

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**DINITROL 447 Spray**

Revision date: 12/06/2021

Product code: 30447

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**1. Identification****Product identifier**

DINITROL 447 Spray

**Recommended use of the chemical and restrictions on use****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 phone number:** 3E Company Emergency +1-866-404-4230**2. Hazard(s) identification****Classification of the chemical****29 CFR Part 1910.1200**

Flammable aerosols: Flam. Aerosol 1  
Gases under pressure: Compressed gas  
Skin corrosion/irritation: Skin 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 or prolonged exposure: STOT RE 1  
Specific target organ toxicity repeated or prolonged exposure: STOT RE 2

**Label elements****29 CFR Part 1910.1200****Signal word:** Danger**Pictograms:****Hazard statements**

Extremely flammable aerosol  
Contains gas under pressure; may explode if heated  
Causes skin irritation  
May cause an allergic skin reaction  
May cause drowsiness or dizziness

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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/sparks/open flames/hot surfaces. - No smoking.  
 Do not spray on an open flame or other ignition source.  
 Pressurized container: Do not pierce or burn, even after use.  
 Do not breathe dust/fume/gas/mist/vapors/spray.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Contaminated work clothing must not be allowed out of the workplace.  
 Wear protective gloves and eye/face protection.  
 Take off contaminated clothing and wash it before reuse.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 Call a poison center/doctor if you feel unwell.  
 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.

#### Hazards not otherwise classified

No information available.

### 3. Composition/information on ingredients

#### Mixtures

##### Hazardous components

CAS No	Components	Quantity
1330-20-7	xylene	14.29 %
64742-49-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	12.86 %
141-78-6	ethyl acetate	11.29 %
64742-49-0	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	4.886 %
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	1.37 %
1330-20-7	xylene	1.219 %
25085-50-1	Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol	1.205 %
8050-09-7	Rosin, colophony	0.8841 %
1333-86-4	Carbon Black	0.3535 %

### 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.

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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, both acute and delayed**

Nausea, Dizziness, Headache.

**Indication of any immediate medical attention and special treatment needed**

No information available.

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

alcohol resistant foam, Carbon dioxide (CO<sub>2</sub>), Extinguishing powder, Water fog.

**Unsuitable extinguishing media**

High power water jet.

**Specific hazards arising from the chemical**

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/stream to protect personnel and to cool endangered containers.

**Additional information**

Use water spray/stream to protect personnel and to cool endangered containers. Suppress gases/vapors/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/vapors/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.

**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).

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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 (PPE): 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**

CAS No.	Substance	ppm	mg/m <sup>3</sup>	f/cc	Category	Origin
1333-86-4	Carbon black (in presence of polycyclic aromatic hydrocarbons (PAHs)) (as PAHs)	-	0.1		TWA (8 h)	REL
1333-86-4	Carbon black	-	3.5		TWA (8 h)	PEL
141-78-6	Ethyl acetate	400	1400		TWA (8 h)	PEL
		400	1400		TWA (8 h)	REL
64-17-5	Ethyl alcohol (Ethanol)	1000	1900		TWA (8 h)	PEL
64-17-5	Ethyl alcohol	1000	1900		TWA (8 h)	REL
75-28-5	Isobutane	800	1900		TWA (8 h)	REL
106-97-8	n-Butane	800	1900		TWA (8 h)	REL
74-98-6	Propane	1000	1800		TWA (8 h)	PEL
		1000	1800		TWA (8 h)	REL
14807-96-6	Talc (containing no asbestos and less than 1% quartz) (resp)	-	2		TWA (8 h)	REL
14807-96-6	Talc (containing no asbestos) respirable dust	706 mp/m <sup>3</sup>	-		TWA (8 h)	PEL
1330-20-7	Xylenes (o-,m-,p-isomers)	100	435		TWA (8 h)	PEL

**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):

PVA (Polyvinyl alcohol), Breakthrough time:: 480 min.

NBR (Nitrile rubber), Breakthrough time:: 30 min.

Butyl caoutchouc (butyl rubber) Breakthrough time:: 60 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: A/P2

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**9. Physical and chemical properties**
**Information on basic physical and chemical properties**

Physical state:	Aerosol
Color:	black
Odor:	characteristic
Odour threshold:	not determined

**Test method**
**Changes in the physical state**

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	-11,7 °C
Flash point:	-80 °C

**Flammability**

Solid/liquid:	not applicable
Gas:	not applicable

**Explosive properties**

not determined

Lower explosion limits:	0,6 vol. %
Upper explosion limits:	15 vol. %
Auto-ignition temperature:	200 °C

**Self-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature: not determined

pH-Value: not determined

Viscosity / dynamic: 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<sup>3</sup> DIN 51757

Relative vapour density: not determined

**Other information**
**Information with regard to physical hazard classes**

 Oxidizing properties  
not determined

**Other safety characteristics**

Solvent content: 68,8 %

Solid content: 31,2 %

Evaporation rate: not determined

**Further Information**

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No information available.

**10. Stability and reactivity****Reactivity**

No hazardous reaction when handled and stored according to provisions.

