# Safety data sheet
## according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date 14.02.2023 Version number 4 (replaces version 3) Revision: 14.02.2023

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

· **1.1 Product identifier**

· **Trade name: K2 METAL BOND HARDENER**
· **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** Steel epoxy

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Melle Sp. z o. o.
Stary Staw 9
63-400 OSTRÓW WLKP.
POLAND

· **Further information obtainable from:**
Product safety department.
zakupy@inter-global.com.pl
· **1.4 Emergency telephone number:** During normal opening times: 0048/62 737 88 00

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## SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation

GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

· **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**

GHS07

· **Signal word** Warning

· **Hazard-determining components of labelling:**
2,4,6-tris(dimethylaminomethyl)phenol
Benzyl alcohol
· **Hazard statements**
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
· **Precautionary statements**
P102 Keep out of reach of children.

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P301+P310 IF SWALLOWED: Immediately call a doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container to a waste container.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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## SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture: consisting of the following components.

| · **Dangerous components:** | | |
|---|---|---|
| CAS: 90-72-2<br>EINECS: 202-013-9 | 2,4,6-tris(dimethylaminomethyl)phenol<br>Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 | <25% |
| CAS: 1333-86-4<br>EINECS: 215-609-9 | Carbon black<br>Self-heat. 2, H252 | <25% |
| CAS: 100-51-6<br>EINECS: 202-859-9 | Benzyl alcohol<br>Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319 | <10% |

· **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:**
Take affected persons out into the fresh air.
Personal protection for the First Aider.
· **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.
· **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.

## SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** CO2, powder or water spray. Fight larger fires with water spray.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:** No special measures required.

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· **Additional information** Cool endangered receptacles with water spray.

## SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
· **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).
· **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** No special precautions are necessary if used correctly.
· **Information about fire - and explosion protection:** No special measures required.

· **7.2 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:** Not required.
· **Further information about storage conditions:** None.
· **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

| · **Ingredients with limit values that require monitoring at the workplace:** | |
|---|---|
| **1333-86-4 Carbon black** | |
| OEL | Long-term value: 3* mg/m³<br>*inhalable fraction |

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

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see item 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
· **Respiratory protection:** Not required.
· **Hand protection**

Protective gloves

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.

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*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/face protection** *Goggles recommended during refilling*

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## SECTION 9: Physical and chemical properties

| | |
|---|---|
| · **9.1 Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Physical state** | *Fluid* |
| · **Colour:** | *Colourless* |
| · **Odour:** | *Characteristic* |
| · **Odour threshold:** | *Not determined.* |
| · **Melting point/freezing point:** | *Undetermined.* |
| · **Boiling point or initial boiling point and boiling range** | *Undetermined.* |
| · **Flammability** | *Not applicable.* |
| · **Lower and upper explosion limit** | |
| · **Lower:** | *Not determined.* |
| · **Upper:** | *Not determined.* |
| · **Flash point:** | *Not applicable.* |
| · **Decomposition temperature:** | *Not determined.* |
| · **pH** | *Not determined.* |
| · **Viscosity:** | |
| · **Kinematic viscosity** | *Not determined.* |
| · **Dynamic:** | *Not determined.* |
| · **Solubility** | |
| · **water:** | *Soluble.* |
| · **Partition coefficient n-octanol/water (log value)** | *Not determined.* |
| · **Vapour pressure:** | *Not determined.* |
| · **Density and/or relative density** | |
| · **Density:** | *Not determined.* |
| · **Relative density** | *Not determined.* |
| · **Vapour density** | *Not determined.* |

| | |
|---|---|
| · **9.2 Other information** | |
| · **Appearance:** | |
| · **Form:** | *Liquid* |
| · **Important information on protection of health and environment, and on safety.** | |
| · **Auto-ignition temperature:** | *Product is not selfigniting.* |
| · **Explosive properties:** | *Product does not present an explosion hazard.* |
| · **Change in condition** | |
| · **Evaporation rate** | *Not determined.* |

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**Trade name: K2 METAL BOND HARDENER**

