

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Rostosan Plus
Green rust primer 3 x 375 ml

1.2 Relevant identified uses of the substance or mixture and uses advised against

Coatings and paints, fillers, putties, thinners

1.3 Details of the supplier of the safety data sheet

Supplier : Chemische Werke Kluthe
Werk Oberhausen

Street : Feldstraße 55

Postal code/city : D 46149 Oberhausen

Telephone : +49208 / 9948-166

Telefax : +49208 / 9948-151

Information contact : sds.ob@kluthe.com

1.4 Emergency telephone number

+49177 / 2144737 (24 h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Aquatic Chronic 2 ; H411 - Hazardous to the aquatic environment : Chronic 2 ; Toxic to aquatic life with long lasting effects.

Flam. Liq. 3 ; H226 - Flammable liquids : Category 3 ; Flammable liquid and vapour.

STOT SE 3 ; H336 - STOT-single exposure : Category 3 ; May cause drowsiness or dizziness.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Flame (GHS02) · Environment (GHS09) · Exclamation mark (GHS07)

Signal word

Warning

Hazard components for labelling

HYDROCARBONS, C9, AROMATES ; EC No. : 918-668-5

Hazard statements

H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.
P101 If medical advice is needed, have product container or label at hand.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P370+P378 In case of fire: Use foam (alcohol resistant), carbon dioxide, dry powder or water spray for extinction.

P405 Store locked up.

P501 Dispose of contents/container according to local regulations

Special rules for supplemental label elements for certain mixtures

EUH208 Contains 2-BUTANONE OXIME ; COBALT-BIS(2-ETHYLHEXANOAT). May produce an allergic reaction.

Additional information

P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges.

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

Gemisch aus oxidativ trocknenden Alkydharzen, organischen und anorganischen Pigmenten und organischen Lösemitteln

3.2 Mixtures

Hazardous ingredients

HYDROCARBONS, C9, AROMATES ; REACH registration No. : 01-2119455851-35 ; EC No. : 918-668-5

Weight fraction : $\geq 10 - < 20$ %

Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Asp. Tox. 1 ; H304 STOT SE 3 ; H335 STOT SE 3 ; H336 Aquatic Chronic 2 ; H411

XYLENE ; REACH registration No. : 01-2119488216-32 ; EC No. : 215-535-7 ; CAS No. : 1330-20-7

Weight fraction : $\geq 5 - < 10$ %

Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Acute Tox. 4 ; H312 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315

ZINC OXIDE ; REACH registration No. : 01-2119463881-32 ; EC No. : 215-222-5 ; CAS No. : 1314-13-2

Weight fraction : $\geq 1 - < 5$ %

Classification 1272/2008 [CLP] : Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410

TRIZINC BIS(ORTHOPHOSPHATE) ; REACH registration No. : 01-2119485044-40 ; EC No. : 231-944-3 ; CAS No. : 7779-90-0

Weight fraction : $\geq 1 - < 5$ %

Classification 1272/2008 [CLP] : Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410

1-METHOXY-2-PROPANOL ; REACH registration No. : 01-2119457435-35 ; EC No. : 203-539-1 ; CAS No. : 107-98-2

Weight fraction : $\geq 1 - < 5$ %

Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 STOT SE 3 ; H336

ALUMINIUMTRIHYDROGENDIPHOSPHATE ; EC No. : 237-714-9 ; CAS No. : 13939-25-8

Weight fraction : $\geq 1 - < 5$ %

Classification 1272/2008 [CLP] : Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

ETHYLBENZENE ; REACH registration No. : 01-2119489370-35 ; EC No. : 202-849-4 ; CAS No. : 100-41-4

Weight fraction : $\geq 1 - < 5$ %

Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Asp. Tox. 1 ; H304 STOT RE 2 ; H373 Acute Tox. 4 ; H332 Aquatic Chronic 3 ; H412

