10022-31-8) | |
|-----------------------------|--------------------------|
| STOT - single exposure | Causes damage to organs. |

STOT - repeated exposure

STOT - repeated exposure Not classified (Based on available data, the classification criteria are not met)

| glycerol trinitrate (55-63-0) | |
|-------------------------------|--|
| STOT - repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

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| Lead styphnate (15245-44-0) | |
|-----------------------------|--|
| STOT - repeated exposure | May cause damage to organs through prolonged or repeated exposure. |
| Diphenylamine (122-39-4) | |
| STOT - repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

Aspiration hazard

Aspiration hazard

Not classified (Based on available data, the classification criteria are not met)

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Viscosity, kinematic

Not applicable

SECTION 12 Ecological information

Ecotoxicity

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.

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)

| glycerol trinitrate (55-63-0) | |
|---|---|
| LC50 - Fish [1] | 1.9 - 3.58 mg/l (96 h; Oncorhynchus mykiss; ASTM Designation E 729-80) |
| EC50 - Crustacea [1] | 17.83 mg/l (48 h; Ceriodaphnia dubia; ASTM Designation E 729-80) |
| EC50 96h - Algae [1] | 1.15 mg/l (Raphidocelis subcapitata; EPA TSCA Experimental Method 797.1060) |
| NOEC chronic fish | 0.03 mg/l |
| NOEC chronic crustacea | 3.23 mg/l (7 d; Ceriodaphnia dubia) |
| Lead styphnate (15245-44-0) | |
| LC50 - Fish [1] | 0.107 mg/l (96 h; Oncorhynchus mykiss; Lead) |
| EC50 - Crustacea [1] | 7 mg/l |
| NOEC chronic fish | 0.0189 - 1.559 mg/l (Fish; Lead) |
| NOEC chronic crustacea | 0.0017 - 0.496 mg/l (aquatic invertebrates; Lead) |
| BCF - Fish [1] | 1.553 |
| Partition coefficient n-octanol/water (Log Kow) | -2.19 (20 ° C) |
| Barium nitrate (10022-31-8) | |
| EC50 - Crustacea [1] | 9018 mg/l |
| zinc (7440-66-6) | |
| LC50 - Fish [1] | 169 µg/l (96h; Oncorhynchus Mykiss) |

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| | |
|---|---|
| EC50 - Crustacea [1] | < 0.1 µg/l (48h; Ceriodaphnia dubia) |
| ErC50 algae | 0.15 mg/l |
| NOEC chronic fish | 26 µg/L (30 d; Jordanella floridae) |
| NOEC chronic crustacea | 48 µg/L (21d; Daphnia magna; (OECD 211 method)) |
| Diphenylamine (122-39-4) | |
| EC50 - Crustacea [1] | 2 mg/l (48 h; Daphnia magna; (OECD 202 method)) |
| EC50 72h - Algae [1] | 2.17 mg/l (Raphidocelis subcapitata; (OECD 201 method)) |
| NOEC chronic algae | 0.0273 mg/l |
| Partition coefficient n-octanol/water (Log Kow) | 3.82 (20,2 ° C) |
| tetrazene (109-27-3) | |
| EC50 - Crustacea [1] | 0.14 mg/l |

Persistence and degradability

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Persistence and degradability Not established

| | |
|--------------------------------------|---------------------------------------|
| glycerol trinitrate (55-63-0) | |
| Not rapidly degradable | Yes |
| Persistence and degradability | Inherently biodegradable |
| Biodegradation | 92.2 % (84 h) |
| Lead styphnate (15245-44-0) | |
| Not rapidly degradable | Yes |
| Barium nitrate (10022-31-8) | |
| Not rapidly degradable | Yes |
| copper (7440-50-8) | |
| Not rapidly degradable | Yes |
| zinc (7440-66-6) | |
| Not rapidly degradable | Yes |
| Persistence and degradability | Not applicable for inorganic products |
| Diphenylamine (122-39-4) | |
| Not rapidly degradable | Yes |
| Persistence and degradability | Not readily biodegraded |
| Biodegradation | 26 % (28 d; (OECD 301D method)) |
| tetrazene (109-27-3) | |
| Not rapidly degradable | Yes |

