

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 1 of 10

1. Identification**Product identifier**

DINITROL 445

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 9829 80
Responsible Department: msds@dinol.com

Telefax: +49 (0) 5281 9829 860

Supplier

Company name: DINOL U.S. Inc.
Street: 8520 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 liquids: Flam. Liq. 2
Skin corrosion/irritation: Skin Irrit. 2
Respiratory or skin sensitization: Skin Sens. 1
Germ cell mutagenicity: Muta. 1B
Carcinogenicity: Carc. 1B
Reproductive toxicity: Repr. 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**

Highly flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
May cause drowsiness or dizziness
May cause genetic defects
May cause cancer

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 2 of 10

Suspected of damaging fertility or the unborn child
 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.
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 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 and eye/face protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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.
 In case of fire: Use water to extinguish.
 Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Store locked up.

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients
Mixtures
Hazardous components

CAS No	Components	Quantity
64742-49-0	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	14.64 %
108-88-3	toluene	9.761 %
64742-82-1	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	7.953 %
1330-20-7	xylene	5.061 %
141-78-6	ethyl acetate	4.428 %
64742-48-9	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	0.3749 %
85711-55-3	Fatty acids, tall-oil, compds. with oleylamine	0.2147 %

Further Information

Note: Each entry in the column EC number that begins with the number "9" is - until the publication the official registration number - one specified by ECHA provisional number for the substance. The above-mentioned substance(s) in this product is (are) identified by CAS number and indeed in Countries that are not subject to the REACH Regulation, or in a regulation which is not in accordance with new naming convention for hydrocarbons have been updated.

4. First-aid measures
Description of first aid measures

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 3 of 10

General information

If unconscious place in recovery position and seek medical advice.
Never give anything by mouth to an unconscious person or a person with cramps.
In all cases of doubt, or when symptoms persist, seek medical advice.

After inhalation

Remove casualty to fresh air and keep warm and at rest.

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, Drowsiness, 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

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**

Provide adequate ventilation.
Wear personal protection equipment.
Avoid contact with skin, eyes and clothes.
Avoid breathing dust/fume/gas/mist/vapors/spray.

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

Prevent spread over a wide area (e.g. by containment or oil barriers).
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 4 of 10

Treat the recovered material as prescribed in the section on waste disposal.

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

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.

Keep away from sources of ignition - No smoking.

Vapours are heavier than air and will spread at floor level.

Vapours may form explosive mixtures with air.

Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Keep container dry.

Keep away from heat. Protect against direct sunlight.

Hints on joint storage

Do not store together with: Oxidizing agents. Strong acid, strong alkalis

8. Exposure controls/personal protection
Control parameters
Exposure limits

CAS No.	Substance	ppm	mg/m ³	f/cc	Category	Origin
141-78-6	Ethyl acetate	400	1400		TWA (8 h)	PEL
		400	1400		TWA (8 h)	REL
546-93-0	Magnesite (resp)	-	5		TWA (8 h)	REL
546-93-0	Magnesite Respirable fraction	-	5		TWA (8 h)	PEL
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
108-88-3	Toluene	200	-		TWA (8 h)	PEL
		100	375		TWA (8 h)	REL
		150	560		STEL (15 min)	REL
		500	-		Peak	PEL
		C 300	-		Ceiling	PEL
1330-20-7	Xylenes (o-,m-,p-isomers)	100	435		TWA (8 h)	PEL

Exposure controls
Appropriate engineering controls

Provide adequate ventilation.

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 5 of 10

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.

Protective and hygiene measures

- Keep away from food, drink and animal feedingstuffs.
- When using do not eat or drink.
- Wash hands before breaks and after work.
- Avoid contact with skin and eyes.
- Remove contaminated, saturated clothing immediately.
- Do not breathe gas/vapour/aerosol.

Eye/face protection

Eye glasses with side protection (DIN EN 166)

Hand protection

- Tested protective gloves must be worn (EN ISO 374):
- FKM (fluoro rubber), Breakthrough time (maximum wearing time): 480 min.
- PVA (Polyvinyl alcohol), 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.

