

Printing date 21.05.2015 Version number 5 Revision: 21.05.2015

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

- · 1.1 Product identifier
- · Trade name: KRISTAL HS Clear Coat 92 2:1 PLUS
- · Article number: 9210
- 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 Lacquer
- · 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. 3 H226 Flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H336 May cause drowsiness or dizziness.

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

- · 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

- · Signal word Warning
- Hazard-determining components of labelling:

heptan-2-one

n-butyl acetate

Hazard statements

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves / eye protection / face protection.

P303+P361+P353 IF ON SKIN (or hair): 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.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.



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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH208 Contains Reaction mass of pentamethylpiperidyl sebacat, Derivative of Benzotriazol. May produce an allergic reaction. 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:

Dangerous components.		
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-butyl acetate The Flam. Liq. 3, H226; STOT SE 3, H336	10-25%
CAS: 108-10-1 EINECS: 203-550-1 Reg.nr.: 01-2119473980-30	4-methylpentan-2-one ♦ Flam. Liq. 2, H225; ♦ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	2,5-10%
	Solvent naphtha (petroleum), light arom. † Flam. Liq. 3, H226; † Asp. Tox. 1, H304; † Aquatic Chronic 2, H411; † Acute Tox. 4, H332; STOT SE 3, H335-H336	2,5-10%
CAS: 110-43-0 EINECS: 203-767-1	heptan-2-one	2,5-10%
ELINCS: 400-830-7 Reg.nr.: 01-0000015075-76	Derivative of Benzotriazol ♦ Acute Tox. 3, H331; ♦ Aquatic Chronic 2, H411; ♦ Skin Sens. 1, H317	0,5-2,5%
Reg.nr.: 01-2119491304-40	Reaction mass of pentamethylpiperidyl sebacat Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	0,5-2,5%
CAS: 64742-95-6 EINECS: 265-199-0	Solvent naphtha (petroleum), light aromatic Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Acute Tox. 4, H332; STOT SE 3, H335-H336	≤ 0,5%

· 4.1 Description of first aid measures

SECTION 4: 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.

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

· After eye contact:

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

Remove contactlenses.

· After swallowing:

Do not induce vomiting; call for medical help immediately.

Rinse out mouth and then drink plenty of water.

- · 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.

SECTION 5: Firefighting measures

- · 5.1 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
- · 5.2 Special hazards arising from the substance or mixture Carbon monoxide (CO)

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- 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

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:

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).

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

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 only in the original receptacle.
- Information about storage in one common storage facility: Store away from oxidising agents.
- · Further information about storage conditions: Keep container tightly sealed.
- Storage class: 3
- · 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:

108-10-1 4-methylpentan-2-one

IOELV Short-term value: 208 mg/m³, 50 ppm Long-term value: 83 mg/m³, 20 ppm

110-43-0 heptan-2-one

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

108-10-1 4-methylpentan-2-one

Dermal Long-term exposure - systemic effects 11,8 mg/kg bw/day (worker)

Inhalative Acute - short-term exposure - local effects 208 mg/m3 (worker)

Acute - short-term exposure - systemic effects 208 mg/m3 (worker)

Long-term exposure - local effects 83 mg/m3 (worker)

Long-term exposure - local effects 83 mg/m3 (worker)

Long-term exposure - systemic effects 83 mg/m3 (worker)



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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)

Derivative of Benzotriazol

Dermal Long-term exposure - systemic effects 0,5 mg/kg bw/day (worker)
Inhalative Long-term exposure - systemic effects 0,35 mg/m3 (worker)

Reaction mass of pentamethylpiperidyl sebacat

Dermal Acute - short-term exposure - systemic effects 2,5 mg/kg bw/day (worker)

Long-term exposure - systemic effects 2,5 mg/kg bw/day (worker)
Inhalative Acute - short-term exposure - systemic effects 2,35 mg/m3 (worker)

Long-term exposure - systemic effects 2,35 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)

108-10-1 4-methylpentan-2-one

PNEC 27,5 mg/l (STP)

0,6 mg/l (aqua, freshwater)

1,5 mg/l (aqua, intermittent releases)

0,06 mg/l (aqua, marine water)

0,83 mg/kg (sediment marine water)

8,27 mg/kg (sediment freshwater)

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)

Derivative of Benzotriazol

PNEC 10 mg/l (STP)

0,00023 mg/l (aqua, marine water)

0,0023 mg/l (aqua freshwater)

2 mg/kg (bd)

0,028 mg/l (intermittent release water)

0,306 mg/kg (sediment marine water)

3,06 mg/kg (sediment freshwater)

Reaction mass of pentamethylpiperidyl sebacat

PNEC 1 mg/l (STP)

0,0022 mg/l (aqua, freshwater)

0,00022 mg/l (aqua, marine water)

0,21 mg/kg (bd)