Bioaccumulative potential

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Bioaccumulative potential Not established

| | |
|--------------------------------------|---|
| glycerol trinitrate (55-63-0) | |
| Bioaccumulative potential | Low bioaccumulation potential (Log Kow < 4) |
| Lead styphnate (15245-44-0) | |
| BCF - Fish [1] | See section 12.1 on ecotoxicology 1.553 |

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| | |
|---|--|
| Partition coefficient n-octanol/water (Log Kow) | See section 12.1 on ecotoxicology-2.19 (20 ° C) |
| zinc (7440-66-6) | |
| Bioaccumulative potential | Bioaccumulation unlikely |
| Diphenylamine (122-39-4) | |
| Bioaccumulative potential | Low bioaccumulation potential (Log Kow < 4) |
| Partition coefficient n-octanol/water (Log Kow) | See section 12.1 on ecotoxicology3.82 (20,2 ° C) |

Mobility in soil

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Bioaccumulative potential Not established

| | |
|---|--|
| glycerol trinitrate (55-63-0) | |
| Bioaccumulative potential | Low bioaccumulation potential (Log Kow < 4) |
| Ecology - soil | Low potential for adsorption in soil. |
| Lead styphnate (15245-44-0) | |
| Partition coefficient n-octanol/water (Log Kow) | See section 12.1 on ecotoxicology-2.19 (20 ° C) |
| zinc (7440-66-6) | |
| Bioaccumulative potential | Bioaccumulation unlikely |
| Diphenylamine (122-39-4) | |
| Bioaccumulative potential | Low bioaccumulation potential (Log Kow < 4) |
| Surface tension | 72.3 mN/m (20 ° C; EU Method A.5) |
| Partition coefficient n-octanol/water (Log Kow) | See section 12.1 on ecotoxicology3.82 (20,2 ° C) |

Other adverse effects

| | |
|----------------------------------|---|
| Classification procedure (Ozone) | Not classified (Based on available data, the classification criteria are not met) |
| Other adverse effects | No additional information available |
| Other information | Avoid release to the environment. |

Results of PBT and vPvB assessment

| | |
|------|--|
| PBT | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII |
| vPvB | This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

SECTION 13 Disposal considerations

| | |
|--------------------------------------|-------------------------------------|
| Waste treatment methods | No additional information available |
| Contaminated container and packaging | No additional information available |

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Additional information

Cartridge strips with unused cartridges: Hazardous waste due to risk of explosion. European waste catalogue: 16 04 01* - waste ammunition. If possible use up the cartridges or store them for your next project.
If not possible to use up the cartridges - The strip is mixed municipal waste and the cartridge itself is "waste ammunition" and has to be disposed of by an authorized/certified company.
If cartridges are used up: European waste catalogue: 20 03 01 - mixed municipal waste . The product (cartridges and strip) can be disposed of as household or factory waste, Do not re-use empty containers.

Product/Packaging disposal recommendations

Dispose in a safe manner in accordance with local/national regulations
Refer to manufacturer/supplier for information on recovery/recycling

Ecological waste information

At high temperatures may form : Response

Sewage disposal recommendations




Avoid release to the environment.

Regional waste regulation

Disposal must be done according to official regulations
Disposal must be done according to official regulations

SECTION 14 Transport information

In accordance with JT/T 617 / IMDG / IATA

| Overland transport (JT/T 617) | Transport by sea | Air transport |
|---|---|---|
| UN number | | |
| 0323 | 0323 | 0323 |
| Proper shipping name | | |
| CARTRIDGES, POWER DEVICE | CARTRIDGES, POWER DEVICE | Cartridges, power device |
| Transport document description | | |
| UN 0323, CARTRIDGES, POWER DEVICE, Division 1.4S | UN 0323 CARTRIDGES, POWER DEVICE, 1.4S | UN 0323 Cartridges, power device, 1.4S |
| Transport hazard class(es) | | |
| 1.4S | 1.4S | 1.4S |
|  |  |  |
| Packing group | | |
| Not applicable | Not applicable | Not applicable |

