# Safety Data Sheet

according to WHMIS

## DINITROL 447 Spray



## 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 | Telefax: + 49 (0) 5281 9829860 |
| E-mail: | msds@dinol.com | |
| Contact person: | Labor | |
| Internet: | www.dinol.com | |
| Responsible Department: | msds@dinol.com | |

**Supplier**

| | | |
|---|---|---|
| Company name: | DINOL U.S. Inc. | |
| Street: | 8500 Cotter Street, Lewis Center | |
| Place: | USA-43035 Ohio | |
| Telephone: | 740-548-1656 | Telefax: 740-548-1657 |
| E-mail: | info@dinolus.com | |
| Internet: | www.dinol.com | |

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

## 2. Hazard identification

**Classification of the substance or mixture**

**WHMIS 2015**

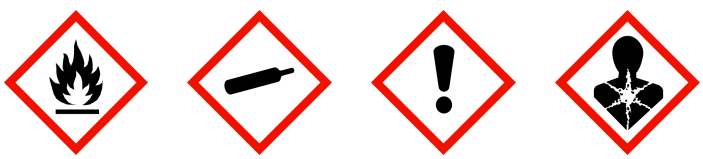
Gases under pressure: Compressed gas
Carcinogenicity: Category 2
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2
Respiratory or skin sensitization: Skin sensitization, category 1
Specific target organ toxicity - single exposure: Category 3 (narcotic effects)
Specific target organ toxicity - repeated exposure: Category 1
Specific target organ toxicity - repeated exposure: Category 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.
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 protection/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**

**Relevant ingredients**

| CAS No | Chemical name | Quantity |
|---|---|---|
| 141-78-6 | ethyl acetate | 10 - < 30 % (*) |
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane | 7 - < 13 % (*) |
| 1330-20-7 | xylene | 7 - < 13 % (*) |
| 64-17-5 | ethanol, ethyl alcohol | 1 - < 5 % (*) |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics | 1 - < 5 % (*) |
| 8050-09-7 | Rosin, colophony | 1 - < 5 % (*) |
| | Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | 1 - < 5 % (*) |
| 100-41-4 | ethylbenzene | 1 - < 5 % (*) |

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

## 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.
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**

**Exposure limits (ACGIH)**

| CAS No | Chemical name | ppm | mg/m³ | | Category | Origin |
|---|---|---|---|---|---|---|
| 75-28-5 | Butane: isobutane | 1000 | 2370 | | STEL (15 min) | ACGIH-2025 |
| 106-97-8 | Butane: n-butane | 1000 | 2370 | | STEL (15 min) | ACGIH-2025 |
| 64-17-5 | Ethanol | 1000 | 1880 | | STEL (15 min) | ACGIH-2025 |
| 141-78-6 | Ethyl acetate | 400 | 1440 | | TWA (8 h) | ACGIH-2025 |
| 100-41-4 | Ethyl benzene | 20 | - | | TWA (8 h) | ACGIH-2025 |
| 74-98-6 | Propane | - | - | | Asphyxiant | ACGIH-2025 |
| 8050-09-7 | Resin acids, as total Resin acids | - | 0.001 | | TWA (8 h) | ACGIH-2025 |
| 1330-20-7 | Xylene: mixed isomers | 20 | | | TWA (8 h) | ACGIH-2025 |

**Biological limit values**

| CAS No | Chemical name | Parameter | Value | Test material | Sampling time |
|---|---|---|---|---|---|
| 1330-20-7 | XYLENES (technical or commercial grade) (ACGIH 2025) | Methylhippuric acids (creatinine) | 0.3 g/g | urine | End of shift |
| 100-41-4 | Ethyl benzene (ACGIH 2025) | 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) penetration time (maximum wearing period): 480 min.
NBR (Nitrile rubber) penetration time (maximum wearing period): 480 min.
Thickness of the glove material : > 0,12 mm
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

## 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: | Not applicable, as it is an aerosol. | |
| Flammability: | not applicable | |
| Lower explosive limits: | 1,0 vol. % | |
| Upper explosive limits: | 11,5 vol. % | |
| Flash point: | Not applicable, as it is an aerosol. | |
| 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 | |
| Vapour pressure: (at 20 °C) | 3500 hPa | |
| Density (at 20 °C): | 0,8 g/cm³ | DIN 51757 |
| Relative vapour density: | not determined | |
| Particle characteristics: | 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: | 69,2 % |
| Solid content: | 29,5 % |
| Viscosity / dynamic: | not determined |

**Further Information**

No information available.

## 10. Stability and reactivity

**Reactivity**

No hazardous reaction when handled and stored according to provisions.

**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) > 5000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation gas) > 20000 ppm

| CAS No | Chemical name | | | | |
|---|---|---|---|---|---|
| | Route of exposure | Dose | Species | Source | Method |
| 141-78-6 | ethyl acetate | | | | |
| | oral | LD50 4935 mg/kg | Rabbit | | |
| | dermal | LD50 180000 mg/kg | Rabbit | | |
| | inhalation (4 h) vapour | LC50 1600 mg/l | Rat | | |
| | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane | | | | |
| | oral | LD50 > 5000 mg/kg | Rat | | |
| | dermal | LD50 > 2800 - 3100 mg/kg | Rat | | |
| | inhalation (4 h) vapour | LC50 > 25,2 mg/l | Rat | | |
| 1330-20-7 | xylene | | | | |
| | dermal | ATE 1100 mg/kg | | | |
| | inhalation gas | ATE 4500 ppm | | | |
| 64-17-5 | ethanol, ethyl alcohol | | | | |
| | oral | LD50 7060 mg/kg | Rat | | |
| | inhalation (4 h) vapour | LC50 20000 mg/l | Rat | | |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics | | | | |
| | oral | LD50 >5000 mg/kg | Rat | | |
| | dermal | LD50 >5000 mg/kg | Rabbit | | |
| | inhalation vapour | LC50 >5000 mg/l | Rat | | |
| 8050-09-7 | Rosin, colophony | | | | |
| | oral | LD50 2800 mg/kg | Rat | | |
| | dermal | LD50 >2000 mg/kg | Rat | | |
| | Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | | | | |
| | oral | LD50 >15000 mg/kg | Rat | | |
| | dermal | LD50 >3400 mg/kg | Rat | | |
| 100-41-4 | ethylbenzene | | | | |
| | oral | LD50 3500 mg/kg | Rat | GESTIS | |
| | dermal | LD50 15400 mg/kg | Rabbit | GESTIS | |
| | inhalation (4 h) vapour | LC50 17,2 mg/l | Rat | | |
| | inhalation gas | ATE 4500 ppm | | | |

**Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye irritation.

**Sensitizing effects**

May cause an allergic skin reaction. (Rosin, colophony)

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing cancer.
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. (ethyl acetate)

**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.

**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.
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**

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

**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

160223

## 16. Other information

**Changes**

This data sheet contains changes from the previous version in section(s): 2,8,9,11.

**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%

**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.)*