

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

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

- **1.1 Product identifier**
- **Trade name:** CARDEA 2K HS ACRYLIC HARDENER
- **Article number:** BB400Z3200
- **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:**
Manufacturer: Kansai Altan Boya San. ve Tic. A.S.
Kemalpaşa OSB Mahallesi İzmir Ankara Yolu (Ansızca) Küme Evleri No: 286
35730, Kemalpaşa – İzmir
TURKEY
infosds@kansaialtan.com.tr
- **Further information obtainable from:** Material safety department
- **1.4 Emergency telephone number:** During working hours: +90 232 870-1277

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.



GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335-H336 May cause respiratory irritation. 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.

(Contd. on page 2)

EU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 1)

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**
*hexamethylene -1,6- diisocyanate, homopolymer
xylene*

*Hydrocarbons, C9 aromatics
ethylbenzene
hexamethylene-di-isocyanate*

· **Hazard statements**

*H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.*

· **Precautionary statements**

*P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see on this label).
P331 Do NOT induce vomiting.
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.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **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.

(Contd. on page 3)

EU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 2)

· Dangerous components:		
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119970543-34	hexamethylene -1,6- diisocyanate, homopolymer ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	10-25%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	xylene ⚠ Flam. Liq. 3, H226; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-25%
EC number: 918-668-5 Reg.nr.: 01-2119455851-35	Hydrocarbons, C9 aromatics ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335-H336	≥10-<25%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35	ethylbenzene ⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332	≥2.5-<10%
CAS: 141-78-6 EINECS: 205-500-4 Index number: 607-022-00-5 Reg.nr.: 01-2119475103-46	ethyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	≥0.1-≤2.5%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37	hexamethylene-di-isocyanate ⚠ Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Resp. Sens. 1, H334; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≥0.1-<0.5%

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

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

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

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

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

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing: If symptoms persist consult doctor.

· 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.

EU

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 3)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Alcohol-resistant foam, CO₂, powders, water spray or mist.
- **For safety reasons unsuitable extinguishing agents:** Water jet.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**
 - Mouth respiratory protective device.
 - Do not inhale explosion gases or combustion gases.
 - Wear fully protective suit.

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 product to reach sewage system or any water course.
 - Inform respective authorities in case of seepage into water course or sewage system.
 - Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
 - Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 - 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:** 5 °C - 40 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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.

(Contd. on page 5)

EU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 4)

· **8.1 Control parameters**

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

100-41-4 ethylbenzene

IOELV	Short-term value: 884 mg/m ³ , 200 ppm Long-term value: 442 mg/m ³ , 100 ppm Skin
-------	---

141-78-6 ethyl acetate

IOELV	Short-term value: 1468 mg/m ³ , 400 ppm Long-term value: 734 mg/m ³ , 200 ppm
-------	--

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

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

· **Recommended filter device for short term use:** Combination filter A-P2

· **Protection of hands:**



Protective gloves

Sensibilisation by the components in the glove materials is possible.

Check protective gloves prior to each use for their proper condition.

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

Use gloves resistant to chemical affects (EN 374) and having CE marking.

· **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.

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.

· **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

(Contd. on page 6)

EU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 5)

- For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
Neoprene gloves
- As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR
- Eye protection:



Tightly sealed goggles

- Body protection: Use protective clothing that prevents direct contact to skin.
- Protective suit antistatic.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

- | | |
|--------------------|-----------------|
| · Form: | Fluid |
| · Colour: | Colourless |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |

- | | |
|-------------|-----------------|
| · pH-value: | Not applicable. |
|-------------|-----------------|

· Change in condition

- | | |
|--|---------------|
| · Melting point/freezing point: | Undetermined. |
| · Initial boiling point and boiling range: | 125 °C |

- | | |
|----------------|--------------------|
| · Flash point: | 25 °C (Closed cup) |
|----------------|--------------------|

- | | |
|------------------------------|-----------------|
| · Flammability (solid, gas): | Not applicable. |
|------------------------------|-----------------|

- | | |
|------------------------------|-----------------|
| · Decomposition temperature: | Not determined. |
|------------------------------|-----------------|

- | | |
|------------------------------|------------------------------|
| · Auto-ignition temperature: | Product is not selfigniting. |
|------------------------------|------------------------------|

- | | |
|-------------------------|---|
| · Explosive properties: | Product does not present an explosion hazard. |
|-------------------------|---|

· Explosion limits:

- | | |
|----------|-----------------|
| · Lower: | Not determined. |
| · Upper: | Not determined. |

- | | |
|--------------------|-----------------|
| · Vapour pressure: | Not determined. |
|--------------------|-----------------|

- | | |
|---------------------|------------------------|
| · Density at 20 °C: | 0.97 g/cm ³ |
| · Relative density | Not determined. |
| · Vapour density | heavier than air |
| · Evaporation rate | Not determined. |

· Solubility in / Miscibility with water:

Partly soluble.

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

· Viscosity:

- | | |
|-----------------------|--------------------|
| · Dynamic: | Not determined. |
| · Kinematic at 20 °C: | 12 s (DIN 53211/4) |

(Contd. on page 7)

EU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 6)

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if inhaled.

· **LD/LC50 values relevant for classification:**

28182-81-2 hexamethylene -1,6- diisocyanate, homopolymer

Dermal	LD50	>2,000 mg/kg (rat)
--------	------	--------------------

123-86-4 n-butyl acetate

Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/96 h	>21 mg/l (rat)

Hydrocarbons, C9 aromatics

Dermal	LD50	>3,160 mg/kg (rabbit)
Inhalative	LC50/96 h	mg/l (rat)

100-41-4 ethylbenzene

Dermal	LD50	17,800 mg/kg (rabbit)
--------	------	-----------------------

141-78-6 ethyl acetate

Dermal	LD50	>18,000 mg/kg (rabbit)
--------	------	------------------------

822-06-0 hexamethylene-di-isocyanate

Dermal	LD50	593 mg/kg (rat)
--------	------	-----------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** 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 respiratory irritation. May cause drowsiness or dizziness.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.

(Contd. on page 8)

EU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 7)

- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** 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.

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**

15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00	packaging (including separately collected municipal packaging waste)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1263
- **14.2 UN proper shipping name**
- **ADR** 1263 PAINT RELATED MATERIAL
- **IMDG, IATA** PAINT RELATED MATERIAL

(Contd. on page 9)

EU

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 8)

· **14.3 Transport hazard class(es)**

· ADR, IMDG, IATA



· **Class** 3 Flammable liquids.
· **Label** 3

· **14.4 Packing group**

· ADR, IMDG, IATA III

· **14.5 Environmental hazards:** Not applicable.

· **14.6 Special precautions for user** Warning: Flammable liquids.

· **Danger code (Kemler):** 30
· **EMS Number:** F-E,S-E
· **Stowage Category** A

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**

· **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

· **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":** UN 1263 PAINT RELATED MATERIAL, 3, III

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
EU legislation:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c FLAMMABLE LIQUIDS**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.03.2018

Version number 1

Revision: 08.03.2018

Trade name: CARDEA 2K HS ACRYLIC HARDENER

(Contd. of page 9)

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.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Department issuing SDS: Product safety department**Abbreviations and acronyms:**

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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

EU