2-BUTANONE OXIME ; REACH registration No. : 01-2119539477-28 ; EC No. : 202-496-6 ; CAS No. : 96-29-7

Weight fraction : $\geq 0,5 - < 1$ %

Classification 1272/2008 [CLP] : Carc. 2 ; H351 Eye Dam. 1 ; H318 Acute Tox. 4 ; H312 Skin Sens. 1 ; H317

N-METHYL-2-PYRROLIDONE ; REACH registration No. : 01-2119472430-46 ; EC No. : 212-828-1 ; CAS No. : 872-50-4

Weight fraction : $< 0,5$ %

Classification 1272/2008 [CLP] : Repr. 1B ; H360D Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

COBALT-BIS(2-ETHYLHEXANOAT) ; REACH registration No. : 01-2119524678-29 ; EC No. : 205-250-6 ; CAS No. : 136-52-7

Weight fraction : $\geq 0,1 - < 0,5$ %

Classification 1272/2008 [CLP] : Repr. 2 ; H361f Skin Sens. 1A ; H317 Eye Irrit. 2 ; H319 Aquatic Acute 1 ; H400

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



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Aquatic Chronic 3 ; H412

BARIUM BIS(2-ETHYLHEXANOAT) ; EC No. : 219-535-8; CAS No. : 2457-01-4

Weight fraction : < 0,5 %

Classification 1272/2008 [CLP] : Acute Tox. 3 ; H331 Acute Tox. 4 ; H302

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH

N-METHYL-2-PYRROLIDONE ; REACH registration No. : 01-2119472430-46 ; EC No. : 212-828-1; CAS No. : 872-50-4

This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH

None

Additional information

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove affected person from the danger area and lay down. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice.

In case of skin contact

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not wash with: Solvents/Thinner

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Carbon dioxide (CO2) alcohol resistant foam Water mist Dry extinguishing powder

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove product from area of fire. Use water spray jet to protect personnel and to cool endangered containers. Do not inhale explosion and combustion gases.

5.3 Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Safety Data Sheet

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Provide adequate ventilation. See protective measures under point 7 and 8.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

6.4 Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13 National regulations see section 15.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Avoid: Skin contact Eye contact Inhalation Only use the material in places where open light, fire and other flammable sources can be kept away. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container. Keep in a cool, well-ventilated place.

Hints on joint storage

Storage class (VCI): 3

Storage class (TRGS 510) : 3

7.3 Specific end use(s)

None

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

HYDROCARBONS, C9, AROMATES

Limit value type (country of origin) : AGW (D)

Limit value : 200 mg/m³ / 8 h

Version : 16.09.2013

XYLENE ; CAS No. : 1330-20-7

Limit value type (country of origin) : TRGS 900 (D)

Limit value : 100 ppm / 440 mg/m³

Peak limitation : 2(II)

Remark : H

Version : 01.03.2018

Limit value type (country of origin) : STEL (EC)

Limit value : 100 ppm / 442 mg/m³

Remark : H

Version : 31.01.2018

Limit value type (country of origin) : TWA (EC)

