Safety Data Sheet

according to UK REACH Regulation

DINITROL 353 Spray

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

1.1. Product identifier

DINITROL 353 Spray

UFI: A1QQ-C2QX-500C-S4FC

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

Use of the substance/mixture

Lubricating agent, Lubricants, greases, release products

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)

Further Information

602288

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Aerosol 1; H222-H229
STOT SE 3; H336
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

pentane
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Signal word: Danger

Pictograms:

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

EUH066	Repeated exposure may cause skin dryness or cracking. Restricted to professional users.

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)			
109-66-0	pentane			25 - < 50 %
	203-692-4	601-006-00-1	01-2119459286-30	
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H336 H304 H411 EUH066			
74-98-6	propane			12,5 - 20 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Press. Gas (Comp.); H220 H280			
	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			10 - < 12,5 %
	919-857-5		01-2119463258-33	
	Flam. Liq. 3, STOT SE 3, Asp. Tox. 1; H226 H336 H304 EUH066			
106-97-8	butane (<0,1 % butadiene)			5-10 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Press. Gas (Comp.); H220 H280			
75-28-5	isobutane			5-10 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Press. Gas (Liq.); H220 H280			

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		
109-66-0	203-692-4	pentane	25 - < 50 %
	inhalation: LC50 = > 25,3 mg/l (vapours); oral: LD50 = >5000 mg/kg		
	919-857-5	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	10 - < 12,5 %
	inhalation: LC50 = 5000 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg		

Further Information

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

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

Provide fresh air. In case of troubles or persistent symptoms, consult an ophthalmologist.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Carbon dioxide (CO2), Extinguishing powder, Water fog.
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Gases/vapours, toxic

5.3. Advice for firefighters

Use water spray jet to protect personnel and to cool endangered containers.
In case of fire: Wear self-contained breathing apparatus.

Additional information

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

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

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.

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.

Hints on joint storage

No information available.

Further information on storage conditions

Keep container tightly closed.

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
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL
109-66-0	Pentane	600	1800		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
109-66-0	pentane		
Worker DNEL, long-term	inhalation	systemic	3000 mg/m³
Worker DNEL, long-term	dermal	systemic	432 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	643 mg/m³
Consumer DNEL, long-term	dermal	systemic	214 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	214 mg/kg bw/day
	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics		
Consumer DNEL, long-term	oral	systemic	125 mg/kg bw/day
Worker DNEL, long-term	dermal	systemic	208 mg/kg bw/day
Consumer DNEL, long-term	dermal	systemic	125 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	871 mg/m³
Consumer DNEL, long-term	inhalation	systemic	185 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
109-66-0	pentane
Freshwater	0,230 mg/l
Marine water	0,230 mg/l
Freshwater sediment	1,2 mg/kg
Marine sediment	1,2 mg/kg
Micro-organisms in sewage treatment plants (STP)	3,600 mg/l

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 (DIN EN 166)

Hand protection

Tested protective gloves must be worn (EN ISO 374):
FKM (fluoro rubber) penetration time (maximum wearing period): 480 min.
NBR (Nitrile rubber) penetration time (maximum wearing period): 480 min.
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: A2/P3

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol	
Colour:	light brown	
Odour:	like: Solvent	
Odour threshold:	not determined	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		not applicable
Flammability:		not applicable
Lower explosion limits:		1,4 vol. %
Upper explosion limits:		10,9 vol. %
Flash point:		not applicable
Auto-ignition temperature:		240 °C
Decomposition temperature:		not determined
pH-Value:		not determined
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)	3500 hPa

Density (at 20 °C):	0,7 g/cm³
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

not determined

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:	not determined
Solvent content:	40,0 %
Solid content:	0,0 %
Softening point:	not determined
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

No further relevant information available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

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 gas) > 20000 ppm

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
109-66-0	pentane				
	oral	LD50 >5000 mg/kg	Rat		
	inhalation (4 h) vapour	LC50 > 25,3 mg/l	Rat		
	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics				
	oral	LD50 > 5000 mg/kg	Rat		
	dermal	LD50 > 5000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 5000 mg/l	Rat		

Irritation and corrosivity

Based on available data, the classification criteria are not met.
Repeated exposure may cause skin dryness or cracking.

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. (pentane)

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.

Information on likely routes of exposure

No information available.

Specific effects in experiment on an animal

No information available.

Additional information on tests

No information available.

Practical experience

No information available.

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

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
109-66-0	pentane					
	Acute fish toxicity	LC50 4,26 mg/l	96 h	fish		
	Acute crustacea toxicity	EC50 9,7 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			
		80%		
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

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

Avoid release to the environment.

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 - residues/unused products

200113 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Solvents; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Remove according to the regulations.
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 naked flames or any incandescent material.
Provide adequate ventilation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1950
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
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1950
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
Excepted quantity:	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:	yes
Special Provisions:	63, 190, 277, 327, 344, 381, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: Pentane

14.6. Special precautions for user

No information available.

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 28, Entry 40, Entry 75

Directive 2004/42/EC on VOC in paints and varnishes:	64,2 % (449,4 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS
Additional information:	E2

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

For the following substances of this mixture a chemical safety assessment has been carried out:
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,9.

Abbreviations and acronyms

Flam. Gas: Flammable gases
Aerosol: Aerosols
Press. Gas (Comp.): Compressed gas
Press. Gas (Liq.): Liquefied gas
Flam. Liq: Flammable liquids
Asp. Tox: Aspiration hazard
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
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
STOT SE 3; H336	Bridging principle "Aerosols"
Aquatic Chronic 2; H411	Calculation method

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.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
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.)