**Chemical stability**

Stability: Stable

The product is stable under storage at normal ambient temperatures.

**Possibility of hazardous reactions**

Hazardous reactions: Will not occur

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.

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CAS No	Components				
	Exposure route	Dose	Species	Source	Method
1330-20-7	xylene				
	oral	LD50 mg/kg 4300	Rat	GESTIS	
	dermal	LD50 mg/kg >1700	Rabbit	GESTIS	
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			
64742-49-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane				
	oral	LD50 mg/kg > 5840	Rat		
	dermal	LD50 mg/kg >2920	Rabbit		
	inhalation (4 h) vapour	LC50 > 25 mg/l	Rat		
141-78-6	ethyl acetate				
	oral	LD50 mg/kg > 2000	Rabbit		
	dermal	LD50 mg/kg >20000	Rabbit		
	inhalation (4 h) vapour	LC50 30 mg/l	Rat		
64742-49-0	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		
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)				
	oral	LD50 mg/kg >15000	Rat		
	dermal	LD50 mg/kg >3400	Rat		
1330-20-7	xylene				
	oral	LD50 mg/kg 4300	Rat		
	dermal	LD50 mg/kg 2000	Rabbit		
	inhalation (4 h) vapour	LC50 20 mg/l	Rat		
	inhalation aerosol	ATE 1,5 mg/l			
8050-09-7	Rosin, colophony				
	oral	LD50 mg/kg 2800	Rat		
	dermal	LD50 mg/kg >2000	Rat		
1333-86-4	Carbon Black				
	oral	LD50 mg/kg > 8000	Rat		

**Irritation and corrosivity**



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Causes skin irritation

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**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.

**Specific target organ toxicity (STOT) - single exposure**

May cause drowsiness or dizziness

**Specific target organ toxicity (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)

Carcinogenicity (OSHA):

No ingredient of this mixture is listed.

Carcinogenicity (IARC):

Xylenes (CAS 1330-20-7) is listed in group 3. Talc not containing asbestos or asbestiform fibres (CAS 14807-96-6) is listed in group 3. Ethanol in alcoholic beverages (CAS 64-17-5) is listed in group 1. Xylenes (CAS 1330-20-7) is listed in group 3. Carbon black (CAS 1333-86-4) is listed in group 2B.

Carcinogenicity (NTP):

No ingredient of this mixture is listed.

**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**

Endocrine disrupting potential No information available.

**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.

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

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**Contaminated packaging**

Remove according to the regulations.

**14. Transport information**
**US DOT 49 CFR 172.101**

**UN number or ID number:** UN 1950  
**Proper shipping name:** AEROSOLS  
**Transport hazard class(es):** 2.1  
 Hazard label: 2.1


**Marine transport (IMDG)**

**UN number or ID number:** UN 1950  
**UN 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  
**UN 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**

**ENVIRONMENTALLY HAZARDOUS:** No

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**Special precautions for user**

Warning: Gases under pressure

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

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.

**15. Regulatory information****U.S. Regulations****National Inventory TSCA**

Substance/product listed in the following inventories: TSCA

**National regulatory information**

SARA Section 304 CERCLA:

Xylene (mixed isomers) (1330-20-7): Reportable quantity = 100 (45.4) lbs. (kg)

Ethyl acetate (141-78-6): Reportable quantity = 5,000 (2270) lbs. (kg)

SARA Section 311/312 Hazards:

Xylene (mixed isomers) (1330-20-7): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, &lt;5% n-hexane (64742-49-0): Fire hazard, Immediate (acute) health hazard

Ethyl acetate (141-78-6): Fire hazard, Immediate (acute) health hazard

Propane (74-98-6): Fire hazard, Sudden release of pressure

Butane (106-97-8): Fire hazard, Sudden release of pressure

Isobutane (75-28-5): Fire hazard, Sudden release of pressure

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, &lt;2% aromatics (64742-49-0): Fire hazard, Immediate (acute) health hazard

Ethanol (64-17-5): Fire hazard

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) (-): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol (25085-50-1): Immediate (acute) health hazard

Rosin, colophony (8050-09-7): Immediate (acute) health hazard

Carbon Black (1333-86-4): Delayed (chronic) health hazard

SARA Section 313 Toxic release inventory:

Xylene (mixed isomers) (1330-20-7): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(r):

Propane (74-98-6): Threshold quantities = 10,000 lbs.

Butane (106-97-8): Threshold quantities = 10,000 lbs.

Isobutane (75-28-5): Threshold quantities = 10,000 lbs.

Clean Air Act Section 112(b):

Xylene (mixed isomers) (1330-20-7), Xylene (mixed isomers) (1330-20-7)

**State Regulations****Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)**

WARNING: This product can expose you to chemicals including Carbon black (airborne, unbound particles of

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respirable size) (cancer); Formaldehyde (gas) (cancer), which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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/none

**16. Other information****Changes**

Revision date: 06.12.2021

Revision No: 1,2

This data sheet contains changes from the previous version in section(s): 9,10,14,15.

**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%

**Other data**

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.)*