Limit value : 50 ppm / 221 mg/m³

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Remark : H
Version : 31.01.2018
1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2
Limit value type (country of origin) : TRGS 900 (D)
Limit value : 100 ppm / 370 mg/m³
Peak limitation : 2(I)
Remark : Y
Version : 01.03.2018
Limit value type (country of origin) : STEL (EC)
Limit value : 150 ppm / 568 mg/m³
Remark : H
Version : 31.01.2018
Limit value type (country of origin) : TWA (EC)
Limit value : 100 ppm / 375 mg/m³
Remark : H
Version : 31.01.2018
ETHYLBENZENE ; CAS No. : 100-41-4
Limit value type (country of origin) : TRGS 900 (D)
Limit value : 20 ppm / 88 mg/m³
Peak limitation : 2(II)
Remark : H, Y
Version : 01.03.2018
Limit value type (country of origin) : STEL (EC)
Limit value : 200 ppm / 884 mg/m³
Remark : H
Version : 31.01.2018
Limit value type (country of origin) : TWA (EC)
Limit value : 100 ppm / 442 mg/m³
Remark : H
Version : 31.01.2018
2-BUTANONE OXIME ; CAS No. : 96-29-7
Limit value type (country of origin) : TRGS 900 (D)
Limit value : 0,3 ppm / 1 mg/m³
Peak limitation : 8(I)
Remark : Y, H, Sh
Version : 01.03.2018
N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4
Limit value type (country of origin) : TRGS 900 (D)
Limit value : 20 ppm / 82 mg/m³
Peak limitation : 2(I)
Remark : H, Y
Version : 01.03.2018
Limit value type (country of origin) : STEL (EC)
Limit value : 20 ppm / 80 mg/m³
Peak limitation : H
Version : 31.01.2018
Limit value type (country of origin) : TWA (EC)
Limit value : 10 ppm / 40 mg/m³
Peak limitation : H
Version : 31.01.2018

Biological limit values

XYLENE ; CAS No. : 1330-20-7

Safety Data Sheet

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Limit value type (country of origin) : TRGS 903 (D)

Parameter : Methylhippuric acid / Urine (U) / End of exposure or end of shift

Limit value : 2000 mg/l

Version : 01.03.2018

1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2

Limit value type (country of origin) : TRGS 903 (D)

Parameter : 1-methoxy-2-propanol / Urine (U) / End of exposure or end of shift

Limit value : 15 mg/l

Version : 01.03.2018

ETHYLBENZENE ; CAS No. : 100-41-4

Limit value type (country of origin) : TRGS 903 (D)

Parameter : Mandelic acid + Phenylglyoxyl acid / Urine (U) / End of exposure or end of shift

Limit value : 250 mg/g Kr

Version : 01.03.2018

N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4

Limit value type (country of origin) : TRGS 903 (D)

Parameter : 5-Hydroxy-N-methyl-2-pyrrolidon / Urine (U) / End of exposure or end of shift

Limit value : 150 mg/l

Version : 01.03.2018

DNEL/DMEL and PNEC values

DNEL/DMEL

Limit value type : DNEL Consumer (systemic) (HYDROCARBONS, C9, AROMATES)

Exposure route : Inhalation

Exposure frequency : Langzeit - systemisch

Limit value : 32 mg/m³

Limit value type : DNEL Consumer (systemic) (HYDROCARBONS, C9, AROMATES)

Exposure route : Dermal

Exposure frequency : Langzeit - systemisch

Limit value : 11 mg/kg

Limit value type : DNEL Consumer (systemic) (HYDROCARBONS, C9, AROMATES)

Exposure route : Oral

Exposure frequency : Langzeit - systemisch

Limit value : 11 mg/kg

Limit value type : DNEL worker (systemic) (HYDROCARBONS, C9, AROMATES)

Exposure route : Dermal

Exposure frequency : Langzeit - systemisch

Limit value : 25 mg/kg

Limit value type : DNEL worker (systemic) (HYDROCARBONS, C9, AROMATES)

Exposure route : Inhalation

Exposure frequency : Langzeit - systemisch

Limit value : 150 mg/m³

Limit value type : DNEL Consumer (systemic) (XYLENE ; CAS No. : 1330-20-7)

Exposure route : Inhalation

Exposure frequency : Kurzzeit - systemisch

Limit value : 174 mg/m³

Limit value type : DNEL Consumer (systemic) (XYLENE ; CAS No. : 1330-20-7)

Exposure route : Dermal

Exposure frequency : Langzeit - systemisch

Limit value : 108 mg/kg

Limit value type : DNEL Consumer (systemic) (XYLENE ; CAS No. : 1330-20-7)

