

Trade name: **RVS Technology Engine Treatment, Transmission Treatment, Gearbox Treatment, Differential Treatment, Professional Gel, Gel**

Date: December 7th, 2001

1. IDENTIFICATION OF THE SUBSTANCE AND MANUFACTURER, IMPORTER, OR OTHER COMPANY

1.1 Identification of the substance or product

Trade name

RVS Technology Engine Treatment, RVS Technology Transmission Treatment, RVS Technology Gearbox Treatment, RVS Technology Differential Treatment, RVS Technology Professional Gel, RVS Technology Gel
(gel in tube or doser pump bottle with or without pump)

Use

Product or part of a product for restoration and modification of metal friction surfaces of equipment of different types

Code of product

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1.2 Identification of manufacturer, importer, or other company

1.2.1 Manufacturer, importer, or other company

RVS-Tec Oy

1.2.2 Street address

Kutomotie 18 B

Post code and office

FIN-00380 Helsinki

Finland

Mail address

P.O. box 621

Post code and office

FIN-00381 Helsinki

Finland

Telephone

+358-(0)9-56596218

Telefax

+358-(0)9-56596300

Company code

1545348-3

1.2.3 Emergency information

Helsinki University Central Hospital, Poison Information Centre, Stenbäckinkatu 11, FIN-00290 Helsinki, Finland

Emergency number

+358-(0)9-2414 392 or +358-(0)9-4711, Helsinki University Central Hospital, Poison Information Centre (24h)

+358-(0)400-939399, RVS-Tec Oy, (24h)

2. COMPOSITION AND INFORMATION ON INGREDIENTS

2.1 Description

Mixture of paraffin and naphtha hydrocarbons, natural minerals and additives on basis of mineral oil.

2.2 Dangerous components

2.2.1 CAS number	2.2.2 Component name	2.2.3 Percentage	2.2.4 Warning sign, threshold limit values and other information on the component
****	Mineral oil	40-80 %	Occupational exposure standard, see 0.
64742-52-5	Distillates (naphtha), treated by hydrogen, heavy, of paraffin/naphtha	20-50 %	-
91001-47-7	Lithium salt of fat acids	< 5 %	-
12001-85-3	Zinc naphthenate	< 2 %	Xi; R36/38

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DESCRIPTION OF HAZARDS

HUMAN HEALTH HAZARDS: No specific hazards under normal use conditions. Contains mineral oil, for which an exposure limit for oil mist applies. Prolonged or repeated exposure may dry and irritate skin and give rise to dermatitis. Used oil may contain harmful impurities.

BURN AND EXPLOSION HAZARDS: Not classified as flammable, but will burn.

ENVIRONMENTAL HAZARDS: Danger of pollution of soil and groundwater. Not readily biodegradable. Bioaccumulation is possible.

See also 5, 0, and 12.

4. FIRST AID MEASURES

4.1 Special measures

-

4.2 Inhalation

If a person exposed to oil mist or vapour has abnormal headache or fatigue, remove him or her to fresh air. If the symptoms persist, obtain medical attention.

4.3 Skin contact

Remove contaminated clothing and wash affected skin with soap and water. If high pressure injection injuries occur, obtain medical attention immediately. If persistent irritation occurs, obtain medical attention.

4.4 Drops to eyes

Flush eyes with copious quantities of water. If persistent irritation occurs, obtain medical attention.

4.5 Ingestion

Wash out mouth with water and obtain medical attention immediately. **DO NOT INDUCE VOMITING.** If the patient does not have nausea, he or she can be given 1 or 2 tea spoons of cream.

4.6 Advice to doctors or other persons giving first aid

Treat symptomatically. Aspiration into the lungs may result in chemical pneumonitis. See information on effects on humans at **Fel! Hittar inte referenskölla.**

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Foam and dry chemical powder. Carbon dioxide, sand or earth for small fires only.

5.2 Extinguishing media, unsuitable for safety reasons

Water. Use of Halon extinguisher should be avoided for environmental reasons.

