

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 1 of 12

1. Identification

Product identifier

DINITROL 445 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
Germ cell mutagenicity: Muta. 1B
Carcinogenicity: Carc. 1B
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

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 2 of 12

May cause an allergic skin reaction
May cause drowsiness or dizziness
May cause genetic defects
May cause cancer
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 vapour/aerosol.
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 must not be allowed out of the workplace.
Wear protective gloves/protective clothing/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.
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
141-78-6	ethyl acetate	23.57 %
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	4.429 %
1330-20-7	xylene	3.998 %
1330-20-7	xylene	2.64 %
100-41-4	ethylbenzene	0.8681 %
1333-86-4	Carbon Black	0.3552 %
147900-93-4	Fatty acids, C18-unsatd. , trimers, compds. with oleylamine	0.1278 %
64742-95-6	Solvent naphtha (petroleum), light arom.	0.1278 %
85711-55-3	Fatty acids, tall-oil, compds. with oleylamine	0.0852 %

4. First-aid measures

Description of first aid measures

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 3 of 12

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, 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 (CO₂), 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.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 4 of 12

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 (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**

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 5 of 12

Exposure limits

CAS No.	Substance	ppm	mg/m ³	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
100-41-4	Ethyl benzene	100	435		TWA (8 h)	PEL
		100	435		TWA (8 h)	REL
		125	545		STEL (15 min)	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 ³	-		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:: 30 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.

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
Color:	black
Odor:	characteristic
Odour threshold:	not determined

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 6 of 12

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not applicable
Flash point:	< -10 °C

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

Explosive properties

not determined

Lower explosion limits:	1,5 vol. %
Upper explosion limits:	10,9 vol. %
Auto-ignition temperature:	210 °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.
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Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Vapor pressure: (at 20 °C)	4000 hPa
Density (at 20 °C):	0,81 g/cm³
Relative vapour density:	not determined

Other information

Information with regard to physical hazard classes

Oxidizing properties	not determined
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Other safety characteristics

Solvent content:	72,5 %
Solid content:	27,5 %
Evaporation rate:	not determined

Further Information

No information available.

10. Stability and reactivity

Reactivity

No hazardous reaction when handled and stored according to provisions.

Chemical stability

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 7 of 12

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.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 8 of 12

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
141-78-6	ethyl acetate				
	oral	LD50 > 2000 mg/kg	Rabbit		
	dermal	LD50 >20000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 30 mg/l	Rat		
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)				
	oral	LD50 >15000 mg/kg	Rat		
	dermal	LD50 >3400 mg/kg	Rat		
1330-20-7	xylene				
	oral	LD50 8700 mg/kg	Rat		
	dermal	LD50 2000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 10-20 mg/l	Rat		
	inhalation aerosol	ATE 1,5 mg/l			
1330-20-7	xylene				
	oral	LD50 4300 mg/kg	Rat		
	dermal	LD50 2000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 20 mg/l	Rat		
	inhalation aerosol	ATE 1,5 mg/l			
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 aerosol	ATE 1,5 mg/l			
1333-86-4	Carbon Black				
	oral	LD50 > 8000 mg/kg	Rat		
147900-93-4	Fatty acids,C18-unsatd. , trimers, compds. with oleylamine				
	oral	LD50 > 1570 mg/kg	Rat		
64742-95-6	Solvent naphtha (petroleum), light arom.				
	dermal	LD50 >3160 mg/kg	Rabbit		
85711-55-3	Fatty acids, tall-oil, compds. with oleylamine				
	oral	LD50 > 2000 mg/kg	Rat		

Irritation and corrosivity

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 9 of 12

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 (Fatty acids, C18-unsatd., trimers, compds. with oleylamine; Fatty acids, tall-oil, compds. with oleylamine)

Carcinogenic/mutagenic/toxic effects for reproduction

May cause genetic defects (Solvent naphtha (petroleum), light arom.)

May cause cancer (Solvent naphtha (petroleum), light arom.)

Suspected of causing cancer (Carbon Black)

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

Specific target organ toxicity (STOT) - single exposure

May cause drowsiness or dizziness (ethyl acetate)

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; ethylbenzene)

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): Talc not containing asbestos or asbestiform fibres (CAS 14807-96-6) is listed in group 3. Xylenes (CAS 1330-20-7) is listed in group 3. Xylenes (CAS 1330-20-7) is listed in group 3. Ethylbenzene (CAS 100-41-4) is listed in group 2B. 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

Ecotoxicity

There are no data available on the mixture itself.

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

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 10 of 12

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

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



Marine pollutant: no
Special Provisions: 63, 190, 277, 327, 344, 959
Limited quantity: 1000 mL
Excepted quantity: E0
EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number: UN1950
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
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

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 11 of 12

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

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:

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

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

Ethylbenzene (100-41-4): Reportable quantity = 1,000 (454) lbs. (kg)

SARA Section 311/312 Hazards:

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

Propane (74-98-6): Fire hazard

Butane (106-97-8): Fire hazard

Isobutane (75-28-5): Fire hazard

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

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

Ethylbenzene (100-41-4): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

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

Fatty acids, C18-unsatd., trimers, compds. with oleylamine (147900-93-4): Immediate (acute) health hazard, Delayed (chronic) health hazard

Solvent naphtha (petroleum), light arom. (64742-95-6): Fire hazard, Delayed (chronic) health hazard, Immediate (acute) health hazard

Fatty acids, tall-oil, compds. with oleylamine (85711-55-3): Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA Section 313 Toxic release inventory:

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

Ethylbenzene (100-41-4): De minimis limit = 0.1 %, 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):

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445 Spray

Revision date: 11/09/2021

Product code: 30445

Page 12 of 12

Xylene (mixed isomers) (1330-20-7), Xylene (mixed isomers) (1330-20-7), Ethylbenzene (100-41-4)

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 Ethylbenzene (cancer); Carbon black (airborne, unbound particles of respirable size) (cancer); Toluene (developmental), 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.

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: 09.11.2021

Revision No: 1,2

This data sheet contains changes from the previous version in section(s): 2,9,10,14,15.

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.)