SAFETY DATA SHEET
RVS Technology Gun Protection & Restoration, RVS Technology Gun Treatment

SDS according to Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II with amendments in accordance with Commission Regulation (EU) 2020/878.

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

Date issued	August 29, 2023
Date verified	August 29, 2023

1.1 Product identifier

Product name	RVS Technology Gun Protection & Restoration, RVS Technology Gun Treatment

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

Use of the substance/preparation	Combined lubricant and surface treatment product
Use categories	PC-TEC-11 Lubricants, greases, release agents
Use by consumers	Yes

1.3 Details of the supplier of the safety data sheet

Supplier

Company name	Oy RVS Technology Ltd.
Office address	Pulttitie 2
Postcode	00880
City	Helsinki
Country	Finland
Tel.	+358-(0)9-7599 010
E-mail	rvs@rvs.fi
Website	http://www.rvs.fi/
Enterprise no. (VAT number)	FI21185745

1.4 Emergency telephone number

Emergency telephone	Description: Poison Information Centre (in Finland), Tukholmankatu 17, Box 790, 00029 HUS (Helsinki), (24 h) Telephone: +358-9-4711 or +358-9-471977

SECTION 2: Hazard identification

2.1 Classification of substance or mixture

Classification according to Regulation (EC) 1272/2008 [CLP / GHS]	Aerosol 1; H229 Aerosol 1; H222 Skin Sens. 1; H317 STOT SE 3; H336

2.2 Label elements

Hazard labels (CLP)

Label information	Naphta (petroleum), hydrotreated heavy, <0.1 % benzene, Bis (dinonil-naftalenosulfonato) calcium
Signal word	Danger
Hazard statements	H229 Pressurised container: May burst if heated. H222 Extremely flammable aerosol. H317 May cause an allergic skin reaction. H336 May cause drowsiness or dizziness.
P phrases	P101 If medical advice is needed, have product container or label at hand. 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. P280 Wear protective gloves. P410+P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C / 122 °F. P501 Dispose of contents/container. Dispose of the contents and/o rits container in accordance with the waste collecting system organised in your municipality.
Additional information	EUH 066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

PBT / vPvB	Not applicable.
Other hazards	Data not available.

SECTION 3: Composition / information on ingredients

3.1 –

3.2 Mixtures

Composition type	Mixture

Substance	Identification	Classification	Contents	Comments
Naphta (petroleum), hydrotreated heavy, <0.1 % benzene	CAS no: 64742-48-9 EC no. 265-150-3 REACH reg. no. 01-2119486659-16	Asp. Tox. 1; H304 STOT SE 3; H336	50–75 %	
Butane	CAS no. 106-97-8 EC no. 203-448-7 REACH reg. no. 01-2119474691-32	Flam. Gas 1; H220; Press. Gas (Comp.); CLP classification, comments: C; U	25–50 %	
Propane	CAS no. 74-98-6 EC no. 200-827-9 REACH reg. no. 01-2119486944-21	Flam. Gas 1; H220; Press. Gas (Comp.); CLP classification, comments: U	2.5–10 %	
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	CAS no. 70024-69-0 EC no. 274-263-7 REACH reg. no. 01-2119492616-28		2.5–10 %	
Bis (dinonilnaftaleno-sulfonato) calcium	CAS no. 57855-77-3 EC no. 260-991-2	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Aquatic Chronic 3; H413		

SECTION 4: First aid measures

4.1 Description of first aid measures

General	In case of an accident or nausea: immediately seek medical attention (show this label if possible) NB! Symptoms may be delayed. Observe the injured person.
Inhalation	The person must rest in fresh air under surveillance. In case of nausea, get medical attention. Take the Safety Data Sheet with you.
Skin contact	Rinse the skin immediately thoroughly with plenty of soap and water. Remove contaminated clothing and continue rinsing. Immediately get medical attention, if irritation persists after the wash.
Eye contact	Immediately flush eyes with plenty of water. Keep eye lashes widened. Remove contact lenses, if easy to do. Continue rinsing. Seek medical attention.
Ingestion	Seek medical attention. Take the Material Safety Data Sheet with you. Do NOT induce vomiting. If vomiting cannot be avoided, keep the head down in order to prevent stomach contents from entering the lungs.

