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1. **IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

Product details REMS SPEZIAL SPRAY

28190

Recommended use:
Water miscible coolant

Identification of the manufacturer / supplier

REMS-WERK

Christian Föll und Söhne GmbH

Stuttgarter Strasse 83

D-71332 Waiblingen

Phone: +49(0)7151/1707-0 Fax: +49(0)7151/1707-110

Emergency phone: +49(0)7161/802-400

Advising personal/Phone: Product safety: +49(0)7161/802-297

2. **Hazards possibilities**

Hazard designation:

F+ Extremely flammable

Specific hazards to man and the environment:

12 Extremely flammable.

In use, may form flammable/explosive vapour-air mixture.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

3. **Composition / information on ingredients**

Chemical characterization

Preparation of pressure gas, mineral oil with native greases, non-ionic surfactans and organic chlorous components.

Hazardous ingredients:

EINECS-No.	Name	Symb.	Conc.-%
CAS-No.	R-phrases		
200-827-9	propane		
74-98-6	12	F+	5 - 10
203-448-7	butane		
106-97-8	12	F+	25 - 100
	fatty alcohol ethoxylate		
	38	Xi	2.5 - 5

Additional information:

Meanings of R-phrases see under chapt.16.

4. **First aid measures**

General information

Remove contaminated clothing immediately and dispose of safely.

After inhalation

Remove the casualty into fresh air and keep him calm.

After skin contact

In case of contact with skin wash off immediately with plenty of

After eye contact

In case of contact with the eyes rinse thoroughly with plenty of water or with an eye-cleaning solution.

In case of irritation consult an oculist.

After ingestion

Do not induce vomiting.

Rinse out mouth and give plenty of water to drink.

Summon a doctor immediately.

5. **Firefighting measures**

Suitable extinguishing media

Foam

Dry powder

Carbon dioxide

Extinguishing media that must not be used for safety reasons

Full water jet

Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases

In the event of fire the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO₂)

In case of combustion evolution of dangerous gases possible.

HCl, SO₂, H₂S

Special protective equipment for firefighting

Do not inhale explosion and/or combustion gases.

Use self-contained breathing apparatus.

Other information

Cool endangered containers with water spray jet.

6. **Accidental release measures**

Personal precautions

Use personal protective clothing.

Ensure adequate ventilation.

Keep away sources of ignition.

Use breathing apparatus if exposed to vapours/dust/aerosol.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up/taking up

Take up with absorbent material (eg sand, kieselguhr, universal binder).

Dispose of absorbed material in accordance with the regulations.

7. **Handling and storage**

Handling

Advice on safe handling

Use personal protective clothing.

Open and handle container with care.

Avoid formation of aerosols.

Use only in well ventilated areas.

Advice on protection against fire and explosion

Vapours can form an explosive mixture with air.

Keep away from sources of ignition - refrain from smoking.

Containers in danger should be cooled with water.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

Storage

Requirements for storage rooms and vessels

Protect from heat and direct sunlight.

Keep in a cool place, heat causes increase in pressure and risk of bursting.

Keep container in a well-ventilated place.

Keep container tightly closed.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional hints on technical system design.

See chapter 7; no measures exceeding the ones mentioned are necessary.

Ingredients with occupational exposure limits to be monitored

EINECS-No.	Name	Type	Value	Unit
203-448-7	butane	750	600	ppm

Personal protective equipment

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation.

Hand protection

Eye protection

General protective measures

Do not inhale gases/vapours/aerosols.

Use only in well ventilated areas.

Avoid contact with eyes and skin.

At work do not eat, drink, smoke or take drugs.

Keep away from foodstuffs and beverages.

Wash hands before breaks and after work.

9. **Physical and chemical properties**

Form aerosol
Colour brownish
Odour typical

	Value	Unit	Method
Flash point	n.a.	°C	
Viscosity	20 °C	n.a.	
Density :	20 °C	0.76	g/cm3
Lower explosion limit :		n.a.	Vol.%
Upper explosion limit:		n.a.	Vol.%
Solubility in water / method		emulsive	
Pourpoint		n.a.	°C
Boiling point:		n.b.	°C
Bulk density :		n.a.	kg/m3
Vapour pressure: 20 °C		insoluble	bar
pH value :	20 °C	n.a.	

10. **Stability and reactivity**

Materials to avoid

Reactions with strong oxidising agents.

Hazardous decomposition products

Flammable gases/vapours

No hazardous reactions when stored and handled according to prescribed instructions.

11. **TOXICOLOGICAL INFORMATION**

General remarks.

No toxicological data are available.

Experience in practice

Inhalation causes narcotic effect/intoxication.

12. **ECOLOGICAL INFORMATION**

Do not discharge into the drains/surface waters/groundwater.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment.

13. **Disposal considerations**

Product

Waste code

150104

metallic packaging

The listed waste code numbers, according to the European Waste Catalogue (EWC), are to be understood as a recommendation. A final decision must be made in agreement with the regional waste disposal company.

Uncleaned packaging

Uncontaminated packaging may be taken for recycling.

Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

14. **Transport information**

Land transport ADR/RID

Class : 2
Tremcard : 2.1
UN number : 1950
Technical name : Aerosols, flammable

PG : n.a.
Hazard id. no. : 23

Marine transport IMDG/GGVSee

Class : 2
EmS : F-D, S-U
UN number : 1950
Correct technical name : AEROSOLS
PG : n.a.
MARINE POLLUTANT :

Air transport ICAO/IATA

Class : 2.1
UN number : 1950
Correct technical name : Aerosols, flammable
PG : n.a.

Other information

15. **REGULATORY INFORMATION**

Labelling in accordance with EC directives

The product is classified and labelled in accordance with EC directives/GefStoff V

F+ Extremely flammable

Contains:

n.a.

R phrases:

12 Extremely flammable.

In use, may form flammable/explosive vapour-air mixture.

S phrases:

16 Keep away from sources of ignition - No smoking.

51 Use only in well-ventilated areas.

Special provisions concerning the labelling of preparations:

n.a.

Special labelling for certain preparations

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material.

National regulations

Water hazard class / source 2

(VwVwS)

VbF (Germany) : -

Restriction of occupation.

Observe employment restrictions for young people.

Observe employment restrictions for child bearing mothers and nursing mothers.

16. Other information

12 Extremely flammable.

38 Irritating to skin.

The data mentioned in the present safety data sheet correspond to our latest knowledge and experience and may be used to precise safety requirements for the different products. The information given therein is no warranty as to quality.

Please also read our technical data sheet.

Revised chapters:

1,2,3,8,11,12,15,16.

n.a.: not applicable

n.b.: not determined