

DINITROL 447 Spray

Revision date: 09.11.2023

Product code: 30447

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1. Identification

Product identifier

DINITROL 447 Spray

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

Use of the substance/mixture

Anti-corrosive coating

Details of the supplier of the safety data sheet

Manufacturer

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

Telefax: + 49 (0) 5281 9829860

Supplier

Company name: DINOL U.S. Inc.
Street: 8500 Cotter Street, Lewis Center
Place: USA-43035 Ohio
Telephone: 740-548-1656
E-mail: info@dinolus.com
Internet: www.dinol.com

Telefax: 740-548-1657

Emergency telephone number: 3E Company Emergency +1-866-404-4230

2. Hazard identification

Classification of the substance or mixture

WHMIS 2015

Aerosol: Aerosol 1
Gases under pressure: Compressed gas
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Respiratory or skin sensitization: Skin Sens. 1
Carcinogenicity: Carc. 2
Specific target organ toxicity - single exposure: STOT SE 3 (narcotic effects)
Specific target organ toxicity - repeated exposure: STOT RE 1
Specific target organ toxicity - repeated exposure: STOT RE 2

Label elements

WHMIS 2015

Signal word: Danger

Pictograms:



Hazard statements

Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes skin irritation.

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May cause an allergic skin reaction.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash water thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves and eye/face protection.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
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.

Other hazards

No information available.

3. Composition/information on ingredients

Mixtures

Hazardous components

CAS No	Chemical name	Quantity
1330-20-7	xylene	10 - < 30% (*)
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	7 - < 13% (*)
141-78-6	ethyl acetate	7 - < 13% (*)
	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	1 - < 5% (*)
1330-20-7	xylene	1 - < 5% (*)
64-17-5	Ethanol	1 - < 5% (*)
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	0.5 - < 1.5% (*)
25085-50-1	Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol	0.5 - < 1.5% (*)
8050-09-7	Rosin, colophony	0.1 - < 1% (*)
1333-86-4	Carbon Black	0.1 - < 1% (*)

(*) The actual concentration is withheld as a trade secret.

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4. First-aid measures**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.

Most important symptoms and effects, whether acute or delayed

Nausea, Dizziness, Headache.

Indication of immediate medical attention and special treatment needed

No information available.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

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

Unsuitable extinguishing media

High power water jet.

Specific hazards arising from the hazardous product

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

Special protective equipment and precautions for fire-fighters

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.

6. Accidental release measures**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.

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Avoid contact with skin, eyes and clothes.

For emergency responders

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

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.

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.

Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

7. Handling and storage**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

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from food, drink and animal feedingstuffs. 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.

Remove contaminated, saturated clothing immediately.

Do not breathe gas/vapour/aerosol.

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.

8. Exposure controls/Personal protection**Control parameters**

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Exposure limits (ACGIH)

CAS No	Chemical name	ppm	mg/m ³	F/ml	Category	Origin
8050-09-7	(OLD) Rosin core solder thermal decomposition products (colophony)	-	-	-	as low as possible	ACGIH-2023
75-28-5	Butane: isobutane	1000	-	-	STEL (15 min)	ACGIH-2023
106-97-8	Butane: n-butane	1000	-	-	STEL (15 min)	ACGIH-2023
1333-86-4	Carbon black (inhalable fraction)	-	3	-	TWA (8 h)	ACGIH-2023
64-17-5	Ethanol	1000	-	-	STEL (15 min)	ACGIH-2023
141-78-6	Ethyl acetate	400	-	-	TWA (8 h)	ACGIH-2023
100-41-4	Ethyl benzene	20	-	-	TWA (8 h)	ACGIH-2023
74-98-6	Propane	-	-	-	Asphyxiant	ACGIH-2023
14807-96-6	Talc containing no asbestos fibers (respirable fraction)	-	2	-	TWA (8 h)	ACGIH-2023
1330-20-7	Xylene: mixed isomers	20	-	-	TWA (8 h)	ACGIH-2023

Biological limit values

CAS No	Chemical name	Parameter	Value	Test material	Sampling time
1330-20-7	XYLENES (technical or commercial grade) (ACGIH 2023)	Methylhippuric acids (creatinine)	1.5 g/g	urine	End of shift
100-41-4	ETHYLBENZENE (ACGIH 2023)	Sum of mandelic acid and phenylglyoxylic acid (creatinine)	0.15 g/g	urine	End of shift

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

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Respiratory protection

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

9. Physical and chemical properties

Information on basic physical and chemical properties

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

Test method

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	-11,7 °C
Flammability:	not applicable
Lower explosive limits:	0,6 vol. %
Upper explosive limits:	15 vol. %
Flash point:	-80 °C
Auto-ignition temperature:	200 °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
Density (at 20 °C):	0,96 g/cm ³ DIN 51757
Relative vapour density:	not determined

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 determined	

Other safety characteristics

Evaporation rate:	not determined
Solvent content:	68,8 %
Solid content:	31,2 %
Viscosity / dynamic:	not determined

Further Information

No information available.