5.3 Specific dangers of exposure in fire

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5.3 Specific protective equipment for fire

Breathing apparatus with pressurised air and full protection clothing.

Other instructions

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6. ACCIDENTAL RELEASE MEASURES

6.1 Instructions for avoiding personal casualties

Unauthorised persons must be evacuated from the area
See Handling at 0.
See Personal protection at 0.

6.2 Environmental precautions

Prevent from spreading or entering into drain, ditches, groundwater, rivers, and lakes by using sand, earth, or other appropriate barriers and absorption materials. Inform local authorities of the accident. Stop the leak if possible without risks.

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6.3 **Clean-up instructions**

Absorb liquid with sand, earth, or other appropriate absorption material. Sweep up and remove the absorption material to a suitable, clearly marked container for disposal. Dispose in accordance with local regulations. See 0 Disposal consideration.

6.4 **Other instructions**

Immediately inform the local authorities of accident.

7. **HANDLING AND STORAGE**

7.1 **Handling**

When handling product in drums, safety footwear and gloves should be worn and proper handling equipment should be used. Prevent spillages.

7.2 **Dosing**

The mixture is mixed with lubricant used in the equipment to be treated in accordance with separate instructions for different applications, and it is stirred or shaken well.

7.3 **Storage**

Keep in cool, dry, well-ventilated place in the position specified by the package markings (vertical position). Avoid direct sunlight, heat sources, and strong oxidising agents.

Storage temperatures: 0 ° C minimum.

Storage temperatures: 40 ° C maximum.

Unsuitable materials of containers: PVC.

Do not store consumer packages outdoors.

8. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1 **Engineering control measures**

The product should be handled in closed systems or appropriate ventilation should be organised. Avoid repeated or prolonged skin contact and oil mist inhalation. Wear personal protection and/or local ventilation if needed.

8.2 **Occupational exposure standards**

8.2.1 **Threshold limit values**

Wash hands before eating, drinking, smoking, and using the toilet.

Name of component

Oil mist

5 mg/m³ (8 h)

8.3 **Personal protection**

8.3.1 **Specific protection and hygiene instructions**

Wash hands before eating, drinking, smoking, and using the toilet.

8.3.2 **Respiratory protection**

Not normally required. If oil mist cannot be controlled, a respirator fitted with a combined A2/P2 filter (for organic gases and solvent vapours/dust) should be used.

8.3.3 **Hand protection**

Nitrile rubber gloves.

8.3.4 **Eye protection**

Wear safety glasses or full face shield if splashes are likely to occur.

8.3.5 **Skin protection**

Avoid all kinds of skin contact. Wear protective clothing if needed. Launder protective clothing and undergarments regularly.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1 **Physical state, colour, and odour**

Green-like brown oil-like liquid, in which minerals may precipitate on the bottom during storage. Must be shaken or stirred properly before use after long-time storage until the precipitated particles are homogeneously spread in the liquid.

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	pH value	-
9.3	Information on change of state	
9.3.1	Boiling point / area	above 280 ° C
9.3.2	Melting point / area	-
9.3.	Temperature of decomposition	-
9.4	Flash point	above 150 ° C
9.5	Inflammability (solid/gas)	-
9.6	Auto-ignition temperature	above 320 ° C (ASTM D 2155)
9.7	Explosion danger	-
9.8	Flammability limits	
	a) lower	1 % (volume)
	b) upper	10 % (volume)
9.9	Oxidising properties	-
9.10	Vapour pressure	below 0,5 Pa (20 ° C)
9.11	Relative density	869-950 kg/m ³ (15 ° C)
9.12	Solubility	
	a) in water	not soluble
	b) fat-solubility	-
9.13	Octanol / water partition coefficient (for components)	
	Information not available.	

