

according to Regulation (EC) No 1907/2006

DINITROL 77B Spray

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

1.1. Product identifier

DINITROL 77B Spray

UFI: N73X-C12S-T009-FYX4

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

number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories: Aerosol: Aerosol 1

Acute toxicity: Acute Tox. 4 Aspiration hazard: Asp. Tox. 1

Specific target organ toxicity - single exposure: STOT SE 3 Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

Harmful if inhaled.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

n-butane

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.

H332 Harmful if inhaled.



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H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smokina.

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.

P273 Avoid release to the environment.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

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

P405 Store locked up.

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.
EUH208 Contains calcium sulfonate. May produce an allergic reaction.

Additional advice on labelling

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

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name				
	EC No	Index No	REACH No		
	GHS Classification				
64742-48-9	Hydrocarbons, C9-C11, n-alkanes,	isoalkanes, cyclics, <2% aromatics		45 - < 50 %	
	919-857-5	649-327-00-6	01-2119463258-33		
	Flam. Liq. 3, STOT SE 3, Asp. Tox.	1; H226 H336 H304 EUH066			
74-98-6	propane			10 - < 15 %	
	200-827-9		01-2119486944-21		
	Flam. Gas 1A, Compressed gas; H	220 H280			
106-97-8	n-butane			10 - < 15 %	
	203-448-7		01-2119474691-32		
	Flam. Gas 1A, Compressed gas, A	cute Tox. 3; H220 H280 H331			
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol			< 1 %	
	246-807-3		01-2119510876-35		
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H400 H410				

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



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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc.	Limits, M-factors and ATE	
106-97-8	203-448-7	n-butane	10 - < 15 %
	inhalation: ATE = 658 ppm (gas	E = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); inhalation: LC50 ses)	
25307-17-9	246-807-3	2,2'-(octadec-9-enylimino)bisethanol	< 1 %
	oral: LD50 = >3 M chron.; H410	300-2000 mg/kg M akut; H400: M=10 : M=1	

Further Information

Hydrocarbons meet the requirements for not being classified as carcinogenic (<0,1% benzene alt<3% (w/w) DMSO extract (IP 346)).

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.

After inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2), alcohol resistant foam, Extinguishing powder In case of major fire and large quantities: Water spray jet, alcohol resistant foam

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

No further relevant information available.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

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.





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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

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

Do not pierce or burn, even after use. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

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

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

No special measures are necessary.

7.3. Specific end use(s)

No further relevant 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



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DNEL/DMEL values

CAS No	Substance				
DNEL type		Exposure route	Effect	Value	
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <20	% aromatics			
,					
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol				
Worker DNEL	, long-term	inhalation	systemic	2,122 mg/m³	
Worker DNEL, long-term		dermal	systemic	0,3 mg/kg bw/day	
Consumer DNEL, long-term		inhalation	systemic	0,745 mg/m³	
Consumer DNEL, long-term		dermal	systemic	0,214 mg/kg bw/day	
Consumer DNEL, long-term		oral	systemic	0,214 mg/kg bw/day	

PNEC values

CAS No	Substance		
Environmental	Environmental compartment Value		
25307-17-9 2,2'-(octadec-9-enylimino)bisethanol			
Freshwater 0,000214 mg/l			
Marine water 0,000021		0,0000214 mg/l	
Freshwater sediment 1,692 mg/kg		1,692 mg/kg	
Marine sediment 0,1692 mg/k		0,1692 mg/kg	
Secondary poisoning 2 mg/kg		2 mg/kg	
Soil 5 mg/kg		5 mg/kg	

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Not required.

Recommended eye protection articles: Eye glasses with side protection (DIN EN 166)

Hand protection

Not required.

Recommended glove articles

NBR (Nitrile rubber) - (> = 0,12 mm), Breakthrough time (maximum wearing time): 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.