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| Overland transport (JT/T 617) | Transport by sea | Air transport |
|--|---|----------------------------------|
| Environmental hazards | | |
| Dangerous for the environment No | Dangerous for the environment No Marine pollutant No | Dangerous for the environment No |
| No supplementary information available | | |

Special transport precautions

| | |
|--|----------------|
| MFAG-No | 114 |
| Overland transport (JT/T 617) | |
| Classification code (JT/T 617) | 1.4S. |
| Special provisions (JT/T 617) | 347. |
| Limited quantities (JT/T 617) | 0. |
| Excepted quantities (JT/T 617) | E0. |
| Packing instructions (JT/T 617) | P134, LP102. |
| Mixed packing provisions (JT/T 617) | MP23. |
| Transport category (JT/T 617) | 4. |
| Tunnel restriction code (JT/T 617) | E. |
| Special provisions for carriage - Loading, unloading and handling (JT/T 617) | CV1, CV2, CV3. |
| Special provisions for carriage - Operation (JT/T 617) | S1. |
| Hazard identification number (JT/T 617) | 1.4S. |
| Orange-coloured plate (JT/T 617) | |



| | |
|-----------------------------|--------------|
| Transport by sea | |
| Special provisions (IMDG) | 347. |
| Limited quantities (IMDG) | 0. |
| Excepted quantities (IMDG) | E0. |
| Packing instructions (IMDG) | P134, LP102. |
| EmS-No. (Fire) | F-B. |
| EmS-No. (Spillage) | S-X. |
| Stowage category (IMDG) | 01. |
| Stowage and handling (IMDG) | SW1. |
| Flash point (IMDG) | |

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| | |
|--|--------------------------------------|
| Properties and observations (IMDG) | See glossary of terms in appendix B. |
| MFAG-No | 114 |
| Air transport | |
| PCA Excepted quantities (IATA) | E0. |
| PCA Limited quantities (IATA) | Forbidden. |
| PCA limited quantity max net quantity (IATA) | Forbidden. |
| PCA packing instructions (IATA) | 134. |
| PCA max net quantity (IATA) | 25kg. |
| CAO packing instructions (IATA) | 134. |
| CAO max net quantity (IATA) | 100kg. |
| Special provisions (IATA) | A165, A802. |
| ERG code (IATA) | 3L. |

SECTION 15 Regulatory information

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| Dangerous Goods List (GB 12268) | Contains listed substance(s). |
| Regulation on the Safety Management of Hazardous Chemicals | Catalogue of Hazardous Chemicals (2015). |
| Rules for dangerous goods transport by railway | List of dangerous goods by railway (2009). |
| Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used | List of Highly Toxic Chemicals (2002). |
| Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals | Not listed. |
| Regulation of the People's Republic of China on the Administration of the Import and Export of Goods | Not listed. |
| Regulation on the Control of Precursor Chemicals | Not listed. |
| Measures for the Administration of Pharmaceutical Precursor Chemicals | Not listed. |
| Regulations on the Control of Agricultural Chemicals; Notice of Pesticide Transport | Not listed. |
| Regulation on the Management of Controlled Chemicals | Not listed. |
| New Chemical Substance Environmental Management Registration Measures (MEE Order 12 of 2020) | |

