

1 Identification

- **Product identifier**
- **Trade name:** *DINITROL 4010*
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *Anticorrosion additive*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*DINOL GmbH
Pyrmonter Str. 76
D-32676 Lügde
Tel: +49 5281 9829 80
Fax: +49 5281 9829 860
E-mail: msds@dinol.com*
- **Information department:** *Research & Development*
- **Emergency telephone number:** *Giftnotruf Berlin +49(0)30 30686 790 Beratung in Deutsch und Englisch.*

2 Hazard(s) identification

- **Classification of the substance or mixture**



Flam. Liq. 3 H226 Flammable liquid and vapor.



Carc. 2 H351 Suspected of causing cancer.



*Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H336 May cause drowsiness or dizziness.*

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** *Warning*
- **Hazard-determining components of labeling:**
*Naphtha (petroleum), hydrotreated heavy
Naphtha (petroleum), hydrotreated heavy
Calcium Sulfonate
2-Butanone oxime*
- **Hazard statements**
*H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H336 May cause drowsiness or dizziness.*

Trade name: DINITROL 4010

(Contd. of page 1)

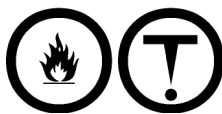
Precautionary statements

- P210 *Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
- P243 *Take precautionary measures against static discharge.*
- P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

Hazard description:

Canadian Hazard Symbols

- B2 - *Flammable liquid*
- D2B - *Toxic material causing other toxic effects*



Classification system:

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)

HEALTH	0	Health = 0
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

Other hazards

The petroleum naphtha / petroleum distillate / lubricating oil meet the requirements for not being classified as carcinogenic (<0,1% benzene alt<3% (w/w) DMSO extract (IP 346)).

Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with additions.

Dangerous components:

CAS: 64742-48-9 EC number: 919-857-5	Naphtha (petroleum), hydrotreated heavy	10-<25%
CAS: 64742-82-1 EINECS: 265-185-4	Naphtha (petroleum), hydrodesulfurized heavy	10-<25%
CAS: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy	5-<10%
CAS: 61789-86-4	Calcium Sulfonate	5-<10%
CAS: 25619-56-1	Barium alkyl naphthalenesulfonate	1-<5%
CAS: 96-29-7 EINECS: 202-496-6	2-Butanone oxime	<1%

Additional information: For the wording of the listed risk phrases refer to section 16.

Printing date 07/27/2015

Reviewed on 07/27/2015

Trade name: DINITROL 4010

(Contd. of page 2)

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Seek medical treatment.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:**
Water
Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources
Wear protective equipment. Keep unprotected persons away.
Avoid contact with skin, eyes and clothes.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Use only in well ventilated areas.

(Contd. on page 4)

US

Trade name: DINITROL 4010

(Contd. of page 3)

- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.12 mm
- **Penetration time of glove material**
> 480 min.
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

Trade name: DINITROL 4010

(Contd. of page 4)

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Liquid
Color:	Light brown
· Odor:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	130 °C
· Flash point:	33 °C (DIN 53213)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	> 200 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	0.6 Vol %
Upper:	7.0 Vol %
· Vapor pressure at 20 °C:	4 hPa
· Density at 20 °C:	0.89 g/cm ³ (DIN 51757)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C:	22 s (DIN 53211/4)
· Solvent content:	
Organic solvents:	52.1 %
VOC content:	52.1 %
Solids content:	47.8 % (DIN 53216)
· Other information No further relevant information available.	
· VOC (EU):	52.12 %
· VOC (EU):	463.9 g/l
· VOC (US):	463.9 g/l / 3.87 lb/gl

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.

(Contd. on page 6)

Trade name: DINITROL 4010

(Contd. of page 5)

- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimates)		
Oral	LD50	8475 mg/kg
Dermal	LD50	11002 mg/kg
Inhalative	LC50/4 h	823 mg/l

64742-48-9 Naphtha (petroleum), hydrotreated heavy		
Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>5000 mg/kg (RABBIT)
Inhalative	LC50/4 h	> 4951 mg/l (RAT)

64742-82-1 Naphtha (petroleum), hydrodesulfurized heavy		
Oral	LD50	>6500 mg/kg (RAT)
Dermal	LD50	>3000 mg/kg (RABBIT)

64742-48-9 Naphtha (petroleum), hydrotreated heavy		
Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>3000 mg/kg (RAT)

96-29-7 2-Butanone oxime		
Oral	LD50	2528 mg/kg (rat)
Dermal	LD50	200-2000 mg/kg (rat)
Inhalative	LC50/4 h	>10.5 mg/l (rat)
	LC50/96 h	>100 mg/l (Fish)

- **Primary irritant effect:**
- **on the skin:** Prolonged or repeated contact with skin may cause slight irritation and/or reddening.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
No further relevant information available.

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
68409-81-4	Fatty acids, C6-C19 branched, cobalt salts	2B

· NTP (National Toxicology Program)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

- **Inhalation:**
May cause headache, dizziness, tiredness and indisposition. At high concentrations reaction time and memory may deteriorate and unconsciousness may occur. Long or often repeated inhalation of high concentrations may cause permanent damage to the nervous system.

(Contd. on page 7)

Trade name: **DINITROL 4010**

(Contd. of page 6)

· **Ingestion:** May cause similar symptoms as for inhalation.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

96-29-7 2-Butanone oxime

EC50/48 h 201 mg/l (DAPHNIA MAGNA)

IC50/72 h 6.1 mg/l (SELENASTRUM CAPRICORNUTUM)

· **Persistence and degradability** No further relevant information available.

· **Other information:** There is no data available for the product.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Dispose of as dangerous waste.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1139

· **UN proper shipping name**

· **DOT**

Coating solution

· **ADR**

1139 Coating solution, special provision 640E

· **IMDG, IATA**

COATING SOLUTION

· **Transport hazard class(es)**

· **DOT**




· **Class**

3 Flammable liquids

(Contd. on page 8)

Trade name: **DINITROL 4010**

(Contd. of page 7)

· Label	3
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No Yes (DOT)
· Special precautions for user	
· Danger code (Kemler):	Warning: Flammable liquids 30
· EMS Number:	F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Not applicable.	
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· Remarks:	Special marking with the symbol (fish and tree).
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN1139, Coating solution, special provision 640E, 3, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

Fatty acids, C6-C19 branched, cobalt salts

<1%

· **TSCA (Toxic Substances Control Act):** All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 9)

Trade name: DINITROL 4010

(Contd. of page 8)

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**

Naphtha (petroleum), hydrotreated heavy
Naphtha (petroleum), hydrotreated heavy
Calcium Sulfonate
2-Butanone oxime

· **Hazard statements**

H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H336 May cause drowsiness or dizziness.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243 Take precautionary measures against static discharge.
P303+P361+P353 **IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Research & Development
· **Contact:** Kontakt: msds@dinol.com oder Tel.: 0049 (0)5281 982 980
· **Date of preparation / last revision** 07/27/2015 / 20

(Contd. on page 10)

Printing date 07/27/2015

Reviewed on 07/27/2015

Trade name: DINITROL 4010

(Contd. of page 9)

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· * Data compared to the previous version altered.

US