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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: AX

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Aerosol
Colour: brown
Odour: characteristic
Odour threshold: not determined

Test method

pH-Value: not determined

Changes in the physical state

Melting point: not determined

Boiling point or initial boiling point and -44 °C

boiling range:

Flash point: < -20 °C

Flammability

Solid/liquid: not applicable
Gas: not applicable

Explosive properties

not determined

Lower explosion limits: 0,6 vol. %
Upper explosion limits: 10,9 vol. %
Auto-ignition temperature: > 200 °C

Self-ignition temperature

Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapour pressure: 8300 hPa

(at 20 °C)

Density (at 20 °C): 0,736 g/cm³ DIN 51757

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:

Viscosity / dynamic:

Viscosity / kinematic:

Relative vapour density:

Evaporation rate:

not determined

not determined

not determined



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Solvent content: 64,10 %

9.2. Other information

Solid content: 35,90 %

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 information available.

10.6. Hazardous decomposition products

Carbon monoxide

SECTION 11: Toxicological information

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

Acute toxicity

Harmful if inhaled.

ATEmix calculated

ATE (inhalation aerosol) 3,571 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
106-97-8	n-butane					
	inhalation vapour	ATE	3 mg/l			
	inhalation aerosol	ATE	0,5 mg/l			
	inhalation (4 h) gas	LC50	658 ppm	Rat		
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol					
	oral	LD50 2000 mg/kg	>300-	Rat		

Irritation and corrosivity

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

Sensitising effects

Contains calcium sulfonate. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause drowsiness or dizziness. (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.



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Aspiration hazard

May be fatal if swallowed and enters airways.

Observe risk of aspiration if vomiting occurs. Potential hazards: Pneumonia

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol						
	Acute algae toxicity	ErC50 mg/l	>0,01-1		Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 mg/l	>0,01-1		Daphnia magna (Big water flea)		

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation	-		•
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aror	matics		
		80%		
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
74-98-6	propane	2,36

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

not applicable

12.7. Other adverse effects

No information available.

Further information

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

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 - residues/unused products



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160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and

discarded chemicals; gases in pressure containers (including halons) containing hazardous

substances; hazardous waste

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:UN 195014.2. UN proper shipping name:AEROSOLS

14.3. Transport hazard class(es):214.4. 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

Other applicable information (land transport)

E0

Inland waterways transport (ADN)

14.1. UN number: UN 1950 **14.2. UN proper shipping name:** AEROSOLS

14.3. Transport hazard class(es):214.4. 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:UN 195014.2. UN proper shipping name:AEROSOLS

14.3. Transport hazard class(es):2.114.4. Packing group:-Hazard label:2.1



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Marine pollutant: no

Special Provisions: 63, 190, 277, 327, 344, 381, 959

Limited quantity: 1000 mL Excepted quantity: E0 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1950

14.2. UN proper shipping name: AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es):2.114.4. Packing group:-Hazard label:2.1



Special Provisions: A145 A167 A802

Limited quantity Passenger: 30 kg G
Passenger LQ: Y203
Excepted quantity: E0

IATA-packing instructions - Passenger:203IATA-max. quantity - Passenger:75 kgIATA-packing instructions - Cargo:203IATA-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

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.

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:





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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 29, Entry 40

2004/42/EC (VOC): 64,10 %

471,8 q/l

Subcategory according to Directive

2004/42/EC:

Special finishes - All types, VOC limit value: 840 g/l

Information according to 2012/18/EU

(SEVESO III):

P3a FLAMMABLE AEROSOLS

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

Aerosol directive (75/324/EEC).

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): 3 - highly hazardous to water

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

Abbreviations and acronyms

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%



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Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Acute Tox. 4; H332	Calculation method
Asp. Tox. 1; H304	
STOT SE 3; H336	Bridging principle "Aerosols"
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H226	Flammable liquid and vapour.
11000	Dunner mineral constains an Mary lave

H229 Pressurised container: May burst if heated.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.

H331 Toxic if inhaled. H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH208 Contains calcium sulfonate. May produce an allergic reaction.

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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)