4.2 Most important symptoms and effects, both acute and delayed

General symptoms and effects	Repeated exposure may cause skin dryness or cracking. Skin contact may cause sensitisation. Vapours may affect the central nervous system and cause headache, nausea, vomiting, and dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

Medical care	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Foam. Powder. Carbon dioxide (CO_2).
Improper extinguishing media	Avoid directing a water jet towards the fire. It may spread the fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products	In case of fire, hazardous gases may form. Carbon monoxide (CO). Carbon dioxide (CO_2).

5.3 Advice for firefighters

Personal protective equipment	Wear self-contained breathing apparatus (SCBA) and full protective equipment. Choice of breath protection device during an early phase of a fire: Follow general instructions of the place of work.
Firefighting measures	Remove all the ignition sources if it can be done safely. Cool aerosol cans that have been exposed to heat with a water jet and remove from the fire site if it can be done safely.
Other information	Collect extinguishing water. Waste is disposed of in accordance with instructions given by local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

General measures	Remove all ignition sources if it can be done safely. Wear appropriate protective equipment. Pay attention on other possible chemicals in the surroundings. Stop leak if it can be done safely. Evacuate the area.

6.2 Environmental precautions

Environmental precautionary measures	Prevent the spilt product from entering water and sewage systems and from contaminating the soil and vegetation. If it is not possible, immediately inform the police and appropriate authorities.

6.3 Methods and material for containment and cleaning up

Cleaning	Collect in inert absorption material and place in a suitable container. Do not absorb in saw dust or any other flammable material. The contents must be clearly marked with hazards signs on containers, in which the spills have be collected.

6.4 Reference to other sections

Other instructions	Personal protective equipment: see section 8. Waste disposal: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling	Ensure good ventilation. Follow good chemical hygiene. Keep away from ignition sources – No smoking. Collect spilt material. Keep away from heat, sparks and open fire. Prevent sparking caused by static electricity. Keep containers tightly closed before and after use. Eating, drinking, and smoking are prohibited while using the product.

7.2 Conditions for safe storage, including any incompatibilities

Storage	Store in tightly sealed original package or container in a cool place with good ventilation. Keep away from heat/sparks/open fire/hot surfaces. – No smoking. Keep containers tightly closed. Do not store in proximity of groceries or animal food. Do not cut, drill, weld, or carry out any other corresponding actions over the containers or in their proximity.

Conditions for safe storage

Storage temperature	Value: 5–30 °C (41–86 °F)

7.3 Specific end use(s)

Specific methods of use	No specific recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Substance	Identification	Exposure limits	Year
Naphta (petroleum), hydrotreated heavy, <0.1 % benzene	CAS number: 64742-48-9	Exposure limit (8 h): 5 mg/m^3 Source: HTP-Arvot 2020 (in Finnish) Comments: Oil mist	
Butane	CAS number: 106-97-8	Exposure limit (8 h): 800 ppm	

		Exposure limit (8 h): 1900 mg/m³ **Exposure limit (15 min)** Value: 1000 ppm **Exposure limit (15 min)** Value: 2400 mg/m³ **Exposure limit letter code** Letter code: 4
Propane	CAS number: 74-98-6	Exposure limit (8 h): 800 ppm Exposure limit (8 h): 1500 mg/m³ **Exposure limit (15 min)** Value: 1100 ppm **Exposure limit (15 min)** Value: 2000 mg/m³ **Exposure limit letter code** Letter code: 4

Limit values	Source: HTP-Arvot 2020 (in Finnish)

DNEL / PNEC

DNEL	Comment: Data are not available.
PNEC	Comment: Data are not available.

8.2 Exposure controls

Measures to prevent exposure

Product related measures to prevent exposure	Ensure good ventilation. Follow good chemical hygiene. Eating, drinking, and smoking are prohibited while using the product. Remove contaminated clothes and wash them thoroughly before wearing them again. Wash hands and any dirty area with water and soap after finishing the work.

Hand protection

Skin and hand protection, short-term contact	Wearing protective gloves is recommended.
Suitable materials	Nitrile gloves suit best.
Hand protection, comments	Choose best possible gloves in cooperation with the glove supplier. They can tell you the penetration time of the glove material.

