Safety Data Sheet
acc. to OSHA HCS

Printing date 10/30/2019 Reviewed on 08/19/2019

*
1 Identification

· **Product identifier**

· **Trade name: DINITROL 4942**

· **Application of the substance / the mixture** Anticorrosion additive

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

DINOL GmbH
Pyrmonter Strasse 76
D-32676 Luegde
Tel : +49 (0) 5281 9829 80
Fax: +49 (0) 5281 9829 860
www.dinol.com

DINOL U.S. Inc.
8520 Cotter Street, Lewis Center
USA-43035 Ohio
Tel: 740-548-1656
Fax: 740-548-1657
e-mail: info@dinolus.com

· **Information department:** Product safety department.
· **Emergency telephone number:** 3E Company Emergency +1-866-404-4230

2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS02

Flammable liquid and vapor.


GHS08

May cause cancer.


GHS07

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**


GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Naphtha (petroleum), hydrotreated heavy
Ethanol
· **Hazard statements**
H226 Flammable liquid and vapor.
H350 May cause 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.
P280 Wear protective gloves/protective clothing/eye protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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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.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 2
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	25-<50%
CAS: 64-17-5 EINECS: 200-578-6	Ethanol	1-<3%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After skin contact:**
Immediately rinse with water.
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:** If symptoms persist consult doctor.
· **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, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** 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.

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· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid contact with skin, eyes and clothes.
· **Environmental precautions:**
Prevent seepage into sewage system, workpits and cellars.
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).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	350 mg/m³
CAS: 8052-42-4	Asphalt	30 mg/m³
CAS: 64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic	140 mg/m³
CAS: 64-17-5	Ethanol	1,800 ppm
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	350 mg/m³
CAS: 141-78-6	Ethyl acetate	1,200 ppm
CAS: 14808-60-7	Quartz (SiO2)	0.075 mg/m³

· **PAC-2:**		
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	1,800 mg/m³
CAS: 8052-42-4	Asphalt	330 mg/m³
CAS: 64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic	1,500 mg/m³
CAS: 64-17-5	Ethanol	3300* ppm
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	1,800 mg/m³
CAS: 141-78-6	Ethyl acetate	1,700 ppm
CAS: 14808-60-7	Quartz (SiO2)	33 mg/m³

· **PAC-3:**		
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	40,000 mg/m³
CAS: 8052-42-4	Asphalt	2,000 mg/m³
CAS: 64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic	8,900 mg/m³
CAS: 64-17-5	Ethanol	15000* ppm
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	40,000 mg/m³
CAS: 141-78-6	Ethyl acetate	10000** ppm
CAS: 14808-60-7	Quartz (SiO2)	200 mg/m³

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.

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Use only in well ventilated areas.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **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 following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

CAS: 64-17-5 Ethanol	
PEL	Long-term value: 1900 mg/m³, 1000 ppm
REL	Long-term value: 1900 mg/m³, 1000 ppm
TLV	Short-term value: 1880 mg/m³, 1000 ppm

· **Regulatory information**
PEL: Guide to Occupational Exposure Values (OSHA PELs)
REL: Guide to Occupational Exposure Values (NIOSH RELs)
TLV: Guide to Occupational Exposure Values (ACGIH)
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· **Breathing equipment:**

Filter A

· **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

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· **Penetration time of glove material**
> 480 min.
The exact break trough 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:** Use protective suit.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Viscous
Color:	Bronze colored
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	130 °C
· **Flash point:**	41 °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 Vol %
· **Vapor pressure at 20 °C:**	3 hPa
· **Vapour pressure at 50 °C:**	13 hPa
· **Density at 20 °C:**	1.09 g/cm³ (DIN 51757)
· **Relative density**	Not determined.
· **Vapor 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:	>2,200 s (DIN 53211/4)
· **Solvent content:**	
Organic solvents:	32.6 %

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VOC content:	32.63 %
Solids content:	67.9 % (DIN 53216)
· **Other information**	No further relevant information available.
· **VOC (EU):**	32.63 %
· **VOC (EU):**	355.6 g/l
· **VOC (US):**	355.6 g/l / 2.97 lb/gal

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.
· **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 Estimate)		
Inhalative	LC50/4 h	16,544 mg/l (RAT)

CAS: 64742-48-9 Naphtha (petroleum), hydrotreated heavy		
Oral	LD50	>5,000 mg/kg (RAT)
Dermal	LD50	>5,000 mg/kg (RABBIT)
Inhalative	LC50/4 h	5,000 mg/l (RAT)
CAS: 64-17-5 Ethanol		
Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
No further relevant information available.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
CAS: 8052-42-4	Asphalt	2B
CAS: 64-17-5	Ethanol	1
CAS: 14808-60-7	Quartz (SiO2)	1

· **NTP (National Toxicology Program)**		
Quartz (SiO2)	K	<1%

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **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/RID/ADN, IMDG, IATA**	UN1139
· **UN proper shipping name**	
· **DOT**	Coating solution
· **ADR/RID/ADN**	1139 COATING SOLUTION
· **IMDG, IATA**	COATING SOLUTION

· **Transport hazard class(es)**

· **DOT**

· **Class**	3 Flammable liquids
· **Label**	3

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· **ADR/RID/ADN, IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	III
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	30
· **EMS Number:**	F-E,S-D
· **Stowage Category**	A
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Tansport classification ADR/IMGD is based on packaging >30ltr(IMDG), <450ltr(ADR). For other packaging untis different classification can apply.
· **DOT**	
· **Quantity limitations**	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· **ADR/RID/ADN**	
· **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":**	UN 1139 COATING SOLUTION, 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):**
None of the ingredients is listed.

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

· **Hazardous Air Pollutants**
None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Quartz (SiO2)	<1%

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· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

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

Asphalt	A4	25-<50%
Ethanol	A3	1-<3%
Quartz (SiO2)	A2	<1%

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

Asphalt	25-<50%
Quartz (SiO2)	<1%

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

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Naphtha (petroleum), hydrotreated heavy
Ethanol
· **Hazard statements**
H226 Flammable liquid and vapor.
H350 May cause 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.
P280	Wear protective gloves/protective clothing/eye protection.
P303+P361+P353	If on skin (or hair): 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:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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** 10/30/2019 / 11
· **Abbreviations and acronyms:**
ICAO: International Civil Aviation Organisation
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 3: Flammable liquids – Category 3
Carc. 1A: Carcinogenicity – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· *** Data compared to the previous version altered.**