



# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 4

Revision: 02.03.2015

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

- 1.1 Product identifier
- Trade name: **KRISTAL Washprimer 50 Hardener PLUS**
- Article number: 8020+
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
No further relevant information available.
- Application of the substance / the mixture Hardening agent/ Curing agent
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:  
Kristal Coatings B.V.  
Platinawerf 22B  
6641 TL Beuningen - Holland  
Tel: 0031 24 67 526 36  
Fax: 0031 24 67 533 60
- Further information obtainable from: Product safety department: info@kristalcoatings.nl
- 1.4 Emergency telephone number:  
National Poisoning Information Centre - Bilthoven - The Netherlands  
T +31 (0)30 274 88 88  
Restricted to physicians for information on ingredients.

### 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.



GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 2 H373 May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalative.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

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



Xn; Harmful

R48/20-63-65: Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed.



Xi; Irritant

R38: Irritating to skin.



F; Highly flammable

R11: Highly flammable.

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.

- Classification system:

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

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- 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    GHS08

- Signal word Danger
- Hazard-determining components of labelling:  
toluene
- Hazard statements  
H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H361d Suspected of damaging the unborn child.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalative.  
H304 May be fatal if swallowed and enters airways.
- Precautionary statements  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P260 Do not breathe the mist/vapours/spray.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
P331 Do NOT induce vomiting.
- Additional information:  
Restricted to professional users.
- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

## SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

### Dangerous components:

CAS: 64-17-5	ethanol	25-50%
EINECS: 200-578-6	F R11	
Reg.nr.: 01-2119457610-43	Flam. Liq. 2, H225	
CAS: 108-88-3	toluene	25-50%
EINECS: 203-625-9	Xn R48/20-63-65;  Xi R38;  F R11	
Reg.nr.: 01-2119471310-51	R67	
01-2116601980-50	Repr. Cat. 3	
17-2119453989-16	Flam. Liq. 2, H225;  Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304;  Skin	
05-211538126-46	Irrit. 2, H315; STOT SE 3, H336	
CAS: 141-78-6	ethyl acetate	10-25%
EINECS: 205-500-4	Xi R36;  F R11	
Reg.nr.: 01-2119475103-46	R66-67	
05-2116947025-47	Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	
CAS: 7664-38-2	phosphoric acid	2,5-10%
EINECS: 231-633-2	C R34	
Reg.nr.: 01-2119485924-24	Skin Corr. 1B, H314	
CAS: 67-56-1	methanol	0,5-2,5%
EINECS: 200-659-6	T R23/24/25-39/23/24/25;  F R11	
Reg.nr.: 01-2119433307-44	Flam. Liq. 2, H225;  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  STOT SE 1, H370	

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

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### \* SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

##### · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

##### · 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.

If skin irritation continues, consult a doctor.

##### · After eye contact:

Remove contactlenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

##### · After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

#### · 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> or powder. Fight larger fights with alcohol resistant foam.

##### · For safety reasons unsuitable extinguishing agents:

 Water with full jet

#### · 5.2 Special hazards arising from the substance or mixture

 Carbon monoxide (CO)

#### · 5.3 Advice for firefighters

##### · Protective equipment:

 Wear self-contained respiratory protective device.
 

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### 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:

 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.

#### · 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.

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### SECTION 7: Handling and storage

#### · 7.1 Precautions for safe handling

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:

 Store away from oxidising agents.

##### · Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

##### · Storage class:

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· 7.3 Specific end use(s) No further relevant information available.