10. STABILITY AND REACTIVITY

10.1	Conditions to avoid
	Extremes of temperature and direct sunlight
10.2	Materials to avoid
	Strong oxidising agents
10.3	Hazardous decomposition products
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11. TOXICOLOGICAL INFORMATION

11.1	Acute toxicity
	Toxicological data have not been determined specifically for this product. Information given is based on the knowledge of the components and the information given by the manufacturers of the products of mineral oil basis used for the suspension of this product.
	Dermal: LD50 above 4 mg/kg
	Oral: LD50 above 5 mg/kg
	Inhalation: Information not available.
11.2	Irritation and corrosion
	Slightly irritant; skin, (estimation)
	Slightly irritant; eyes, (estimation)
	Inhalation of mists may cause slight irritation of the respiratory tracks.
11.3	Sensitisation
	Information not available.
11.4	Sub-acute, sub-chronic and prolonged toxicity
	Not mutagenic hazard. Product is based on mineral oils of types shown to be non-carcinogenic in animal skin-painting studies.
11.5	Empiric knowledge on effect on humans
	prolonged and/or repeated skin contact may cause defatting of the skin, which may lead to skin irritation and possibly cause dermatitis, especially under conditions of poor personal hygiene.
11.6	Other information related to health
	Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. All used oil should be handled with caution and skin contact should be avoided as far as possible.

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ECOLOGICAL INFORMATION

- 12.1 Persistence in environment**
- 12.1.1 Biological degradability**
Not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
- 12.1.2 Chemical degradability**
-
- 12.2 Bioaccumulation**
Bioaccumulation is possible
- 12.3 Mobility in environment**
Liquid under most environmental conditions. The product is lighter than water, and floats on it. If the product enters soil, major part of it will adsorb to soil particles but some of it may reach the groundwater surface. Basic oil hydrocarbons may be adsorbed to organic material of soil or sediment. Big quantities of the product may pollute the soil and groundwater.
- 12.4 Ecotoxicity**
- 12.4.1 Aquatic organisms**
Poorly soluble mixture. Product is expected to dirty aquatic organisms. In practice the toxicity of the product to aquatic organisms is low, LC/EC50 > 100 mg/l (estimation).
- 12.4.2 Other organisms**
Information not available.
- 12.5 Other information**
Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

13. DISPOSAL CONSIDERATIONS

Waste containing the product is hazardous. To be disposed in accordance with the appropriate legislation and instructions of the appropriate authorities. When handling the waste, take into account the dangers caused by the product and take care of the necessary safety precautions, warning signs, and obligation of information.

14. TRANSPORT INFORMATION

- 14.1 UN number** -
- 14.2 Package group** -
- 14.3 Transport by land** -
- 14.3.1 Transport group ADR** -
- 14.3.2 Code number of danger** -
- 14.3.3 Item according to bill of freight** -
- 14.3.4 Other information** -
- 14.4 Transport by sea**
- 14.4.1 IMDG class** -
- 14.4.2 Proper technical name**
- 14.5 Transport by air**
- 14.5.1 ICAO/IATA class** -

15. REGULATORY INFORMATION ON CHEMICALS

- 15.1 Information of warning label**
- 15.1.1 Letter code and name of warning sign**
-
- 15.1.2 S clauses**
S24 Beware of chemical getting onto skin
S60 This material and its package have to be handled as hazardous waste

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National regulations

All the components are listed in EINECS or freed.

16. OTHER INFORMATION

16.1 Use

16.1.1 Described in words

Compensation of friction and wear by carrying to the object via lubricating system.

16.1.2 Code of use

TOL:I602 Other transport by land KT: 23 Lubricants

G505 Car repair activities

16.2 Instruction for use

Delivered separately for the application of the client.

16.3 Other information

This information has to be available for all those who handle this product. The sheet is based on the current information and has been meant to respond to the health, safety, and environmental questions related to the product. This sheet is not to be given as a guarantee of any property of the product.

16.4 Additional information given by

RVS-Tec Oy

16.5 Sources of information used for the sheet

Estimation made on the basis of the information on the components. ZAO NPO Ruspromremont, St. Petersburg, Russia. Oy Shell Ab, Finland. Fortum Oil & Gas Oy, Finland. Research Institute of Geology, Finland.