Exposure route : Inhalation

Exposure frequency : Langzeit - systemisch

Limit value : 14,8 mg/kg

Safety Data Sheet

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Limit value type :	DNEL Consumer (systemic) (XYLENE ; CAS No. : 1330-20-7)
Exposure route :	Oral
Exposure frequency :	Langzeit - systemisch
Limit value :	1,6 mg/kg
Limit value type :	DNEL worker (systemic) (XYLENE ; CAS No. : 1330-20-7)
Exposure route :	Inhalation
Exposure frequency :	Kurzzeit - systemisch
Limit value :	289 mg/m ³
Limit value type :	DNEL worker (systemic) (XYLENE ; CAS No. : 1330-20-7)
Exposure route :	Dermal
Exposure frequency :	Langzeit - systemisch
Limit value :	180 mg/kg
Limit value type :	DNEL worker (systemic) (XYLENE ; CAS No. : 1330-20-7)
Exposure route :	Inhalation
Exposure frequency :	Langzeit - systemisch
Limit value :	77 mg/m ³
Limit value type :	DNEL Consumer (systemic) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route :	Dermal
Exposure frequency :	Langzeit - systemisch
Limit value :	18,1 mg/kg
Limit value type :	DNEL Consumer (systemic) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route :	Inhalation
Exposure frequency :	Langzeit - systemisch
Limit value :	43,9 mg/m ³
Limit value type :	DNEL Consumer (systemic) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route :	Oral
Exposure frequency :	Langzeit - systemisch
Limit value :	3,3 mg/kg
Limit value type :	DNEL worker (local) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route :	Inhalation
Exposure frequency :	Kurzzeit - lokal
Limit value :	553,5 mg/m ³
Limit value type :	DNEL worker (systemic) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route :	Dermal
Exposure frequency :	Langzeit - systemisch
Limit value :	50,6 mg/kg
Limit value type :	DNEL worker (systemic) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route :	Inhalation
Exposure frequency :	Langzeit - systemisch
Limit value :	369 mg/m ³
Limit value type :	DNEL Consumer (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route :	Dermal
Exposure frequency :	Kurzzeit - systemisch
Limit value :	125 mg/kg
Limit value type :	DNEL Consumer (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route :	Inhalation
Exposure frequency :	Kurzzeit - systemisch
Limit value :	80 mg/m ³
Limit value type :	DNEL Consumer (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route :	Oral
Exposure frequency :	Kurzzeit - systemisch
Limit value :	26 mg/kg
Limit value type :	DNEL Consumer (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route :	Dermal

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

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Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Exposure frequency : Langzeit - systemisch
Limit value : 11,9 mg/kg
Limit value type : DNEL Consumer (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Inhalation
Exposure frequency : Langzeit - systemisch
Limit value : 12,5 mg/m³
Limit value type : DNEL Consumer (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Oral
Exposure frequency : Langzeit - systemisch
Limit value : 6,3 mg/kg
Limit value type : DNEL worker (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Dermal
Exposure frequency : Kurzzeit - systemisch
Limit value : 208 mg/kg
Limit value type : DNEL worker (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Inhalation
Exposure frequency : Kurzzeit - systemisch
Limit value : 80 mg/m³
Limit value type : DNEL worker (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Dermal
Exposure frequency : Langzeit - systemisch
Limit value : 19,8 mg/kg
Limit value type : DNEL worker (systemic) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Inhalation
Exposure frequency : Langzeit - systemisch
Limit value : 40 mg/m³