0,009 mg/l (intermittent release water)

0,11 mg/kg (sediment marine water)

1,05 mg/kg (sediment freshwater)

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



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- · 8.2 Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

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:

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

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

Butyl rubber, BR

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 0.3 mm (butylacetate)

Value for the permeation: Level \geq 60 min (butylacetate)

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

SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Fluid
Colour: Clear
Odour: Characteristic
Odour threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined. Boiling point/Boiling range: 114 ℃

· Flash point: 23 ℃

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 370 ℃

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:

Lower: 1,2 Vol %
Upper: 7,5 Vol %

· Vapour pressure at 20 °C: 10,7 hPa

· Density at 20 °C: 0,99 g/cm³

· Relative density Not determined.

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Vapour densityEvaporation rateNot determined.Not determined.

· Solubility in / Miscibility with

water: Slightly soluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined. Kinematic at 20 °C: 35 s (DIN 53211/4)

· Solvent content:

Organic solvents: 45,9 % VOC (EC) 45,86 %

• 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 oxidizing 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:

Oral LD50 1200 mg/kg (rat)

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)

108-10-1 4-methylpentan-2-one

Oral LD50 2080 mg/kg (rat)
Dermal LD50 >2000 mg/kg (rabbit)
Inhalative LC50/4h 8,2-16,4 mg/l (rat)

64742-95-6 Solvent naphtha (petroleum), light arom.

Oral LD50 >6800 mg/kg (rat)
Dermal LD50 >3400 mg/kg (rab)
Inhalative LC50/4h >10,2 mg/l (rat)

110-43-0 heptan-2-one

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

Derivative of Benzotriazol

Oral LD50 >5000 mg/kg (rat) (OESO 401)

Dermal LD50 >2000 ml/kg (rat) (OESO 402)

Inhalative LC50/4h >5,8 mg/l (rat) (OESO 403)

64742-95-6 Solvent naphtha (petroleum), light aromatic

Oral LD50 >6800 mg/kg (rat)
Dermal LD50 >3400 mg/kg (rab)
Inhalative LC50/4h >10,2 mg/l (rat)



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- · Primary irritant effect:
- · Skin corrosion/irritation No irritant effect.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.

SECTION 12: Ecological information

- · 12.1 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)

108-10-1 4-methylpentan-2-one

EC50/48h >200 mg/l (daphnia magna)

EC50/96h 400 mg/l (algae) LC50/96h >179 mg/l (fish)

Derivative of Benzotriazol

EC10/72h (static) 10 mg/l (pseudokirchneriella subcapitata) (OESO 201)

EC50/3h (static) >1000 mg/l (ac) (OESO 209)

EC50/48h (static) 4,0 mg/l (daphnia magna) (OESO 202)

EC50/72h (static) >9 mg/l (algae) (OESO 201)

LC0/14d >1000 mg/kg (Eisenia foetida) (OESO 207)

LC50/96h (static) (oncorhynchus mykiss)

NOEC/21d (dynamic) 0,78 mg/l (daphnia magna) (OESO 202) NOEC/56d 100 mg/kg (Eisenia foetida) (OESO 222)

Reaction mass of pentamethylpiperidyl sebacat

EC50/24h 20 mg/l (daphnia magna) (OESO 202)

EC50/3h >100 mg/l (ac) (OESO 209)

EC50/72h (static) 1,68 mg/l (desmodesmus supspicatus) (OESO 201)
LC50/96h 0,97 mg/l (lepomis macrochirus) (OESO 203)
0,9 mg/l (Brachydanio rerio) (OESO 203)

7,9 mg/l (oncorhynchus mykiss) (OESO 203)

NOEC/21d (dynamic) 1 mg/l (daphnia magna) (OESO 211)

- 12.2 Persistence and degradability No further relevant information available.
- Degree of elimination:

123-86-4 n-butyl acetate

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

- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- · Ecotoxical 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

- 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.
- · European waste catalogue

08 01 11* waste paint and varnish containing organic solvents or other dangerous substances

- · 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 IMDG, IATA PAINT

· 14.3 Transport hazard class(es)

· ADR, ADN, IMDG, IATA



· Class 3 Flammable liquids.

· Label 3

· 14.4 Packing group

· ADR, ADN, IMDG, IATA

· 14.5 Environmental hazards:

· Marine pollutant:

· 14.6 Special precautions for user Warning: Flammable liquids.

Danger code (Kemler): 30 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 Excepted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per unter packaging: 300 ml

Transport category 3

· Tunnel restriction code D/E

· IMDG

· Limited quantities (LQ) 5L · Excepted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

'UN "Model Regulation": UN1263, PAINT, 3, III

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.

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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.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

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.

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)

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 Conceptation (REACH)

DNEL: Derived No-Effect Level (HEACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
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 - AcuteHazard, 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