Safety Data Sheet

according to 29 CFR 1910.1200(g)

DINITROL 447 Black

1. Identification

Product identifier

DINITROL 447 Black

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	Telefax: + 49 (0) 5281 9829860
e-mail:	msds@dinol.com	
Contact person:	Labor	
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 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
Carcinogenicity: Carc. 2
Specific target organ toxicity single exposure: STOT SE 3 (narcotic effects)
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
Suspected of causing cancer
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.
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.
Do not breathe dust/fume/gas/mist/vapors/spray.
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 (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.
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, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	31 %
1330-20-7	xylene	11.66 %
8050-09-7	Rosin, colophony	6.899 %
141-78-6	ethyl acetate	4.499 %
64742-49-0	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	2.76 %
25085-50-1	Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol	1.51 %
64742-95-6	Hydrocarbons, C9, aromatics	1.38 %
1333-86-4	Carbon Black	0.84 %

4. First-aid measures

Description of first aid measures

General information

If unconscious but breathing normally, 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.
Rinse skin with water [or shower].
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

Combustible. Vapors may form explosive mixtures with air.
Formation of: Carbon monoxide

Special protective equipment and precautions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray/stream to protect personnel and to cool endangered containers. Supress 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

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

Other information

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.

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.

Advice on general occupational hygiene

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.

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 from 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/m³	f/cc	Category	Origin
1317-65-3	Calcium carbonate (resp)	-	5		TWA (8 h)	REL
1317-65-3	Calcium Carbonate Respirable fraction	-	5		TWA (8 h)	PEL
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
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/m³	-		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):
FKM (fluoro rubber), Breakthrough time:: 480 min
PVA (Polyvinyl alcohol), Breakthrough time:: 480 min
NBR (Nitrile 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:	Liquid
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:	88 °C	
Sublimation point:	not determined	
Softening point:	not determined	
Pour point:	not determined	
Flash point:	-12 °C	DIN 51755
Flammability		
Solid/liquid:	not applicable	
Gas:	not applicable	
Explosive properties		
not determined		
Lower explosion limits:	0,8 vol. %	
Upper explosion limits:	7,7 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: (at 20 °C)	400-600 mPa·s	

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	
Vapor pressure: (at 20 °C)	85 hPa	
Density (at 20 °C):	1,02-1,06 g/cm³	ISO 2811
Relative vapour density:	not determined	

Other information

Information with regard to physical hazard classes

Oxidizing properties

not determined

Other safety characteristics

Solvent separation test:	not determined
Solvent content:	51,80 %, water: 0,02 %
Solid content:	46-50 %
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

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.

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.

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
64742-49-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane				
	oral	LD50 > 5840 mg/kg	Rat		
	dermal	LD50 >2920 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 > 25 mg/l	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			
8050-09-7	Rosin, colophony				
	oral	LD50 2800 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
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		
64742-49-0	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics				
	oral	LD50 4951 mg/kg	Rat		
	dermal	LD50 5000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 4951 mg/l	Rat		
64742-95-6	Hydrocarbons, C9, aromatics				
	oral	LD50 3492 mg/kg	Rat		
	dermal	LD50 >3160 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 >6193 mg/l	Rat		
1333-86-4	Carbon Black				
	oral	LD50 > 8000 mg/kg	Rat		

Irritation and corrosivity

Causes skin irritation

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

Irritating to skin.

Sensitizing effects

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

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 (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)

Specific target organ toxicity (STOT) - repeated exposure

May cause damage to organs through prolonged or repeated exposure (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. Xylenes (CAS 1330-20-7) is listed in group 3. Ethanol in alcoholic beverages (CAS 64-17-5) is listed in group 1. 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

CAS No	Components					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
64742-49-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane					
	Acute fish toxicity	LC50 10-100 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute algae toxicity	ErC50 30-100 mg/l	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 > 1 - 10 mg/l	48 h	Daphnia magna (Big water flea)		
	Fish toxicity	NOEC 2,045 mg/l	28 d	Oncorhynchus mykiss (Rainbow trout)		
	Crustacea toxicity	NOEC 1 mg/l	21 d	Daphnia magna (Big water flea)		
1330-20-7	xylene					
	Acute fish toxicity	LC50 86 mg/l	96 h	Leuciscus idus (golden orfe)		
	Acute algae toxicity	ErC50 2-8 mg/l		Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 1-10 mg/l	48 h			
8050-09-7	Rosin, colophony					
	Acute algae toxicity	ErC50 400-410 mg/l	72 h	Scenedesmus subspicatus		
	Fish toxicity	NOEC >1 mg/l	4 d	Danio rerio (zebrafish)		
	Acute bacteria toxicity	(>10000 mg/l)	3 h	Activated sludge		
141-78-6	ethyl acetate					
	Acute fish toxicity	LC50 230 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute algae toxicity	ErC50 3300 mg/l		Desmodesmus subspicatus	48 h	
	Acute crustacea toxicity	EC50 717 mg/l	48 h	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(2900 mg/l)		Pseudomonas putida	16 h	
64742-95-6	Hydrocarbons, C9, aromatics					
	Acute fish toxicity	LC50 9,2 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 2,9 mg/l	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 3,2 mg/l	48 h	Daphnia magna (Big water flea)		
1333-86-4	Carbon Black					
	Acute fish toxicity	LC50 > 1000 mg/l	96 h	Brachydanio rerio (Zebrabärbling)		
	Algae toxicity	NOEC 10000 mg/l	3 d	Scenedesmus subspicatus		

Persistence and degradability

There are no data available on the mixture itself.

Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Components	Log Pow
64742-49-0	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	3,4-5,2
141-78-6	ethyl acetate	0,73

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

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.

Contaminated packaging

Remove according to the regulations.

14. Transport information

US DOT 49 CFR 172.101

UN number or ID number: UN 1139
Transport hazard class(es): 3
Packing group: II

Marine transport (IMDG)

UN number or ID number: UN1139
UN proper shipping name: COATING SOLUTION (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane; Hydrocarbons, C9, aromatics), MARINE POLLUTANT
Transport hazard class(es): 3
Packing group: II
Hazard label: 3

Marine pollutant: yes
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 or ID number: UN1139
UN proper shipping name: COATING SOLUTION
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: Yes

Danger releasing substance: trizinc bis(orthophosphate)
Hydrocarbons, C9, aromatics

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

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:

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

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

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

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

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

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

Hydrocarbons, C9, aromatics (64742-95-6): Fire hazard, Immediate (acute) health hazard

Ethanol (64-17-5): Fire 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(b):

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 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.

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

Hazardous Materials Information Label (HMIS)

Health:	0
Flammability:	2

NFPA Hazard Ratings

Health:	0
Flammability:	2
Reactivity:	0
Unique Hazard:	

Changes

Revision date:	19.10.2021
Revision No:	1,6

This data sheet contains changes from the previous version in section(s): 1,2,9,15.

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.)