PNEC

Limit value type : PNEC (Aquatic, freshwater) (XYLENE ; CAS No. : 1330-20-7)
Limit value : 0,327 mg/l
Limit value type : PNEC (Aquatic, intermittent release) (XYLENE ; CAS No. : 1330-20-7)
Limit value : 0,327 mg/l
Limit value type : PNEC (Aquatic, marine water) (XYLENE ; CAS No. : 1330-20-7)
Limit value : 0,327 mg/l
Limit value type : PNEC (Sediment, freshwater) (XYLENE ; CAS No. : 1330-20-7)
Limit value : 12,46 mg/kg
Limit value type : PNEC (Sediment, marine water) (XYLENE ; CAS No. : 1330-20-7)
Limit value : 12,46 mg/kg
Limit value type : PNEC soil, freshwater (XYLENE ; CAS No. : 1330-20-7)
Limit value : 2,31 mg/kg
Limit value type : PNEC (Sewage treatment plant) (XYLENE ; CAS No. : 1330-20-7)
Limit value : 6,58 mg/l
Limit value type : PNEC (Aquatic, freshwater) (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Limit value : 20,6 µg/l
Limit value type : PNEC (Aquatic, marine water) (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Limit value : 6,1 µg/l
Limit value type : PNEC (Sediment, freshwater) (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Limit value : 235,6 mg/kg
Limit value type : PNEC (Sediment, marine water) (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Limit value : 113 mg/kg
Limit value type : PNEC soil, freshwater (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Limit value : 106,8 mg/kg

Safety Data Sheet

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Limit value type :	PNEC (Sewage treatment plant) (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Limit value :	52 µg/l
Limit value type :	PNEC (Aquatic, freshwater) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Limit value :	10 mg/l
Limit value type :	PNEC (Aquatic, marine water) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Limit value :	1 mg/l
Limit value type :	PNEC (Sediment, freshwater) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Limit value :	41,6 mg/kg
Limit value type :	PNEC (Sediment, marine water) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Limit value :	4,17 mg/kg
Limit value type :	PNEC soil, freshwater (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Limit value :	2,47 mg/kg
Limit value type :	PNEC (Sewage treatment plant) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Limit value :	100 mg/l
Limit value type :	PNEC (Aquatic, freshwater) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Limit value :	0,25 mg/l
Limit value type :	PNEC (Aquatic, marine water) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Limit value :	0,025 mg/l
Limit value type :	PNEC zeitweise Freisetzung (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Limit value :	5 mg/l
Limit value type :	PNEC (Sediment, freshwater) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Limit value :	0,805 mg/kg
Limit value type :	PNEC (Sediment, marine water) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Limit value :	0,0805 mg/kg
Limit value type :	PNEC (Sewage treatment plant) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Limit value :	10 mg/l

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Eye glasses In case of increased risk, additionally Eye glasses with side protection

Skin protection

Hand protection

Do not wear gloves near rotary machines and tools. Check leak tightness/impermeability prior to use. 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.

Suitable gloves type : Disposable gloves.

Body protection

Disposable suit Overall

Respiratory protection

Usually no personal respiratory protection necessary. Respiratory protection necessary at: insufficient ventilation

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : grey

Odour : characteristic

Safety relevant basis data

Melting point/melting range : not determined

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Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Initial boiling point and boiling range :	(1013 hPa)	>	100,0	°C	
Decomposition temperature :			No data available		
Flash point :		>	24,0	°C	DIN 51755 part 1
Ignition temperature :			not determined		
Oxidising liquids :			No data available.		
Lower explosion limit :				Vol-%	
Upper explosion limit :				Vol-%	
Vapour pressure :	(50 °C)	<	1100,0	hPa	
Density :	(20 °C)	approx.	1,380	g/cm ³	
Solvent separation test :	(20 °C)	<	3,0	%	
Water solubility :	(20 °C)		insoluble		
pH-value:	(20 °C / conc.)		not applicable		
log P O/W :			No data available		
Flow time :	(20 °C)	>	200	s	DIN-cup 4 mm
Odour threshold :			not determined		
Relative vapour density :	(20 °C)		No data available		(air = 1)
Vapourisation rate :			No data available		(Ether = 1)
VOC-value :		approx.	431,1	g/l	

9.2 Other information

no more data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under recommended storage and handling conditions(See section 7).

10.3 Possibility of hazardous reactions

Formation of explosive mixtures with: Air. possible

10.4 Conditions to avoid

Heat, sparks, flames and other ignition sources.

