Safety Data Sheet

according to UK REACH Regulation

DINITROL RC 900 Spray

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

1.1. Product identifier

DINITROL RC 900 Spray

UFI: K53Y-C8FE-U00J-U7NF

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

Use of the substance/mixture

Anti-corrosive coating

1.3. Details of the supplier of the safety data sheet

Company name:	DINOL GmbH	
Street:	Pyrmonter Strasse 76	
Place:	D-32676 Luegde	
Telephone:	+ 49 (0) 5281 982980	Telefax: + 49 (0) 5281 9829860
E-mail:	msds@dinol.com	
Contact person:	Labor	
Responsible Department:	msds@dinol.com	

1.4. Emergency telephone number:

Giftnotruf Berlin: +49 30 30686 700 (Beratung in Deutsch und Englisch)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Aerosol 1; H222-H229
Eye Irrit. 2; H319
STOT SE 3; H336

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

acetone; propan-2-one; propanone
1-methoxy-2-propanol; monopropylene glycol methyl ether
propan-2-ol; isopropyl alcohol; isopropanol

Signal word: Danger

Pictograms:

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

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.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Additional advice on labelling

The classification of the aerosol was carried out according to EC 1272/2008, Annex 1, point 1.1.3.7.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:

Hazard statements

H222-H229

Precautionary statements

P210-P211-P251-P410+P412

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
115-10-6	dimethyl ether			45 - < 50 %
	204-065-8		01-2119472128-37	
	Flam. Gas 1, Press. Gas (Liq.); H220 H280			
67-64-1	acetone; propan-2-one; propanone			15 - < 20 %
	200-662-2	606-001-00-8		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			5 - < 10 %
	203-539-1	603-064-00-3	01-2119457435-35	
	Flam. Liq. 3, STOT SE 3; H226 H336			
112-34-5	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether			5 - < 10 %
	203-961-6	603-096-00-8		
	Eye Irrit. 2; H319			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			5 - < 10 %
	200-661-7	603-117-00-0		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
108-65-6	2-methoxy-1-methylethyl acetate			5 - < 10 %
	203-603-9	607-195-00-7		
	Flam. Liq. 3; H226			
64-18-6	Formic acid			< 1 %
	200-579-1		01-2119491174-37	
	Acute Tox. 3, Acute Tox. 4, Skin Corr. 1C; H331 H302 H314			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
115-10-6	204-065-8	dimethyl ether	45 - < 50 %
	inhalation: LC50 = 308 mg/l (vapours)		
67-64-1	200-662-2	acetone; propan-2-one; propanone	15 - < 20 %
	inhalation: LC50 = 76 mg/l (vapours); dermal: LD50 = 20000 mg/kg; oral: LD50 = 5800 mg/kg		
107-98-2	203-539-1	1-methoxy-2-propanol; monopropylene glycol methyl ether	5 - < 10 %
	dermal: LD50 = >2000 mg/kg; oral: LD50 = > 5000 mg/kg		
112-34-5	203-961-6	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	5 - < 10 %
	dermal: LD50 = 4120 mg/kg; oral: LD50 = 5660 mg/kg		
108-65-6	203-603-9	2-methoxy-1-methylethyl acetate	5 - < 10 %
	dermal: LD50 = 7500 mg/kg; oral: LD50 = 8532 mg/kg		
64-18-6	200-579-1	Formic acid	< 1 %
	inhalation: LC50 = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: LD50 = 1100 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice.
Never give anything by mouth to an unconscious person or a person with cramps.
If unconscious but breathing normally, place in recovery position and seek medical advice.

After inhalation

Remove casualty to fresh air and keep warm and at rest.
If unconscious but breathing normally, place in recovery position and seek medical advice.

After contact with skin

Change contaminated clothing.
Wash with plenty of water/Soap.
If skin irritation occurs: Get medical advice/attention.

