



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.02.2013

Version number 2

Revision: 07.02.2013

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

- Product identifier
- Trade name: **KRISTAL 2K PU ULTRA Thinner Slow eXcellent**
- Article number: 3132
- Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
- Application of the substance / the preparation Thinner, Diluent
- 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
- Emergency telephone number: 0031 24 67 526 36

* SECTION 2: Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

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



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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



Xn; Harmful

R65: Harmful: may cause lung damage if swallowed.

R10-52/53-66-67: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Repeated exposure may cause skin dryness or cracking. 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.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

- Classification system:

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

- Label elements

- Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- Code letter and hazard designation of product:



Xn Harmful

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- Hazard-determining components of labelling:
Hydrocarbons, C9, aromatics
- Risk phrases:
 - 10 Flammable.
 - 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 - 65 Harmful: may cause lung damage if swallowed.
 - 66 Repeated exposure may cause skin dryness or cracking.
 - 67 Vapours may cause drowsiness and dizziness.
- Safety phrases:
 - 23 Do not breathe vapour/spray.
 - 36/37 Wear suitable protective clothing and gloves.
 - 60 This material and its container must be disposed of as hazardous waste.
 - 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
- Special labelling of certain preparations:
Restricted to professional users.
- Additional information:
EUH066 Repeated exposure may cause skin dryness or cracking.
Restricted to professional users.
- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.
- Dangerous components:

CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-butyl acetate R10-66-67 Flam. Liq. 3, H226; STOT SE 3, H336	25-50%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate R10 Flam. Liq. 3, H226	10-25%
CAS: 64742-95-6 EC number: 918-668-5 Reg.nr.: 01-2119455851-35	Hydrocarbons, C9, aromatics Xn R65; Xi R37; N R51/53 R10-66-67 Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336	10-25%
CAS: 110-43-0 EINECS: 203-767-1	heptan-2-one Xn R20/22 R10-67 Flam. Liq. 3, H226; Acute Tox. 4, H302; Acute Tox. 4, H332; STOT SE 3, H336	2,5-10%
CAS: 112-07-2 EINECS: 203-933-3 Reg.nr.: 01-2119475112-47	2-butoxyethyl acetate Xn R20/21 Acute Tox. 4, H302; Acute Tox. 4, H312	2,5-10%

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

SECTION 4: First aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
 - Remove contactlenses.
 - Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing:
 - Do not induce vomiting; call for medical help immediately.

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Rinse out mouth and then drink plenty of water.

- 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.
-

* SECTION 5: Firefighting measures

- Extinguishing media
 - Suitable extinguishing agents: CO₂ or powder. Fight larger fights with alcohol resistant foam.
 - For safety reasons unsuitable extinguishing agents: Water with full jet
 - Special hazards arising from the substance or mixture Carbon monoxide (CO)
 - Advice for firefighters
 - Protective equipment: Wear self-contained respiratory protective device.
-

* SECTION 6: Accidental release measures

- Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
 - Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
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.
-

* SECTION 7: Handling and storage

- Handling:
 - 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.
 - 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: Store away from oxidizing agents.
 - Further information about storage conditions:
Keep container tightly sealed.
Protect from heat and direct sunlight.
 - Storage class: 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.
- Control parameters
- Ingredients with limit values that require monitoring at the workplace:

108-65-6 2-methoxy-1-methylethyl acetate

IOELV Short-term value: 550 mg/m³, 100 ppmLong-term value: 275 mg/m³, 50 ppm

Skin

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110-43-0 heptan-2-one

IOELV Short-term value: 475 mg/m³, 100 ppm
 Long-term value: 238 mg/m³, 50 ppm
 Skin

112-07-2 2-butoxyethyl acetate

IOELV Short-term value: 333 mg/m³, 50 ppm
 Long-term value: 133 mg/m³, 20 ppm
 Skin

· **DNELs****123-86-4 n-butyl acetate**

Inhalative Acute - short-term exposure - local effects	960 mg/m3 (worker)
Acute - short-term exposure - systemic effects	960 mg/m3 (worker)
Long-term exposure - local effects	480 mg/m3 (worker)
Long-term exposure - systemic effects	480 mg/m3 (worker)

108-65-6 2-methoxy-1-methylethyl acetate

Dermal Long-term exposure - systemic effects	153,5 mg/kg bw/day (worker)
Inhalative Long-term exposure - systemic effects	275 mg/m3 (worker)

64742-95-6 Hydrocarbons, C9, aromatics

Dermal Long-term exposure - systemic effects	25 mg/kg bw/day (worker)
Inhalative Long-term exposure - systemic effects	150 mg/m3 (worker)

110-43-0 heptan-2-one

Dermal Long-term exposure - systemic effects	54,27 mg/kg bw/day (worker)
Inhalative Acute - short-term exposure - systemic effects	1516 mg/m3 (worker)
Long-term exposure - systemic effects	394,25 mg/m3 (worker)

· **PNECs****123-86-4 n-butyl acetate**

PNEC 35,6 mg/l (STP)
 0,18 mg/l (aqua, freshwater)
 0,36 mg/l (aqua, intermittent releases)
 0,018 mg/l (aqua, marine water)
 0,0981 mg/l (sediment marine water)
 0,981 mg/kg (sediment freshwater)

108-65-6 2-methoxy-1-methylethyl acetate

PNEC 100 mg/l (STP)
 6,35 mg/l (aqua, intermittent releases)
 0,0635 mg/l (aqua, marine water)
 0,635 mg/l (aqua freshwater)
 0,329 mg/kg (sediment marine water)
 3,29 mg/kg (sediment freshwater)
 0,29 mg/kg (soil)

110-43-0 heptan-2-one

PNEC 12,5 mg/l (STP)
 0,0982 mg/l (aqua, freshwater)
 0,982 mg/l (aqua, intermittent releases)
 0,00982 mg/l (aqua, marine water)
 0,189 mg/kg (sediment marine water)
 1,89 mg/kg (sediment freshwater)
 0,321 mg/kg (soil)

· **Additional information:** The lists valid during the making were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.