Skin protection

Suitable protective clothes	Not necessary in normal circumstances.

Breathing protection

General breathing protection	In normal use circumstances a respirator is not necessary.
Breathing protection is needed	No special precautions, but a respirator has to be used if air impurities exceed hygienic limit values.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	Aerosol package: not specified
Physical state	Liquid.
Colour	Colourless.
Odour	Characteristic.
Odour threshold	Comments: Not suitable.
pH	Comments: Not suitable.
Melting point / melting range	Comments: Not suitable.
Freezing point	Comments: Not suitable.
Boiling point / boiling range	Value: 42 °C (107 °F) Comments: Propellant.
Flash point	Value: –104 °C (–155 °F) Comments: Propellant.
Evaporation rate	Comments: Not suitable.
Flammability	Comments: Not suitable.
Lower explosion limit and unit of measure	Comments: Not suitable.
Upper explosion limit and unit of measure	Comments: Not suitable.
Vapour pressure	Value: < 300 kPa (< 43.5 psi) Temperature: 50 °C (122 °F) Comments: Not suitable.

	Temperature: 20 °C (68 °F)
Vapour density	Comments: Not suitable.
Relative density	Comments: Not suitable.
Density	Comments: Not suitable.
Solubility	Comments: Not suitable.
Partition coefficient: n-octanol / water	Comments: Not suitable.
Spontaneous combustibility	Value: 410 °C (770 °F) Comments: Propellant.
Decomposition temperature	Comments: Not suitable.
Viscosity	Comments: Not suitable.
Explosive properties	Not suitable.
Oxidising properties	Not suitable.

9.2 Other information

9.2.1 –

9.2.2 Other safety properties

Comments	Data not available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Reactivity	There are no known reactivity hazards connected with this product.

10.2 Chemical stability

Stability	Stable when in normal temperatures and used in accordance with instructions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions	There are no known reactivity hazards connected with this product.

10.4 Conditions to avoid

Conditions to avoid	Protect from heat, sparks, and open fire. Not to be exposed to high temperatures or direct sunlight.

10.5 Incompatible materials

Materials to avoid	Strong acids. Strong alkalis.

10.6 Hazardous decomposition products

Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO_2).

SECTION 11: Toxicological information

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

Acute toxicity	Effect tested: LD50 Exposure routes: Orally Value: 15,000 mg/kg Species: Rat Comments: CAS: 64742-48-9 Effect tested: LD50 Exposure routes: Via skin Value: 3,160 mg/kg Species: Rabbit Comments: CAS: 64742-48-9 Effect tested: LC50 Exposure routes: Breathing Duration: 4 h Value: > 20 mg/l Comments: CAS: 64742-48-9 Effect tested: LD50 Exposure routes: Orally Value: > 2000 mg/kg Comments: CAS: 74-98-6 Effect tested: LD50 Exposure routes: Via skin Value: > 2000 mg/kg Comments: CAS: 74-98-6

	Effect tested: LC50 Exposure routes: Breathing Duration: 4 h Value: > 5 mg/l Comments: CAS: 74-98-6 Effect tested: LD50 Exposure routes: Orally Value: > 2000 mg/kg Comments: CAS: 106-97-8 Effect tested: LD50 Exposure routes: Via skin Value: > 2000 mg/kg Comments: CAS: 106-97-8 Effect tested: LC50 Exposure routes: Breathing Duration : 4 h Value: 658 mg/ Comments: CAS: 106-97-8 Effect tested: LD50 Exposure routes: Orally Value: 16,000 mg/kg Species: Rat Comments: CAS: 64742-48-9 Effect tested: LD50 Exposure routes: Via skin Species: Rabbit Comments: CAS: 64742-48-9 Effect tested: LC50 Exposure routes: Breathing Value: > 5 mg/l Comments: CAS: 64742-48-9

Information on other health hazards

Estimation of acute toxicity	Based on the available information classification criteria are not met.
Estimation of skin corrosion	Based on the available information classification criteria are not met.
General respiratory or skin sensitisation	Based on the available information classification criteria are not met.
Mutagenicity	Based on the available information classification criteria are not met.
Estimation of carcinogenicity	Based on the available information classification criteria are not met.
Estimation of reproductive toxicity	Based on the available information classification criteria are not met.
STOT – single exposure, classification	Based on the available information classification criteria are not met.
STOT – repeated exposure, classification	Based on the available information classification criteria are not met.
Estimation of aspiration hazard classification	Based on the available information classification criteria are not met.