10.5 Incompatible materials

Alkali (lye), concentrated. Acid, concentrated. Oxidising agent, strong.

10.6 Hazardous decomposition products

Carbon dioxide. Carbon monoxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects

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

Acute oral toxicity

Parameter :	LD50 (HYDROCARBONS, C9, AROMATES)
Exposure route :	Oral
Species :	Rat
Effective dose :	3592 mg/kg
Method :	OECD 401
Parameter :	LD50 (XYLENE ; CAS No. : 1330-20-7)
Exposure route :	Oral

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Species : Rat
Effective dose : 3523 mg/kg
Parameter : LD50 (ZINC OXIDE ; CAS No. : 1314-13-2)
Exposure route : Oral
Species : Rat
Effective dose : 7950 mg/kg
Method : OECD 401
Parameter : LD50 (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route : Oral
Species : Rat
Effective dose : 4016 mg/kg
Parameter : LD50 (ETHYLBENZENE ; CAS No. : 100-41-4)
Exposure route : Oral
Species : Rat
Effective dose : 3500 mg/kg
Parameter : LD50 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Oral
Species : Rat
Effective dose : 4150 mg/kg
Method : OECD 401

Acute dermal toxicity

Parameter : LD50 (HYDROCARBONS, C9, AROMATES)
Exposure route : Dermal
Species : Rabbit
Effective dose : > 3160 mg/kg
Method : OECD 402
Parameter : LD50 (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Dermal
Species : Rabbit
Effective dose : 12126 mg/kg
Parameter : LD50 (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route : Dermal
Species : Rabbit
Effective dose : 2000 mg/kg
Parameter : LD50 (ETHYLBENZENE ; CAS No. : 100-41-4)
Exposure route : Dermal
Species : Rabbit
Effective dose : 5000 mg/kg
Parameter : LD50 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Dermal
Species : Rat
Effective dose : > 5000 mg/kg
Method : OECD 402

Acute inhalation toxicity

Parameter : LC50 (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Inhalation
Species : Rat
Effective dose : 27123 mg/m³
Exposure time : 4 h
Parameter : LC50 (ZINC OXIDE ; CAS No. : 1314-13-2)
Exposure route : Inhalation
Species : Rat
Effective dose : > 5,7 mg/l

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Exposure time : 4 h
Parameter : LC50 (ZINC OXIDE ; CAS No. : 1314-13-2)
Exposure route : Inhalation
Species : Mouse
Effective dose : 2500 mg/m³
Parameter : LC50 (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Exposure route : Inhalation
Species : Rat
Effective dose : 27,596 mg/l
Exposure time : 6 h
Parameter : LC50 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Exposure route : Inhalation
Species : Rat
Effective dose : > 5,1 mg/l
Exposure time : 4 h
Method : OECD 403

Irritant and corrosive effects

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

Sensitisation

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

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

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

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.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

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

Aspiration hazard

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

11.5 Additional information

Toxicological data are not available.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Toxic to aquatic life with long lasting effects.

Acute (short-term) fish toxicity

Parameter : LL50 (HYDROCARBONS, C9, AROMATES)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 9,2 mg/l
Exposure time : 96 h
Parameter : LC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 7,6 mg/l
Exposure time : 96 h

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Parameter : LC50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 0,33 - 6,06 mg/l
Exposure time : 96 h
Parameter : LC50 (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Species : Leuciscus idus (golden orfe)
Effective dose : 6812 mg/l
Exposure time : 96 h
Parameter : LC50 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 832 mg/l
Exposure time : 96 h