After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion

If swallowed, rinse mouth with water (only if the person is conscious).
Call a physician immediately.
Put victim at rest, cover with a blanket and keep warm.
Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Nausea, Dizziness, Headache.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Carbon dioxide (CO2), Extinguishing powder, Water fog.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products: Danger of serious damage to health by prolonged exposure.
Do not inhale explosion and combustion gases. Use appropriate respiratory protection.

5.3. Advice for firefighters

Use water spray jet to protect personnel and to cool endangered containers.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Remove all sources of ignition. Provide adequate ventilation.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wear personal protection equipment.
Avoid contact with skin, eyes and clothes.

For emergency responders

For further specification, refer to section 8 of the SDS.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment

Prevent spread over a wide area (e.g. by containment or oil barriers).
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Provide adequate ventilation.
Clear contaminated areas thoroughly.
Do not rinse down with water.

Other information

No information available.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle and open container with care.
If handled uncovered, arrangements with local exhaust ventilation have to be used.
If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

Take precautionary measures against static discharges.
Do not spray on naked flames or any incandescent material.
Keep away from sources of ignition - No smoking.
Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.
When using do not eat or drink.
Wash hands before breaks and after work.
Avoid contact with skin and eyes.
Remove contaminated, saturated clothing immediately.
Do not breathe gas/vapour/aerosol.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.
Do not keep the container sealed. Keep container dry.
Keep away from heat. Protect from direct sunlight.

Further information on storage conditions

Keep container tightly closed. Do not keep the container sealed. Store in a cool dry place. Protect from sunlight.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-98-2	1-Methoxypropan-2-ol	100	375		TWA (8 h)	WEL
		150	560		STEL (15 min)	WEL
108-65-6	1-Methoxypropyl acetate	50	274		TWA (8 h)	WEL
		100	548		STEL (15 min)	WEL
112-34-5	2-(2-Butoxyethoxy)ethanol	10	67.5		TWA (8 h)	WEL
		15	101.2		STEL (15 min)	WEL
67-64-1	Acetone	500	1210		TWA (8 h)	WEL
		1500	3620		STEL (15 min)	WEL
115-10-6	Dimethyl ether	400	766		TWA (8 h)	WEL
		500	958		STEL (15 min)	WEL
64-18-6	Formic acid	5	9.6		TWA (8 h)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

8.2. Exposure controls


Appropriate engineering controls

Provide adequate ventilation.
If handled uncovered, arrangements with local exhaust ventilation should be used if possible.
If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

Eye/face protection

Eye glasses with side protection (EN 166)

Hand protection

Tested protective gloves must be worn (EN ISO 374):
FKM (fluoro rubber), Breakthrough time::
PVA (Polyvinyl alcohol), Breakthrough time::
NBR (Nitrile rubber), Breakthrough time::
Butyl caoutchouc (butyl rubber), Breakthrough time::
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Protective gloves have to be replaced at the first sign of deterioration.
Protect skin by using skin protective cream.

Skin protection

Wear anti-static footwear and clothing

Respiratory protection

Work in well-ventilated zones or use proper respiratory protection.
gas filtering equipment (EN 141)., Filter material/medium: A/P2 / AX

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol	
Colour:	amber	
Odour:	characteristic	
Odour threshold:	not determined	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		82 °C
Flammability:		not applicable not applicable
Lower explosion limits:		2,6 vol. %
Upper explosion limits:		18,6 vol. %
Flash point:		not applicable
Auto-ignition temperature:		235 °C
Decomposition temperature:		not determined
pH-Value (at 20 °C):		4,8
Viscosity / kinematic:		not determined
Water solubility:		The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents
not determined

Partition coefficient n-octanol/water:	not determined
Vapour pressure: (at 20 °C)	5200 hPa
Density (at 20 °C):	1,0 g/cm³
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties
not determined

Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Oxidizing properties	
not determined	

Other safety characteristics

Evaporation rate:	not determined
Solvent content:	67,5 %
Solid content:	1,5%
Viscosity / dynamic:	not determined

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from heat. Ignition hazard.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Carbon monoxide