11.2 Information on other hazards

Properties that disturb hormone activity	No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity for aquatic organisms, fish	Value: 2,200 mg/l Effective dosage: LC50 Exposure time: 96 h Species: Pimephales promelas (Fathead minnow) Comments: CAS: 64742-48-9
Toxicity for aquatic organisms, crustacean	Value: 1,000 mg/l Effective dosage: EC50

	Exposure time: 96 h Species: Daphnia Magna
Ecological toxicity	No data on the product as such exist.

12.2 Persistence and degradability

Biodegradability	Value: 89.9 % Comments: CAS: 64742-48-9 Test period: 28 days

12.3 Bioaccumulative potential

Bioaccumulative potential, comments	Data not available.

12.4 Mobility in soil

Mobility	No data on the product as such exist. The product is not water-soluble.

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment results	Not suitable.

12.6 Endocrine disrupting properties

Endocrine disrupting properties	No data available.

12.7 Other adverse effects

Other ecological data	No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate waste treatment methods, product	Emissions and waste are disposed of in accordance with the instructions of the local authorities. WARNING: The aerosol is pressurised. Keep away from direct sunlight and temperatures over 50 °C (122 °F). Do not open forcibly or throw to fire even when empty. Do not spray to flames or blazing objects.
European Waste Code (EWC)	European Waste Code (EWC): 160504 gases in pressure containers (including halons) containing hazardous substances. Classified as hazardous waste: Yes.

SECTION 14: Transport information

Product classified as hazardous	Yes

14.1 UN number

ADR/RID/ADN	1950
IMDG	1950
ICAO/IATA	1950

14.2 UN proper shipping name

Trade name to be used in shipping	AEROSOLS
ADR/RID/ADN	AEROSOLS
IMDG	AEROSOLS
ICAO/IATA	AEROSOLS, FLAMMABLE

14.3 Transport hazard class(es)

ADR/RID/ADN	2.1
Classification code ADR/RID/ADN	5F

14.4 Packing group

14.5 Environment hazards

IMDG	No.

14.6 Special precautions for user

Other applicable safety measures of the user	Flammable aerosol.

14.7 Maritime transport in bulk according to IMO instruments

Trade name	AEROSOLS, FLAMMABLE

Other applicable information

Danger label ADR/RID/ADN	2.1
Danger label IMDG	2.1
Danger label ICAO/IATA	2.1

ADR/RID Additional information

Tunnel code	D
Special regulations	190, 327, 344, 625
Transport category	2

IMDG Additional information

EmS	F-D, S-U

Special regulations	63, 190, 277, 327, 344, 959

ICAO/IATA Additional information

Limited quantities	1 L

SECTION 15: Regulatory information

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

Restrictions	No recommendation.
National legislation	Decree of the Ministry of Social Affairs and Health of Finland on delivering notifications on chemicals and information on amounts 1118/2020.
Legislation and regulations	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, with later amendments. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, with later amendments. Seveso directive P5c

15.2 Chemical safety assessment

Chemical safety assessment performed	No

SECTION 16: Other information

Supplier remarks	Data in this material safety data sheet is based on the data that was available to us on the date of compiling, and they have been given provided the product will be used in normal circumstances and in harmony with methods of use indicated in the package and relevant technical literature. Other use of the product, possibly in combination with other products or processes, is done on the responsibility of the user.
List of H phrases used (in sections 2 and 3)	H220 Extremely flammable gas. H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H413 May cause long lasting harmful effects to aquatic life.
The most important sources used in compiling the material safety data sheet	Material safety data sheet January 24th, 2019
Amendment after previous version (additions, removals and checks)	Significant amendments to the previous version are marked on the left margin with vertical lines.
Version	1
English translation	This document is a translation of the original document in Finnish that has been made in accordance with the laws and regulations applicable in Finland. Parts of this document may not be applicable in other countries and territories. This document may lack essential information that is required in other countries and territories.