### 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:

#### 7664-38-2 phosphoric acid

IOELV Short-term value: 2 mg/m<sup>3</sup>Long-term value: 1 mg/m<sup>3</sup>

#### 67-56-1 methanol

IOELV Long-term value: 260 mg/m<sup>3</sup>, 200 ppm

Skin

· DNELs

#### 64-17-5 ethanol

Dermal Long-term exposure - systemic effects 34,3 mg/kg bw/day (worker)

Inhalative Acute - short-term exposure - local effects 1900 mg/m<sup>3</sup> (worker)Long-term exposure - systemic effects 950 mg/m<sup>3</sup> (worker)

#### 108-88-3 toluene

Dermal Long-term exposure - systemic effects 384 mg/kg bw/day (worker)

Inhalative Acute - short-term exposure - local effects 384 mg/m<sup>3</sup> (worker)Acute - short-term exposure - systemic effects 384 mg/m<sup>3</sup> (worker)Long-term exposure - local effects 192 mg/m<sup>3</sup> (worker)Long-term exposure - systemic effects 192 mg/m<sup>3</sup> (worker)

#### 141-78-6 ethyl acetate

Dermal Long-term exposure - systemic effects 63 mg/kg bw/day (worker)

Inhalative Acute - short-term exposure - local effects 1468 mg/m<sup>3</sup> (worker)Acute - short-term exposure - systemic effects 1468 mg/m<sup>3</sup> (worker)Long-term exposure - local effects 734 mg/m<sup>3</sup> (worker)Long-term exposure - systemic effects 734 mg/m<sup>3</sup> (worker)

#### 7664-38-2 phosphoric acid

Inhalative Long-term exposure - local effects 2,92 mg/m<sup>3</sup> (worker)

#### 67-56-1 methanol

Dermal Acute - short-term exposure - systemic effects 40 mg/kg bw/day (worker)  
ECHA databaseLong-term exposure - systemic effects 40 mg/kg bw/day (worker)  
ECHA databaseInhalative Acute - short-term exposure - local effects 260 mg/m<sup>3</sup> (worker)  
ECHA databaseAcute - short-term exposure - systemic effects 260 mg/m<sup>3</sup> (worker)  
ECHA databaseLong-term exposure - local effects 260 mg/m<sup>3</sup> (worker)  
ECHA databaseLong-term exposure - systemic effects 260 mg/m<sup>3</sup> (worker)  
ECHA database

· PNECs

#### 64-17-5 ethanol

PNEC 580 mg/l (STP)

0,96 mg/l (aqua, freshwater)

2,75 mg/l (aqua, intermittent releases)

0,79 mg/l (aqua, marine water)

0,72 mg/kg (oral)

2,9 mg/kg (sediment marine water)

3,6 mg/kg (sediment freshwater)

0,63 mg/kg (soil)

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**108-88-3 toluene**

PNEC 13,61 mg/l (STP)

- 0,68 mg/l (aqua, freshwater)
- 0,68 mg/l (aqua, intermittent releases)
- 0,68 mg/l (aqua, marine water)
- 16,39 mg/kg (sediment marine water)

**141-78-6 ethyl acetate**

PNEC 650 mg/l (STP)

- 0,26 mg/l (aqua, freshwater)
- 1,65 mg/l (aqua, intermittent releases)
- 0,026 mg/l (aqua, marine water)
- 0,125 mg/kg (sediment marine water)
- 1,25 mg/kg (sediment freshwater)

- **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.
  - Do not inhale gases / fumes / aerosols.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:**
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Filter A.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
  - Fluorocarbon rubber gloves (Viton)
  - 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**
  - Thickness of the gloves  $\geq 0,5$  mm (toluene)
  - Value for the permeation: Level  $\geq 480$  min (toluene)
  - 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:** Solvent resistant protective clothing
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## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form: Fluid
  - Colour: Transparent
  - Odour: Characteristic

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· pH-value at 20 °C:	2,5
· Change in condition	
Boiling point/Boiling range:	77 °C
· Flash point:	2 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	425 °C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1,2 Vol %
Upper:	15,0 Vol %
· Vapour pressure at 20 °C:	97 hPa
· Density at 20 °C:	0,85 g/cm <sup>3</sup>
· Solubility in / Miscibility with water:	Slightly soluble.
· Viscosity:	
Dynamic at 20 °C:	± 1 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	95,6 %
VOC (EC)	96,41 %
Solids content:	3,5 %
· 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 Reacts with strong oxidising agents.
- 10.4 Conditions to avoid High temperatures.
- 10.5 Incompatible materials: Oxidizing agents.
- 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:

#### 64-17-5 ethanol

Oral LD50 7060 mg/kg (rat)  
 Inhalative LC50/4h 20000 mg/l (rat)

#### 108-88-3 toluene

Oral LD50 5580 mg/kg (rat)  
 Dermal LD50 > 5000 mg/kg (rabbit)  
 Inhalative LC50/4h 28,1 mg/l (rat)

#### 141-78-6 ethyl acetate

Oral LD50 4100 mg/kg (mouse)  
 Dermal LD50 5620 mg/kg (rat)  
 20000 mg/kg (rabbit)

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Inhalative LC50/4h 30 mg/l (rat)

**67-56-1 methanol**

Oral LD50 &gt; 5000 mg/kg (rat)

Dermal LD50 20000 mg/kg (rabbit)

Inhalative LC50/4h 80-130 mg/l (rat)

· **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

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Repr. 2

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## SECTION 12: Ecological information

· **12.1 Toxicity**· **Aquatic toxicity:****108-88-3 toluene**

EC50/3h 134 mg/l (Chlorella vulgaris)

EC50/48h 3,78 mg/l (daphnia magna)

EC50/72h 12,5 mg/l (algae)

LC50/96h 5,5 mg/l (Oncorhynchus kisutch)

5,5 mg/l (fish)

NOEC/72h 10 mg/l (Skeletonema costatum)

**141-78-6 ethyl acetate**

EC50/48h 5600 mg/l (algae)

610 mg/l (daphnia magna)

LC50/96h 230 mg/l (fish)

NOEC/21d 2,4 mg/l (daphnia magna)

NOEC/32d &gt;9,65 mg/l (fish)

**67-56-1 methanol**

EC50/24h &gt; 10000 mg/l (daphnia magna)

LC50/96h &gt; 10000 mg/l (fish)

· **12.2 Persistence and degradability** No further relevant information available.· **12.3 Bioaccumulative potential****108-88-3 toluene**

BCF 90 (l)

LogPow 2,73 (l)

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

· **12.5 Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **12.6 Other adverse effects** No further relevant information available.

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## 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.

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- European waste catalogue  
07 01 04\* other organic solvents, washing liquids and mother liquors
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

### SECTION 14: Transport information

- 14.1 UN-Number  
ADR,ADN, IMDG, IATA UN1263
- 14.2 UN proper shipping name  
ADR/ADN 1263 PAINT RELATED MATERIAL
- IMDG, IATA PAINT RELATED MATERIAL
- 14.3 Transport hazard class(es)  
ADR,ADN, IMDG, IATA



- Class 3 Flammable liquids.
- Label 3
- 14.4 Packing group  
ADR,ADN, IMDG, IATA II
- 14.5 Environmental hazards:  
Marine pollutant: No
- 14.6 Special precautions for user  
Warning: Flammable liquids.
- Danger code (Kemler): 33
- EMS Number: F-E,S-E
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
Not applicable.
- Transport/Additional information:

- ADR/ADN
- Limited quantities (LQ) 5L
- Transport category 2
- Tunnel restriction code D/E
- UN "Model Regulation": UN1263, PAINT RELATED MATERIAL, 3, II

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- National regulations:
- Other regulations, limitations and prohibitive regulations  
The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.
- 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.

- Relevant phrases
- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.

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H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs.
H373	May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalative.
R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R38	Irritating to skin.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63	Possible risk of harm to the unborn child.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

· **Contact:** Dhr. B. Peters

· **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  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 VOC: Volatile Organic Compounds (USA, EU)  
 DNEL: Derived No-Effect Level (REACH)  
 PNEC: Predicted No-Effect Concentration (REACH)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 Flam. Liq. 2: Flammable liquids, Hazard Category 2  
 Acute Tox. 3: Acute toxicity, Hazard Category 3  
 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  
 Repr. 2: Reproductive toxicity, Hazard Category 2  
 STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1  
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2  
 Asp. Tox. 1: Aspiration hazard, Hazard Category 1

· \* **Data compared to the previous version altered.**

— EU —