

**Safety data sheet**

accord. to 1907/2006/EC, Art. 31, incl. Comm. Regul. (EU) No 453/2010

Printing date 26.05.2015

Revision: 26.05.2015

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name: DINITROL ACTIVATOR PLUS****1.2 Relevant identified uses of the substance or mixture and uses advised against****Sector of Use**

SU3, SU17, SU22

SU3, SU17, SU21, SU22

**Product category** PC1 Adhesives, sealants**Process category** PROC1-5, PROC7, PROC8a, PROC8b, PROC9-11, PROC13-14, PROC 19, PROC21**Environmental release category** ERC5, ERC8c, ERC8d, ERC8f**Article category** Not applicable**Application of the substance / the mixture** Activator /**Uses advised against** SU21 Consumer uses: Private households / general public / consumers**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Hersteller/ Producer: EFTEC AG, Hofstrasse 31, CH-8590 Romanshorn

EU-Importeur/ EU-Importer: EFTEC Ltd., Rhigos/Aberdare, GB-Mid Glamorgan CF44 9UE (Responsible for chemical registration in EU)

Lieferant/ Supplier: DINOL GmbH, Pyrmonterstrasse 76, D-32676 Lügde

**Further information obtainable from:** msds@dinol.com**1.4 Emergency telephone number:** Giftnotruf D-Berlin +49(0)30 30686 790 Beratung in Deutsch und Englisch.**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xn; Harmful

R65: Harmful: may cause lung damage if swallowed.

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**Xi; Irritant****R38:** Irritating to skin.**F; Highly flammable****R11:** Highly flammable.**N; Dangerous for the environment****R50/53:** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**R67:** Vapours may cause drowsiness and dizziness.**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Has a narcotising effect.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS02



GHS07



GHS09

**Signal word** Danger**Hazard-determining components of labelling:**

heptane

**Hazard statements****H225** Highly flammable liquid and vapour.**H315** Causes skin irritation.**H336** May cause drowsiness or dizziness.**H410** Very toxic to aquatic life with long lasting effects.**Precautionary statements****P210** Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**P303+P361+P353** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**P405** Store locked up.**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.**Additional information:****EUH208** Contains 3-aminopropyltriethoxysilane, 3-trimethoxysilylpropane-1-thiol, N-(3-(trimethoxysilyl)propyl) ethylenediamine. May produce an allergic reaction.**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

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## SECTION 3: Composition/information on ingredients

### 3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 142-82-5 EINECS: 205-563-8	heptane Xn R65; Xi R38; F R11; N R50/53 R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	50-100%
CAS: 872-50-4 EINECS: 212-828-1	N-methyl-2-pyrrolidone Xi R36/37/38 Repr. Cat. 2 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	3-<5%
CAS: 426260-76-6 EC number: 610-052-1	Heptane, branched, cyclic, linear Xn R65; Xi R38; F R11; N R50/53 R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	3-5%
CAS: 919-30-2 EINECS: 213-048-4	3-aminopropyltriethoxysilane C R34; Xn R22; Xi R43 Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317	0.3-<1%
CAS: 4420-74-0 EINECS: 224-588-5	3-trimethoxysilylpropane-1-thiol Xn R22; Xi R43; N R51/53 Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Sens. 1, H317	0.3-<1%
CAS: 1760-24-3 EINECS: 217-164-6	N-(3-(trimethoxysilyl)propyl)ethylenediamine Xi R36/38; Xi R43 R52/53 Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412	0.1-<0.3%

### SVHC

The mixture of substances contain no SVHC (Substances of Very High Concern, <http://echa.europa.eu>)

872-50-4 | N-methyl-2-pyrrolidone

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** Seek immediate medical advice.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media***Suitable extinguishing agents: CO<sub>2</sub>, sand, extinguishing powder. Do not use water.***For safety reasons unsuitable extinguishing agents:***Water**Water with full jet***5.2 Special hazards arising from the substance or mixture** *No further relevant information available.***5.3 Advice for firefighters****Protective equipment:** *No special measures required.***SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures***Wear protective equipment. Keep unprotected persons away.***6.2 Environmental precautions:***Prevent seepage into sewage system, workpits and cellars.**Inform respective authorities in case of seepage into water course or sewage system.**Do not allow to enter sewers/ surface or ground water.***6.3 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.**Do not flush with water or aqueous cleansing agents***6.4 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.***SECTION 7: Handling and storage****7.1 Precautions for safe handling***No special measures required.**Ensure good ventilation/exhaustion at the workplace.**Prevent formation of aerosols.***Information about fire - and explosion protection:***Keep ignition sources away - Do not smoke.**Protect against electrostatic charges.***7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** *Store in a cool location.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:***Keep container tightly sealed.**Store in cool, dry conditions in well sealed receptacles.***Maximum storage temperature:** *< 35 °C***Minimum storage temperature:** *> 0 °C***Storage temperature:** *0 - 35 °C***7.3 Specific end use(s)** *No further relevant information available.*

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## SECTION 8: Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:**

#### 142-82-5 heptane

WEL Long-term value: 2085 mg/m<sup>3</sup>, 500 ppm

#### 872-50-4 N-methyl-2-pyrrolidone

WEL Short-term value: 80 mg/m<sup>3</sup>, 20 ppm  
 Long-term value: 40 mg/m<sup>3</sup>, 10 ppm  
 Sk

**Additional information:** The lists valid during the making were used as basis.

### 8.2 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.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

**Respiratory protection:**

Filter A

Not necessary if room is well-ventilated.