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:	Liquid
Color:	black
Odor:	characteristic

Test method

pH-Value: not determined

Changes in the physical state

Melting point/freezing point: not determined

Initial boiling point and boiling range: >77 °C

Flash point: -4 °C DIN 51755

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

not determined

Lower explosion limits: 0,8 vol. %

Upper explosion limits: 7,7 vol. %

Ignition temperature: >200 °C

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 6 of 10

Decomposition temperature: not determined

Oxidizing properties

not determined

 Vapor pressure: 61 hPa
 (at 20 °C)

 Density (at 20 °C): 1,17 g/cm³ ISO 2811

 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: not determined

 Viscosity / dynamic: 1000 mPa·s
 (at 20 °C)

Vapor density: not determined

Evaporation rate: not determined

Solvent separation test: not determined

Solvent content: 43,6 %

Other information

Solid content: 56,4 %

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.

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.

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 7 of 10

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
64742-49-0	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics				
	oral	LD50 >5000 mg/kg	Rat		
	dermal	LD50 >2800 mg/kg	Rabbit		
	inhalation vapour	LC50 >23,3 mg/l	Rat		
	inhalation aerosol	ATE 1,5 mg/l			
108-88-3	toluene				
	oral	LD50 >2000 mg/kg	Rat		
	dermal	LD50 12124 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 28,1 mg/l	Rat		
64742-82-1	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)				
	oral	LD50 >150000 mg/kg	Rat		
	dermal	LD50 >3400 mg/kg	Rat		
1330-20-7	xylene				
	oral	LD50 4300 mg/kg	Rat	GESTIS	
	dermal	LD50 >1700 mg/kg	Rabbit	GESTIS	
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 21,7 mg/l	Rat	GESTIS	
141-78-6	ethyl acetate				
	oral	LD50 4935 mg/kg	Rat		
	dermal	LD50 5000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 56 mg/l	Rat		
64742-48-9	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics				
	oral	LD50 >2000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rabbit		

Irritation and corrosivity

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, tall-oil, compds. with oleylamine)

Carcinogenic/mutagenic/toxic effects for reproduction

May cause genetic defects (Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics; Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics)

May cause cancer (Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics; Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics)

Suspected of damaging fertility or the unborn child (toluene)

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 8 of 10

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 (toluene; xylene)

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. Toluene (CAS 108-88-3) is listed in group 3. Xylenes (CAS 1330-20-7) is listed in group 3.

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

Aspiration hazard

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

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.

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.

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**US DOT 49 CFR 172.101****UN/ID number:**

UN 1139

Proper shipping name:

Coating solution (includes surface treatments or coatings used for industrial or other purposes such as vehicle undercoating, drum or barrel lining)

Transport hazard class(es):

3

Packing group:

II

Hazard label:

3

Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 9 of 10


Marine transport (IMDG)

UN number: UN 1139
UN proper shipping name: Coating solution
Transport hazard class(es): 3
Packing group: II
 Hazard label: 3



Marine pollutant: no
 Special Provisions: -
 Limited quantity: 5 L
 EmS: F-E, S-E

Other applicable information (marine transport)
 E2

Air transport (ICAO-TI/IATA-DGR)

UN number: UN 1139
UN proper shipping name: COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under-coating, drum or barrel lining)
Transport hazard class(es): 3
Packing group: II
 Hazard label: 3



Special Provisions: A3
 Limited quantity Passenger: 1 L
 IATA-packing instructions - Passenger: 353
 IATA-max. quantity - Passenger: 5 L
 IATA-packing instructions - Cargo: 364
 IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)
 E2
 Passenger-LQ: Y341

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

Special precautions for user

Warning: Flammable liquids

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

not applicable

15. Regulatory information
U.S. Regulations

according to 29 CFR 1910.1200(g)

DINITROL 445

Revision date: 12.11.2019

Product code: 5104

Page 10 of 10

National regulatory information

SARA Section 304 CERCLA:

- Toluene (108-88-3): Reportable quantity = 1,000 (454) lbs. (kg)
- 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:

- Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (64742-49-0): Fire hazard, Delayed (chronic) health hazard, Immediate (acute) health hazard
- Toluene (108-88-3): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
- Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) (64742-82-1): 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
- Ethyl acetate (141-78-6): Fire hazard, Immediate (acute) health hazard
- Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics (64742-48-9): Delayed (chronic) health hazard
- Fatty acids, tall-oil, compds. with oleylamine (85711-55-3): Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

- Toluene (108-88-3): De minimis limit = 1.0 %, Reportable threshold = Standard
- Xylene (mixed isomers) (1330-20-7): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(b):

- Toluene (108-88-3), 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 Toluene (developmental); Carbon black (airborne, unbound particles of respirable size) (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.

16. Other information

Revision date: 12.11.2019

Revision No: 2,2

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.)