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- **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.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product.

Due to missing tests no recommendation to the glove material can be given for the product.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **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.

- **Penetration time of glove material**

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

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

* SECTION 9: Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Clear
Odour:	Characteristic

- **Change in condition**

Boiling point/Boiling range: 126 °C

Flash point: 29 °C

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 280 °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:	0,7 Vol %
Upper:	10,8 Vol %

Vapour pressure at 20 °C: 10,7 hPa

Density at 20 °C: 0,9 g/cm³

Solubility in / Miscibility with water:

Slightly soluble.

- **Solvent content:**

Organic solvents:	100,0 %
VOC (EC)	100,00 %

Other information: No further relevant information available.



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* SECTION 10: Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions Reacts with strong oxidizing agents.
- Conditions to avoid High temperatures.
- Incompatible materials: Oxidizing agents.
- Hazardous decomposition products: No dangerous decomposition products known.

* SECTION 11: Toxicological information

- Information on toxicological effects
- Acute toxicity:
- LD/LC50 values relevant for classification:

123-86-4 n-butyl acetate

Oral LD50 10760 mg/kg (rat) (OECD 423)
 Dermal LD50 >14112 mg/kg (rabbit) (OECD 402)
 Inhalative LC50/4h 23,4 mg/l (rat) (OECD 403 in vivo, aerosol)

108-65-6 2-methoxy-1-methylethyl acetate

Oral LD50 > 5000 mg/kg (rat)
 Dermal LD50 > 5000 mg/kg (rat)

64742-95-6 Hydrocarbons, C9, aromatics

Oral LD50 >2000- <5000 mg/kg (rat) (OECD 401)
 Dermal LD50 >2000 mg/kg (rab)

110-43-0 heptan-2-one

Oral LD50 1670 mg/kg (rat)
 Dermal LD50 12600 mg/kg (rabbit)

- 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 the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

* SECTION 12: Ecological information

- Toxicity
- Aquatic toxicity:

123-86-4 n-butyl acetate

EC50/48h 44 mg/l (daphnia magna)
 EC50/72h 647,7 mg/l (desmodesmus supspicatus)
 IC50 356 mg/l (tetrahymena pyriformis) (40 h)
 LC50/96h 18 mg/l (pimphales promelas) (OECD 203)
 NOAEL/72h 200 mg/l (desmodesmus supspicatus)

108-65-6 2-methoxy-1-methylethyl acetate

EC50/48h 408-500 mg/l (daphnia magna)
 LC50/96h 100-180 mg/l (oncorhynchus mykiss)

64742-95-6 Hydrocarbons, C9, aromatics

IC50 1-10 mg/l (algae)
 1-10 mg/l (activated sludge)
 >100 mg/l (bacteria)
 NOEC 1-10 mg/l (activated sludge)
 1-10 mg/l (fish)

- Persistence and degradability No further relevant information available.

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· Degree of elimination:

123-86-4 n-butyl acetate

OECD 301D 83 % (/) (28 d)

· Behaviour in environmental systems:

· Bioaccumulative potential No further relevant information available.

· Mobility in soil No further relevant information available.

· Ecotoxicological effects:

· Remark: Harmful to fish

· Additional ecological information:

· General notes:

Water hazard class 2 (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.

Harmful to aquatic organisms

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· Waste treatment methods

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

· 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.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

* SECTION 14: Transport information

· UN-Number

· ADR, IMDG, IATA

UN1263

· UN proper shipping name

· ADR

1263 PAINT

· IMDG, IATA

PAINT

· Transport hazard class(es)

· ADR, IMDG, IATA



· Class

3 Flammable liquids.

· Label

3

· Packing group

· ADR, IMDG, IATA

III

· Environmental hazards:

· Marine pollutant:

No

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

30

· EMS Number:

F-E,S-E

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

5L

· Transport category

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- Tunnel restriction code D/E
 - UN "Model Regulation": UN1263, PAINT, 3, III
-

* SECTION 15: Regulatory information

- 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.
 - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
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* 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
 - H226 Flammable liquid and vapour.
 - H302 Harmful if swallowed.
 - H304 May be fatal if swallowed and enters airways.
 - H312 Harmful in contact with skin.
 - H332 Harmful if inhaled.
 - H335 May cause respiratory irritation.
 - H336 May cause drowsiness or dizziness.
 - H411 Toxic to aquatic life with long lasting effects.
 - R10 Flammable.
 - R20/21 Harmful by inhalation and in contact with skin.
 - R20/22 Harmful by inhalation and if swallowed.
 - R37 Irritating to respiratory system.
 - R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 - 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)
 - IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 - ICAO: International Civil Aviation Organization
 - ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 - 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 Harmonized System of Classification and Labelling of Chemicals
 - 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
 - * Data compared to the previous version altered.
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