**Protection of hands:**



Protective gloves (DIN EN 374)

Chemical resistant protective gloves with CE-labeling

To minimise the wetness in the glove due to perspiration changing of gloves during a shift is required.

Softening of the callus when wearing air-impermeable gloves is possible.

Check the permeability prior to each anewed use of the glove.

**Material of gloves**

Nitrile rubber, NBR

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.

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**



Safety glasses (DIN EN 166)

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**Trade name: DINITROL ACTIVATOR PLUS****Body protection:**

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Protective work clothing

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not determined.**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	82 °C

**Flash point:** 13 °C**Flammability (solid, gaseous):** Not applicable.**Ignition temperature:** 215 °C**Decomposition temperature:** Not determined.**Self-igniting:** Product is not selfigniting.**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.**Explosion limits:**

<b>Lower:</b>	1.1 Vol %
<b>Upper:</b>	6.7 Vol %

**Vapour pressure at 20 °C:** 48 hPa

<b>Density at 20 °C:</b>	0.69 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	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:** Not determined.**Solvent content:****Organic solvents:** 94.1 %**Solids content:** 0.2 %

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**9.2 Other information**

No further relevant information available.

**SECTION 10: Stability and reactivity****10.1 Reactivity****10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity:****LD/LC50 values relevant for classification:****142-82-5 heptane**

Oral	LD50	12700 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50/ 4h	18000 mg/l (mouse)

**Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** No irritating effect.**Sensitisation:** No sensitising effects known.**Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Very toxic for fish**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (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.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

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**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

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

**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN-Number**

ADR, IMDG, IATA

UN1993

**14.2 UN proper shipping name**

ADR

UN1993 FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa) (HEPTANES, HEPTANES), ENVIRONMENTALLY HAZARDOUS

IMDG

FLAMMABLE LIQUID, N.O.S. (HEPTANES, HEPTANES), MARINE POLLUTANT

IATA

FLAMMABLE LIQUID, N.O.S. (HEPTANES, HEPTANES)

**14.3 Transport hazard class(es)**

ADR

Class  
Label3 (F1) Flammable liquids.  
3

IMDG

Class  
Label3 Flammable liquids.  
3

IATA

Class  
Label3 Flammable liquids.  
3**14.4 Packing group**

ADR, IMDG, IATA

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<b>14.5 Environmental hazards:</b>	Product contains environmentally hazardous substances.
<b>Marine pollutant:</b>	Yes
	Symbol (fish and tree)
<b>Special marking (ADR):</b>	Symbol (fish and tree)

<b>14.6 Special precautions for user</b>	Warning: Flammable liquids.
<b>Danger code (Kemler):</b>	33
<b>EMS Number:</b>	F-E,S-E

<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
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**Transport/Additional information:****ADR**

<b>Limited quantities (LQ)</b>	1L
<b>Excepted quantities (EQ)</b>	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
<b>Transport category</b>	2
<b>Tunnel restriction code</b>	D/E

**IMDG**

<b>Limited quantities (LQ)</b>	1L
<b>Excepted quantities (EQ)</b>	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml

<b>UN "Model Regulation":</b>	UN1993, FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa) (HEPTANES, HEPTANES), ENVIRONMENTALLY HAZARDOUS, 3, II
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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:****Technical instructions (air):**

Class	Share in %
NK	50-100

**Other regulations, limitations and prohibitive regulations****Substances of very high concern (SVHC) according to REACH, Article 57**

872-50-4 | N-methyl-2-pyrrolidone

**EU-VOC:** 94.14 %**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 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.

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**Relevant phrases**

- H225 *Highly flammable liquid and vapour.*  
H302 *Harmful if swallowed.*  
H304 *May be fatal if swallowed and enters airways.*  
H314 *Causes severe skin burns and eye damage.*  
H315 *Causes skin irritation.*  
H317 *May cause an allergic skin reaction.*  
H319 *Causes serious eye irritation.*  
H335 *May cause respiratory irritation.*  
H336 *May cause drowsiness or dizziness.*  
H400 *Very toxic to aquatic life.*  
H410 *Very toxic to aquatic life with long lasting effects.*  
H411 *Toxic to aquatic life with long lasting effects.*  
H412 *Harmful to aquatic life with long lasting effects.*
- 
- R11 *Highly flammable.*  
R22 *Harmful if swallowed.*  
R34 *Causes burns.*  
R36/37/38 *Irritating to eyes, respiratory system and skin.*  
R36/38 *Irritating to eyes and skin.*  
R38 *Irritating to skin.*  
R43 *May cause sensitisation by skin contact.*  
R50/53 *Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*  
R51/53 *Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*  
R52/53 *Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*  
R65 *Harmful: may cause lung damage if swallowed.*  
R67 *Vapours may cause drowsiness and dizziness.*

**Department issuing MSDS:** Entwicklung**Contact:** msds@dinol.com**Abbreviations and acronyms:**

- Flam. Liq. 2: Flammable liquids, Hazard Category 2  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
Asp. Tox. 1: Aspiration hazard, Hazard Category 1  
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2  
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3  
\* **Data compared to the previous version altered.**