Acute (short-term) daphnia toxicity

Parameter : EL50 (HYDROCARBONS, C9, AROMATES)
Species : Daphnia magna (Big water flea)
Effective dose : 3,2 mg/l
Exposure time : 48 h
Parameter : EC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Daphnia magna (Big water flea)
Effective dose : 3,82 mg/l
Exposure time : 48 h
Parameter : EC50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : ceriodaphnia dubia
Effective dose : 0,96 mg/l
Exposure time : 48 h
Parameter : EC50 (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Species : Daphnia magna (Big water flea)
Effective dose : 23300 mg/l
Exposure time : 48 h
Parameter : EC50 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Species : Daphnia magna (Big water flea)
Effective dose : > 1000 mg/l
Exposure time : 24 h
Method : DIN 38412 / part 11

Chronic (long-term) daphnia toxicity

Parameter : NOEC (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Species : Daphnia magna (Big water flea)
Effective dose : 12,5 mg/l
Exposure time : 21 d
Method : OECD 202, Teil 2

Acute (short-term) algae toxicity

Parameter : EL50 (HYDROCARBONS, C9, AROMATES)
Species : Pseudokirchneriella subcapitata
Effective dose : 2,629 mg/l
Exposure time : 72 h
Parameter : EC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Pseudokirchneriella subcapitata
Effective dose : 4,7 mg/l
Exposure time : 72 h
Parameter : EC50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Selenastrum capricornutum
Effective dose : 0,32 mg/l
Exposure time : 72 h

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Parameter : EC50 (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Species : Pseudokirchneriella subcapitata
Effective dose : 1000 mg/l
Exposure time : 7 d
Parameter : EC50 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Species : Scenedesmus subspicatus
Effective dose : > 500 mg/l
Exposure time : 72 h
Method : DIN 38412 / part 9

Bacteria toxicity

Parameter : EC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Belebtschlamm
Effective dose : > 175 mg/l
Parameter : EC0 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Species : Pseudomonas putida
Effective dose : 9000 mg/l
Exposure time : 48 h
Parameter : EC0 (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Species : growth inhibition
Effective dose : 600 mg/l
Exposure time : 0,5 h
Method : OECD 209

12.2 Persistence and degradability

Biodegradation

Parameter : Biodegradation (HYDROCARBONS, C9, AROMATES)
Inoculum : Degree of elimination
Effective dose : 78 %
Exposure time : 28 d
Evaluation : Readily biodegradable (according to OECD criteria).
Parameter : Biodegradation (XYLENE ; CAS No. : 1330-20-7)
Evaluation : Readily biodegradable (according to OECD criteria).
Parameter : Biodegradation (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Inoculum : Degree of elimination
Effective dose : 96 %
Exposure time : 28 d
Evaluation : Readily biodegradable (according to OECD criteria).
Parameter : Biodegradation (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Inoculum : Degree of elimination
Effective dose : 73 %
Exposure time : 28 d
Evaluation : Readily biodegradable (according to OECD criteria).
Method : OECD 301C

12.3 Bioaccumulative potential

Parameter : Bioconcentration factor (BCF) (XYLENE ; CAS No. : 1330-20-7)
Value : 25,9
Parameter : Partition coefficient n-octanol /water (log P O/W) (XYLENE ; CAS No. : 1330-20-7)
Value : 3,16
Parameter : Partition coefficient n-octanol /water (log P O/W) (1-METHOXY-2-PROPANOL ; CAS No. : 107-98-2)
Value : -0,43
Parameter : Partition coefficient n-octanol /water (log P O/W) (ETHYLBENZENE ; CAS No. : 100-41-4)
Value : 3,6

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Parameter : Partition coefficient n-octanol /water (log P O/W) (N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4)
Value : -0,46

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No information available.

12.7 Additional ecotoxicological information

None

SECTION 13: Disposal considerations

Dispose according to legislation.