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| | |
|---|---|
| · **Information with regard to physical hazard classes** | |
| · **Explosives** | Void |
| · **Flammable gases** | Void |
| · **Aerosols** | Void |
| · **Oxidising gases** | Void |
| · **Gases under pressure** | Void |
| · **Flammable liquids** | Void |
| · **Flammable solids** | Void |
| · **Self-reactive substances and mixtures** | Void |
| · **Pyrophoric liquids** | Void |
| · **Pyrophoric solids** | Void |
| · **Self-heating substances and mixtures** | Void |
| · **Substances and mixtures, which emit flammable gases in contact with water** | Void |
| · **Oxidising liquids** | Void |
| · **Oxidising solids** | Void |
| · **Organic peroxides** | Void |
| · **Corrosive to metals** | Void |
| · **Desensitised explosives** | Void |

## 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 hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Harmful if swallowed.

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

| **ATE (Acute Toxicity Estimates)** | | |
|---|---|---|
| Oral | LD50 | 2,113 mg/kg |
| Dermal | LD50 | 22,222 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 122 mg/l |

| **90-72-2 2,4,6-tris(dimethylaminomethyl)phenol** | | |
|---|---|---|
| Oral | LD50 | 500 mg/kg (ATE) |
| **1333-86-4 Carbon black** | | |
| Oral | LD50 | 10,000 mg/kg (rat) |
| **100-51-6 Benzyl alcohol** | | |
| Oral | LD50 | 1,230 mg/kg (rat) |
| Dermal | LD50 | 2,000 mg/kg (rabbit) |

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| | | |
|---|---|---|
| *Inhalative* | *LC50/4 h* | *11 mg/l (ATE)* |

· ***Skin corrosion/irritation*** *Causes skin irritation.*
· ***Serious eye damage/irritation*** *Causes serious eye irritation.*
· ***Respiratory or skin sensitisation*** *Based on available data, the classification criteria are not met.*
· ***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*** *Based on available data, the classification criteria are not met.*
· ***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.*
· ***11.2 Information on other hazards***

| · ***Endocrine disrupting properties*** |
|---|
| *None of the ingredients is listed.* |

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## *SECTION 12: Ecological information*

· ***12.1 Toxicity***
· ***Aquatic toxicity:*** *No further relevant information available.*
· ***12.2 Persistence and degradability*** *The product is biodegradable. Degree of biodegradation> 70%*
· ***12.3 Bioaccumulative potential*** *No further relevant information available.*
· ***12.4 Mobility in soil*** *No further relevant information available.*
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*
· ***12.6 Endocrine disrupting properties***
*The product does not contain substances with endocrine disrupting properties.*
· ***12.7 Other adverse effects***
· ***Additional ecological information:***
· ***General notes:***
*Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water*
*Do not allow product to reach ground water, water course or sewage system, even in small quantities.*
*Danger to drinking water if even extremely small quantities leak into the ground.*

## *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.*

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

## *SECTION 14: Transport information*

| | |
|---|---|
| · ***14.1 UN number or ID number*** | |
| · ***ADR, ADN, IMDG, IATA*** | *Void* |
| · ***14.2 UN proper shipping name*** | |
| · ***ADR, ADN, IMDG, IATA*** | *Void* |

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| | |
|---|---|
| · **14.3 Transport hazard class(es)** | |
| · **ADR, ADN, IMDG, IATA** | |
| · **Class** | Void |
| · **14.4 Packing group** | |
| · **ADR, IMDG, IATA** | Void |
| · **14.5 Environmental hazards:** | |
| · **Marine pollutant:** | No |
| · **14.6 Special precautions for user** | Not applicable. |
| · **14.7 Maritime transport in bulk according to IMO instruments** | Not applicable. |
| · **UN "Model Regulation":** | Void |

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## SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **National regulations:**
1. 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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

2. 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Local regulations.

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· **15.2 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**
H252 Self-heating in large quantities; may catch fire.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
· **Classification according to Regulation (EC) No 1272/2008**
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
· **Date of previous version:** 24.07.2020
· **Version number of previous version:** 3
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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
Self-heat. 2: Self-heating substances and mixtures – Category 2
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