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|---|---|
| Inventory of Existing Chemical Substances in China (IECSC) | <p>Contains listed substance(s)</p> <p>Cellulose, nitrate (CAS-No. 9004-70-0)</p> <p>1,2,3-Propanetriol, 1,2,3-trinitrate (CAS-No. 55-63-0)</p> <p>Barium nitrate (CAS-No. 10022-31-8)</p> <p>Copper (CAS-No. 7440-50-8)</p> <p>Zinc (CAS-No. 7440-66-6)</p> <p>Diphenylamine (CAS-No. 122-39-4)</p> |
| Regulations on the Safe Management of Hazardous Chemicals (Decree 591 of the State Council) | |
| Catalogue of Hazardous Chemicals (2015) | <p>Contains Hazardous Chemical(s)</p> <p>cellulose nitrate (CAS-No. 9004-70-0)</p> <p>Nitroglycerin [desensitized with not less than 40% non-volatile water-insoluble phlegmatizer, by mass] (CAS-No. 55-63-0)</p> <p>lead 2,4,6-trinitro-m-phenylene dioxide [with not less than 20% phlegmatizer] (CAS-No. 15245-44-0)</p> <p>Barium nitrate (CAS-No. 10022-31-8)</p> <p>copper</p> <p>zinc (CAS-No. 7440-66-6)</p> <p>Diphenylamine (CAS-No. 122-39-4)</p> <p>Guanyl nitrosaminoguanyltetrazene, wetted with not less than 30% water, or mixture of alcohol and water, by mass (CAS-No. 109-27-3)</p> <p>Considered as Hazardous Chemical(s)</p> |
| Identification of major hazard installations for dangerous chemicals (GB 18218) | <p>Contains listed substance(s)</p> <p>cellulose nitrate (CAS-No. 9004-70-0)</p> <p>Nitroglycerine (CAS-No. 55-63-0)</p> |
| Catalogue of Explosive Precursor Dangerous Chemicals | <p>Contains listed substance(s)</p> <p>cellulose nitrate (CAS-No. 9004-70-0)</p> <p>Barium nitrate (CAS-No. 10022-31-8)</p> <p>zinc (CAS-No. 7440-66-6)</p> |
| Law of the People's Republic of China on the Prevention and Control of Occupational Diseases | |
| Catalogue for Classification of Hazardous Factors of Occupational Diseases | <p>Contains listed substance(s)</p> <p>Nitroglycerine (CAS-No. 55-63-0)</p> |
| List of Highly Toxic Substances | <p>Contains listed substance(s)</p> <p>Diphenylamine (CAS-No. 122-39-4)</p> |
| Regulation on the Administration of Precursor Chemicals (Decree 445 of the State Council) | |
| Catalogue of Precursor Chemicals | |
| Other domestic regulatory lists | |
| Dangerous Goods List (GB 12268) | <p>Contains listed substance(s)</p> <p>cellulose nitrate (CAS-No. 9004-70-0)</p> <p>NITROGLYCERIN SOLUTION IN ALCOHOL with not more than 1% nitroglycerin (CAS-No. 55-63-0)</p> <p>BARIUM NITRATE (CAS-No. 10022-31-8)</p> <p>ZINC POWDER or ZINC DUST (CAS-No. 7440-66-6)</p> <p>GUANYLNITROSAMINO-GUANYLTETRAZENE (TETRAZENE), WETTED with not less than 30% water, or mixture of alcohol and water, by mass (CAS-No. 109-27-3)</p> |
| Inventory of Hazardous Chemicals under Key Supervision | <p>Contains listed substance(s)</p> <p>Nitrocellulose (CAS-No. 9004-70-0)</p> <p>Nitroglycerine (CAS-No. 55-63-0)</p> |

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SECTION 16 Other information

Data sources

Supplier Safety Data Sheet

| Abbreviations and acronyms | |
|----------------------------|---|
| CAS-No. | Chemical Abstracts Service number |
| 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 |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| ED | Endocrine disruptor |
| EC-No. | European Community number |
| EN | European Standard |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| IOELV | Indicative Occupational Exposure Limit Value |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| N. O. S. | Not Otherwise Specified |
| 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 |
| STP | Sewage treatment plant |
| TLM | Median Tolerance Limit |
| TRGS | Technical Rules for Hazardous Substances |
| VOC | Volatile Organic Compounds |
| WGK | Water Hazard Class |
| vPvB | Very Persistent and Very Bioaccumulative |
| NOAEL | No-Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| LOAEL | Lowest Observed Adverse Effect Level |

| Indication of changes |
|-----------------------|
| General revision |



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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.