10. Stability and reactivity

Reactivity

No hazardous reaction when handled and stored according to provisions.

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Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

No known hazardous reactions.

Conditions to avoid

Keep away from heat. Ignition hazard.

Incompatible materials

No information available.

Hazardous decomposition products

Carbon monoxide

11. Toxicological information**Information on toxicological effects****Acute toxicity**

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

ATEmix calculated

ATE (oral) 7514 mg/kg; ATE (dermal) 3440 mg/kg; ATE (inhalation gas) 24578 ppm

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CAS No	Chemical name				
	Route of exposure	Dose	Species	Source	Method
1330-20-7	xylene				
	oral	LD50 mg/kg 4300	Rat	GESTIS	
	dermal	LD50 mg/kg >1700	Rabbit	GESTIS	
	inhalation gas	ATE ppm 4500			
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane				
	oral	LD50 mg/kg > 2000	Rat		
	dermal	LD50 mg/kg >2000	Rabbit		
	inhalation (4 h) vapour	LC50 > 20 mg/l	Rat		
141-78-6	ethyl acetate				
	oral	LD50 mg/kg 5620	Rat		
	dermal	LD50 mg/kg >20000	Rabbit		
	inhalation (4 h) vapour	LC50 50 mg/l	Rat		
	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics				
	oral	LD50 mg/kg 4951	Rat		
	dermal	LD50 mg/kg 5000	Rabbit		
	inhalation (4 h) vapour	LC50 4951 mg/l	Rat		
1330-20-7	xylene				
	oral	LD50 mg/kg 8700	Rat		
	dermal	LD50 mg/kg 2000	Rabbit		
	inhalation (4 h) vapour	LC50 mg/l 10-20	Rat		
	inhalation gas	ATE ppm 4500			
64-17-5	Ethanol				
	oral	LD50 mg/kg 10470	Rat		
	dermal	LD50 mg/kg > 2000	Rabbit		
	inhalation (4 h) vapour	LC50 > 50 mg/l	Rat		
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)				
	oral	LD50 mg/kg >15000	Rat		
	dermal	LD50 mg/kg >3400	Rat		
8050-09-7	Rosin, colophony				
	oral	LD50 mg/kg 2800	Rat		

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	dermal	LD50 mg/kg	>2000	Rat		
1333-86-4	Carbon Black					
	oral	LD50 mg/kg	> 8000	Rat		

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitizing effects

May cause an allergic skin reaction. (Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol; Rosin, colophony)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (Carbon Black)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))

May cause damage to organs through prolonged or repeated exposure. (xylene; xylene)

Aspiration hazard

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

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.

12. Ecological information

Persistence and degradability

There are no data available on the mixture itself.

Bioaccumulative potential

There are no data available on the mixture itself.

Mobility in soil

There are no data available on the mixture itself.

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.

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.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation. Do not mix with other wastes.

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List of proposed waste codes/waste designations in accordance with EWC:

Contaminated packaging

Remove according to the regulations.

14. Transport information

Canadian TDG

UN number: UN 1950
Proper shipping name: AEROSOLS
Hazard classes: 2.1
Hazard label: 2.1
Limited quantity: 1 L



Marine transport (IMDG)

UN number or ID number: UN 1950
United Nations proper shipping name: AEROSOLS
Transport hazard class(es): 2.1
Packing group: -
Hazard label: 2.1



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)

UN number or ID number: UN 1950
United Nations proper shipping name: AEROSOLS, FLAMMABLE
Transport hazard class(es): 2.1
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: 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

Environmental hazards

Safety Data Sheet

according to WHMIS

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ENVIRONMENTALLY HAZARDOUS: No

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.

15. Regulatory information**Canadian regulations****DSL/NDSL inventory status**

Substance/product listed in the following inventories: DSL/NDSL

Directive 2004/42/EC on VOC in 68,8 % (565 g/l)
paints and varnishes:**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

16. Other information**Changes**

This data sheet contains changes from the previous version in section(s): 8,9.

Abbreviations and acronymsADR: 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%

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.)