

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis  
Issue date: 14.12.2022      Revision date: 14.12.2022      Supersedes: 07.10.2013      Version: 4.0

### SECTION 1: Identification

#### 1.1. Product identifier

Name RWS 9x17 W  
Product code BU Direct Fastening

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

Recommended use For professional use only,CARTRIDGES, POWER DEVICE

#### 1.4. Supplier's details

##### Supplier

Hilti Far East Private Ltd.  
No 20 Harbour Drive, #06-06/08 PSA Vista Singapore Singapur 117612  
T +65 6777 7887 - F +65 6777 3057  
[sg-customerservice@hilti.com](mailto:sg-customerservice@hilti.com)

##### Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH  
Hiltistrasse 6 Kaufering Deutschland 86916  
T +49 8191 906310 - F +49 8191 90176310  
[df-hse@hilti.com](mailto:df-hse@hilti.com)

#### 1.5. Emergency phone number

Emergency number Schweizerisches Toxikologisches Informationszentrum – 24h Service  
+41 44 251 51 51 (international)  
+65 6777 7887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Physical hazards Explosives, Division 1.4

#### 2.2. GHS label elements including precautionary statements

##### Hazard pictograms (GHS SG)



##### Signal word (GHS SG)

Warning

##### Hazard statements (GHS SG)

H204 : Fire or projection hazard.

##### Precautionary statements

##### Prevention

P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat  
P250 : Do not subject to shock.  
P280 : Wear eye protection.

##### 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.

##### Storage

P401 : Store in accordance with local regulations on explosives.

#### 2.3. Other hazards which do not result in classification

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

### 3.2. Mixtures

#### Comments

max. net explosives weight each cartridge in mg:

Caliber 9x17; yellow: 500; red: 605.

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.

Propellant powder: glycerol trinitrate containing nitrocellulose powder

Mass per cartridge: essentially dependent on the required power (500-610 mg).

Exposed propellant powder outside a cartridge is harmful if swallowed and highly flammable; without tamping no explosion risk.

Packed safety cartridges don't represent a significant risk.

In case of reaction no dangerous fragments or projectiles will be formed.

Mechanical or thermal attempts to expose the primer composition lead to an immediate reaction of the dangerous ingredients.

Name	Synonyms	Concentration (%)	Formula	Product identifier
glycerol trinitrate	-	1 – 4	-	CAS-No.: 55-63-0 EC-No.: 200-240-8 EC Index-No.: 603-034-00-X
lead styphnate	-	0.1 – 1	C6HN3O8Pb	CAS-No.: 15245-44-0 EC-No.: 239-290-0 EC Index-No.: 609-019-00-4
diphenylamine	-	0.1 – 1	C12H11N	CAS-No.: 122-39-4 EC-No.: 204-539-4 EC Index-No.: 612-026-00-5

## SECTION 4: First-aid measures

### 4.1. Description of necessary first aid measures

#### First-aid measures general

In all cases of doubt, or when symptoms persist, seek medical attention.

#### Inhalation

Allow affected person to breathe fresh air. Allow the victim to rest.

#### Skin contact

Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

#### Eye contact

Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

#### Ingestion

Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms/effects, acute and delayed

#### Symptoms/effects

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

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

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

#### Suitable extinguishing media

Dry powder. Water spray.

#### Unsuitable extinguishing media

Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

#### Hazardous decomposition products in case of fire

Carbon monoxide. Carbon dioxide. Nitrous gasses.

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

### 5.3. Special protective actions for fire fighters

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

### 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.

### 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.
-------------------------	--

### 6.4. Reference to other sections

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

## 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.
Storage temperature	5 – 25 °C
Information on mixed storage	Keep away from : ignition sources. Store according to local legislation.
Storage area	Store away from heat.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters/Occupational exposure limits

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

<b>glycerol trinitrate (55-63-0)</b>	
<b>Singapore - Occupational Exposure Limits</b>	
Local name	Nitroglycerin (NG)
PEL (OEL TWA)	0.46 mg/m <sup>3</sup>
PEL (OEL TWA) [ppm]	0.05 ppm
Regulatory reference	WSH (General Provision) Regulation 2014
<b>diphenylamine (122-39-4)</b>	
<b>Singapore - Occupational Exposure Limits</b>	
Local name	Diphenylamine
PEL (OEL TWA)	10 mg/m <sup>3</sup>
Regulatory reference	WSH (General Provision) Regulation 2014

### 8.2. Monitoring

No additional information available

### 8.3. Appropriate engineering control measures

No additional information available

### 8.4. Personal protection

Hand protection	Not required for normal conditions of use
Eye protection	Safety glasses
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)



## 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
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	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
Partition coefficient n-octanol/water (Log Pow)	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

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

Additional information	Not specifically applicable. Article
------------------------	--------------------------------------

## 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

Risk of explosion by shock, friction, fire or other sources of ignition. Heating may cause an explosion. At high temperatures : >150 °C reaction.