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code packaging

Waste code (EWC/AVV) : 08 01 11*

13.2 Additional information

None

SECTION 14: Transport information

14.1 UN number

UN 1263

14.2 UN proper shipping name

Land transport (ADR/RID)

PAINT

Sea transport (IMDG)

PAINT (HYDROCARBONS, C9, AROMATES · ZINC OXIDE · TRIZINC BIS(ORTHOPHOSPHATE) · COBALT-BIS(2-ETHYLHEXANOAT))

Air transport (ICAO-TI / IATA-DGR)

PAINT

14.3 Transport hazard class(es)

Land transport (ADR/RID)

Class(es) : 3
Classification code : F1
Hazard identification number (Kemler No.) : 30
Tunnel restriction code : D/E
Special provisions : LQ 5 I · E 1
Hazard label(s) : 3 / N

Sea transport (IMDG)

Class(es) : 3
EmS-No. : F-E / S-E
Special provisions : LQ 5 I · E 1 · IMDG-Code segregation group 7 - Heavy metal and their salts (including their organometallic compounds)
Hazard label(s) : 3 / N

Air transport (ICAO-TI / IATA-DGR)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

Print date : 16.10.2018

Class(es) : 3
Special provisions : E 1
Hazard label(s) : 3

14.4 Packing group

III

14.5 Environmental hazards

Land transport (ADR/RID) : Yes
Sea transport (IMDG) : Yes (P)
Air transport (ICAO-TI / IATA-DGR) : Yes

14.6 Special precautions for user

None

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation

Authorisations and/or restrictions on use

Restrictions on use

N-METHYL-2-PYRROLIDONE ; CAS No. : 872-50-4 ; Annex XVII No. 30

National regulations

Technische Anleitung Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : < 5 %

Water hazard class (WGK)

Class : 2 (Significant hazardous to water) Classification according to AwSV

15.2 Chemical safety assessment

No information available.

SECTION 16: Other information

16.1 Indication of changes

02. Classification of the substance or mixture · 02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] · 11. STOT-single exposure

16.2 Abbreviations and acronyms

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route)
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany)
BCF: Bio-Concentration Factor
BOD(5): Biochemical oxygen demand (within 5 days)
CAS: Chemical Abstract Service
CLP: Classification, Labelling and Packaging
CMR: Carcinogenic, Mutagenic, toxic for Reproduction
DIN: German Standards Institute / German industrial norm
DNEL: Derived No Effect Level
DOC: Dissolved organic carbon
EAK/ AVV: European waste catalogue/ waste directory-regulation
EC50: Effective Concentration 50%
ECHA: European Chemical Agency
EINECS: European Inventory of Existing Commercial Chemical Substances

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

Trade name : Rostosan Plus (011210337001-0593)
Green rust primer 3 x 375 ml

Revision date : 17.10.2017

Version (Revision) : 19.0.0 (18.0.1)

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GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
IATA: International Air Transport Association
IC50: Inhibition Concentration 50%
IMDG: International Maritime Dangerous Goods Code
LC50: Lethal Concentration 50% - LD50: Lethal dose 50%
MAK: Treshold limit values Germany
NLP: No Longer Polymers
NOAEC: No Observed Adverse Effect Concentration
NOAEL: No Observed Adverse Effect Level
OECD: Organization for Economic Cooperation and Development
PBT: persistent, bioaccumulative, toxic
PC: Product category
PNEC: Predicted No Effect Concentration
REACH: Registration, Evaluation and Authorization of Chemicals
RID: Regulations concerning the international carriage of dangerous goods by rail
(Règlement International concernant le transport de marchandises dangereuses par chemin de fer)
STEL: Short-term Exposure Limit
STP: Sewage treatment plant
SVHC: Substance of Very High Concern
TLV: Threshold Limit Value
TWA: Time Weighted Average
UN: United Nations
VOC: Volatile Organic Compounds
vPvB: very persistent, very bioaccumulative

16.3 Key literature references and sources for data

None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

No information available.

16.5 Relevant H- and EUH-phrases (Number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
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.

16.6 Training advice

None

16.7 Additional information

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)



Harmony in
Chemistry

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Green rust primer 3 x 375 ml

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Version (Revision) : 19.0.0 (18.0.1)

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None

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.