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) 336,7 mg/l; ATE (inhalation dust/mist) 56,12 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
115-10-6	dimethyl ether					
	inhalation (4 h) vapour	LC50	308 mg/l	Rat		
67-64-1	acetone; propan-2-one; propanone					
	oral	LD50 mg/kg	5800	Rat	RTECS	
	dermal	LD50 mg/kg	20000	Rabbit	IUCLID	
	inhalation (4 h) vapour	LC50	76 mg/l	Rat		
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether					
	oral	LD50 mg/kg	> 5000	Rat	IUCLID	
	dermal	LD50 mg/kg	>2000	Rabbit		
112-34-5	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether					
	oral	LD50 mg/kg	5660	Rat		
	dermal	LD50 mg/kg	4120	Rabbit		
108-65-6	2-methoxy-1-methylethyl acetate					
	oral	LD50 mg/kg	8532	Rat	RTECS	
	dermal	LD50 mg/kg	7500	Rabbit		
64-18-6	Formic acid					
	oral	LD50 mg/kg	1100	Rat		
	inhalation (4 h) vapour	LC50	3 mg/l			
	inhalation dust/mist	ATE	0,5 mg/l			

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (acetone; propan-2-one; propanone)

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Endocrine disrupting properties

Endocrine disrupting potential No information available.

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
67-64-1	acetone; propan-2-one; propanone						
	Acute fish toxicity	LC50	5540 mg/l	96 h	Onchorhynchus mykiss		
	Acute crustacea toxicity	EC50	6100 mg/l	48 h	Daphnia magna		
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether						
	Acute fish toxicity	LC50	4600 - 10000 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50	> 1000 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50	> 500 mg/l	48 h	Daphnia magna	IUCLID	
112-34-5	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether						
	Acute algae toxicity	ErC50	> 100 mg/l		Scenedesmus sp.		
	Acute crustacea toxicity	EC50	> 100 mg/l	48 h	Daphnia magna		
108-65-6	2-methoxy-1-methylethyl acetate						
	Acute fish toxicity	LC50	161 mg/l	96 h	Pimephales promelas		
	Acute crustacea toxicity	EC50	408 mg/l	48 h	Daphnia magna		

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
115-10-6	dimethyl ether	0,1
67-64-1	acetone; propan-2-one; propanone	-0,24
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	-0,437
112-34-5	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	0,56 (25°C)
108-65-6	2-methoxy-1-methylethyl acetate	0,43

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation. Do not mix with other wastes.
List of proposed waste codes/waste designations in accordance with EWC:

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Remove according to the regulations.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1

Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Transport category:	2
Tunnel restriction code:	D

Other applicable information (land transport)

E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1

Marine pollutant:	no
Special Provisions:	63, 190, 277, 327, 344, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN1950
14.2. UN proper shipping name:	AEROSOLS, flammable
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-

Hazard label:	2.1	
		
Special Provisions:	A145 A167 A802	
Limited quantity Passenger:	30 kg G	
IATA-packing instructions - Passenger:		203
IATA-max. quantity - Passenger:		75 kg
IATA-packing instructions - Cargo:		203
IATA-max. quantity - Cargo:		150 kg

Other applicable information (air transport)

E0

Passenger-LQ: Y203

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Gases under pressure

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Other applicable information

Stowage Code:
SW1 Protected from sources of heat.
SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre:Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

Segregation Code:
SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 55, Entry 75

Directive 2004/42/EC on VOC in paints and varnishes:	67,54 % 675,4 g/l
Information according to Directive 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

Additional information

Observe in addition any national regulations!
Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	1 - slightly hazardous to water

Additional information

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Flam. Gas: Flammable gases
Aerosol: Aerosols
Press. Gas (Liq.): Liquefied gas
Flam. Liq: Flammable liquids
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Irrit: Eye irritation
STOT SE: Specific target organ toxicity - single exposure
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Eye Irrit. 2; H319	Bridging principle "Aerosols"
STOT SE 3; H336	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product

named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)