### 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

Carbon monoxide. Carbon dioxide. Nitrogen oxides. Metal oxides. Thermal decomposition can lead to the release of irritating gases and vapours.

## SECTION 11: Toxicological information

### 11.1. 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	1055 mg/kg bodyweight (mouse)
LD50 dermal rat	> 9560 mg/kg bodyweight (OECD 402 method)
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)
diphenylamine (122-39-4)	
LD50 oral rat	> 800 mg/kg bodyweight

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)

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

<b>glycerol trinitrate (55-63-0)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<b>lead styphnate (15245-44-0)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<b>diphenylamine (122-39-4)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified (Based on available data, the classification criteria are not met)
Potential adverse human health effects and symptoms	No additional information available. 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.
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)
Other information	Avoid release to the environment.

<b>glycerol trinitrate (55-63-0)</b>	
LC50 - Fish [1]	1.9 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 (60 d; Oncorhynchus mykiss)
NOEC chronic crustacea	3.23 mg/l (7 d; Ceriodaphnia dubia)
<b>lead styphnate (15245-44-0)</b>	
LC50 - Fish [1]	0.107 mg/l (96 h; Oncorhynchus mykiss; Lead)
EC50 - Crustacea [1]	7.02 mg/l (48 h; Daphnia magna; (OECD 202 method); Lead)
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)
<b>diphenylamine (122-39-4)</b>	
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	0.37 mg/l (Raphidocelis subcapitata; (OECD 201 method))
Partition coefficient n-octanol/water (Log Kow)	3.82 (20,2 °C)

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

### 12.2. Persistence and degradability

RWS 9x17 W	
Persistence and degradability	Not established.
glycerol trinitrate (55-63-0)	
Not rapidly degradable	
Persistence and degradability	Inherently biodegradable.
Biodegradation	92.2 % (84 h)
lead styphnate (15245-44-0)	
Not rapidly degradable	
diphenylamine (122-39-4)	
Not rapidly degradable	
Persistence and degradability	Not readily biodegraded.
Biodegradation	26 % (28 d; (OECD 301D method))

### 12.3. Bioaccumulative potential

RWS 9x17 W	
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]	1.553
Partition coefficient n-octanol/water (Log Kow)	-2.19 (20 °C)
diphenylamine (122-39-4)	
Partition coefficient n-octanol/water (Log Kow)	3.82 (20,2 °C)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).

### 12.4. Mobility in soil

RWS 9x17 W	
Mobility in soil	No additional information available
glycerol trinitrate (55-63-0)	
Ecology - soil	Low potential for adsorption in soil.
lead styphnate (15245-44-0)	
Partition coefficient n-octanol/water (Log Kow)	-2.19 (20 °C)
diphenylamine (122-39-4)	
Surface tension	72.3 mN/m (20 °C; EU Method A.5)
Partition coefficient n-octanol/water (Log Kow)	3.82 (20,2 °C)

### 12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available

## SECTION 13: Disposal considerations

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with local/national regulations. Refer to manufacturer/supplier for information on recovery/recycling. At high temperatures may form : Response.
Additional information	<p>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.</p> <p>If cartridges are used up: European waste catalogue: 20 03 01 - mixed municipal waste . The product can be disposed of as household or factory waste.</p>

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
<b>14.1. UN number or ID number</b>			
UN 0323	UN 0323	UN 0323	UN 0323
<b>14.2. UN proper shipping name</b>			
CARTRIDGES, POWER DEVICE	CARTRIDGES, POWER DEVICE	Cartridges, power device	CARTRIDGES, POWER DEVICE
<b>Transport document description</b>			
UN 0323 CARTRIDGES, POWER DEVICE, 1.4S, (E)	UN 0323 CARTRIDGES, POWER DEVICE, 1.4S	UN 0323 Cartridges, power device, 1.4S	UN 0323 CARTRIDGES, POWER DEVICE, 1.4S
<b>14.3. Transport hazard class(es)</b>			
1.4S	1.4S	1.4S	1.4S
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
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)	1.4S
Special provisions (ADR)	347
Limited quantities (ADR)	0
Excepted quantities (ADR)	E0
Packing instructions (ADR)	P134, LP102
Mixed packing provisions (ADR)	MP23
Transport category (ADR)	4
Special provisions for carriage - Loading, unloading and handling (ADR)	CV1, CV2, CV3
Special provisions for carriage - Operation (ADR)	S1
Tunnel restriction code (ADR)	E

#### Transport by sea

Special provisions (IMDG)	347
Limited quantities (IMDG)	0



# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

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
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

### Rail transport

Classification code (RID)	1.4S
Special provisions (RID)	347
Limited quantities (RID)	0
Excepted quantities (RID)	E0
Packing instructions (RID)	P134, LP102
Mixed packing provisions (RID)	MP23
Transport category (RID)	4
Special provisions for carriage – Packages (RID)	W2
Special provisions for carriage - Loading, unloading and handling (RID)	CW1
Colis express (express parcels) (RID)	CE1
Hazard identification number (RID)	1.4S

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations specific for the product in question

Regulation		Component / Mixture
Fire Safety Act/Fire Safety (Petroleum and Flammable Materials) Regulations	Petroleum and Flammable Materials	Nitroglycerin
Maritime and Port Authority of Singapore (Dangerous, Petroleum and Explosives) Regulations	Maritime and Port Authority-Dangerous Goods	Nitroglycerin, desensitized; Lead styphnate, wetted
Poisons Act	Poisons List	Glyceryl trinitrate
Poisons Rules	First Schedule	Glyceryl trinitrate
	Third Schedule	Glyceryl trinitrate
Strategic goods (Control) Act	Military Goods - Energetic Materials and Related Substances - Exemptions	Nitroglycerin; Lead styphnate

### 15.2. International regulations

No additional information available

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

### 15.3 Chemical inventory status

No additional information available

## SECTION 16: Other information

Issue date	14/12/2022
Revision date	14/12/2022
Data sources	Source: European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a> . manufacturer.
Abbreviations and acronyms	<p>CAS-No. - Chemical Abstract Service number</p> <p>ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways</p> <p>ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>ATE - Acute Toxicity Estimate</p> <p>CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008</p> <p>DNEL - Derived-No Effect Level</p> <p>EC50 - Median effective concentration</p> <p>ED - Endocrine disrupting properties</p> <p>EC-No. - European Community number</p> <p>EN - European Standard</p> <p>IATA - International Air Transport Association</p> <p>IMDG - International Maritime Dangerous Goods</p> <p>IOELV - Indicative Occupational Exposure Limit Value</p> <p>LC50 - Median lethal concentration</p> <p>LD50 - Median lethal dose</p> <p>NOEC - No-Observed Effect Concentration</p> <p>OECD - Organisation for Economic Co-operation and Development</p> <p>N.O.S. - Not Otherwise Specified</p> <p>OEL - Occupational Exposure Limit</p> <p>PBT - Persistent Bioaccumulative Toxic</p> <p>PNEC - Predicted No-Effect Concentration</p> <p>REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006</p> <p>RID - Regulations concerning the International Carriage of Dangerous Goods by Rail</p> <p>SDS - Safety Data Sheet</p> <p>STP - Sewage treatment plant</p> <p>TLM - Median Tolerance Limit</p> <p>TRGS - Technical Rules for Hazardous Substances</p> <p>VOC - Volatile Organic Compounds</p> <p>WGK - Water Hazard Class</p> <p>vPvB - Very Persistent and Very Bioaccumulative</p> <p>NOAEL - No-Observed Adverse Effect Level</p> <p>NOAEC - No-Observed Adverse Effect Concentration</p> <p>LOAEL - Lowest Observed Adverse Effect Level</p>

Indication of changes			
Section	Changed item	Change	Comments
	General	Modified	
11	Toxicological information	Modified	
12	Ecotoxicological information	Modified	
15	Regulatory information	Added	
2	Labelling according to the United Nations GHS	Modified	

# RWS 9x17 W

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

---

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.