

Safety Data Sheet
acc. to OSHA HCS

Printing Date 12/05/2016

Revision Number 3

Revision Date 11/30/2016

* **1 Identification**

- **Product identifier**
- **Trade name:** 53230 (Hardman Epoweld 13230 Part B)
- **Article number:** 53230
- **Relevant identified uses of the substance or mixture.** Curing Agent
- **Application of the substance / the mixture** Epoxy curing agent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Royal Adhesives And Sealants, LLC
2001 W. Washington Street
South Bend IN 46628-2023
Information Phone Number: 574-246-5000
- **Information department:** Environment protection department.
- **Emergency telephone number:**
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

* **2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS08

- **Signal word** Danger

- **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

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· **Precautionary statements**

[In case of inadequate ventilation] wear respiratory protection.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

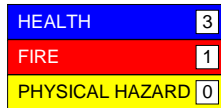


Health = 3

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 1

Physical Hazard = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture

· **Hazardous components:**

68541-13-9	Polyamide Resin	50-100%
1332-58-7	Kaolin	25-50%
112-24-3	3,6-diazaoctanethylenediamin	≤2.5%
13463-67-7	titanium dioxide	≤1.0%
1333-86-4	Carbon black	≤0.1%
112-57-2	3,6,9-triazaundecamethylenediamine	≤0.03%
111-40-0	2,2'-iminodiethylamine	≤0.03%

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4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**
Supply fresh air or oxygen; call for 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. Then consult a doctor.
- **After swallowing:** Induce vomiting and call for medical help.
- **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.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
Use fire fighting measures that suit the environment.
- **Advice for firefighters**
- **Protective equipment:** Protective clothing and respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **Environmental precautions:** 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 of contaminated material as waste in accordance with federal state and local regulations.
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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location away from direct heat.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

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

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data.

· **Control parameters**

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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

1332-58-7 Kaolin

PEL Long-term value: 15* 5** mg/m³
*total dust **respirable fraction

REL Long-term value: 10* 5** mg/m³
*total dust **respirable fraction

TLV Long-term value: 2* mg/m³
E; as respirable fraction

112-24-3 3,6-diazaoctanethylenediamin

WEEL Long-term value: 6 mg/m³, 1 ppm
Skin

13463-67-7 titanium dioxide

PEL Long-term value: 15* mg/m³
*total dust

REL See Pocket Guide App. A

TLV Long-term value: 10 mg/m³
withdrawn from NIC

1333-86-4 Carbon black

PEL Long-term value: 3.5 mg/m³

REL Long-term value: 3.5* mg/m³
*0.1 in presence of PAHs; See Pocket Guide Apps.A+C

TLV Long-term value: 3* mg/m³
*inhalable fraction

112-57-2 3,6,9-triazaundecamethylenediamine

WEEL Long-term value: 5 mg/m³
Skin; DSEN

111-40-0 2,2'-iminodiethylamine

REL Long-term value: 4 mg/m³, 1 ppm
Skin

TLV Long-term value: 4.2 mg/m³, 1 ppm
Skin

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

· **Exposure controls**

· **Personal protective equipment (see listings below)**

· **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

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· **Breathing equipment:**

Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

· **Protection of hands:**



Protective gloves

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

· **Material of gloves**

Nitrile rubber, NBR

Chloroprene rubber, CR

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.

· **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:**

Safety glasses with side shields.



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Liquid

Color: Gray

· **Odor:** Amine-like

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point: Undetermined.

· **Boiling point:** 103 °C (217 °F)

· **Flash point:** Not determined

· **Ignition temperature:** Not determined

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Flammable limits:**

Lower: Not determined

Upper: Not determined

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- | | |
|--|--|
| · Vapor pressure: | Not determined. |
| · Specific gravity at 20 °C (68 °F): | 1.23 g/cm ³ (10.264 lbs/gal) |
| · Relative density | Not determined. |
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined |
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Viscosity: | |
| · Dynamic: | Not determined. |
| · Kinematic: | Not determined. |
| · Solvent content: | |
| · Organic solvents: | 0.0 % |
| · VOC (Per EPA 24) | 103.3 GMS/L |
| · Solids content: | Not available |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Avoid high temperatures. Avoid freezing.
- **Incompatible materials:** Reacts with oxidizing agents.
- **Hazardous decomposition products:** Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides, Ammonia.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Corrosive to the skin.
- **on the eye:**
Strong irritant with the danger of severe eye injury.
Vapors may be irritating to the eyes.
- **Sensitization:** Skin Contact - Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

13463-67-7	titanium dioxide	2B
1333-86-4	Carbon black	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

* 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** At present there are no ecotoxicological assessments.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

* 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

- | | |
|--|------------------------|
| · UN-Number | |
| · DOT, ADN, IMDG, IATA | <i>not regulated</i> |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | <i>not regulated</i> |
| · Transport hazard class(es) | |
| · DOT | |
| · Class | <i>not regulated</i> |
| · ADN/R Class: | <i>Non-Hazardous</i> |
| | <i>not regulated</i> |
| · IMDG, IATA | |
| · Class | <i>not regulated</i> |
| | <i>Not Regulated</i> |
| · Packing group | |
| · DOT, IMDG, IATA | <i>not regulated</i> |
| · Environmental hazards: | <i>Not applicable.</i> |
| · Special precautions for user | <i>Not applicable.</i> |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <i>Not applicable.</i> |

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- | | |
|--|--|
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | not regulated |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):
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None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):
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None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.
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· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:
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None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:
--

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· (DSL) Canada Domestic Substance List

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.
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· New Jersey Right-to-Know List:

1332-58-7	Kaolin	
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112-24-3	3,6-diazaoctanethylenediamin	
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13463-67-7	titanium dioxide	
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1333-86-4	Carbon black	
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111-41-1	2-(2-aminoethylamino)ethanol	
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140-31-8	2-piperazin-1-ylethylamine	
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112-57-2	3,6,9-triazaundecamethylenediamine	
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111-40-0	2,2'-iminodiethylamine	
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· New Jersey Special Hazardous Substance List:

112-24-3	3,6-diazaoctanethylenediamin	CO
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1333-86-4	Carbon black	CA
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111-41-1	2-(2-aminoethylamino)ethanol	CO
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140-31-8	2-piperazin-1-ylethylamine	CO, F2
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112-57-2	3,6,9-triazaundecamethylenediamine	CO
----------	------------------------------------	----

111-40-0	2,2'-iminodiethylamine	CO
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· Pennsylvania Right-to-Know List:

1332-58-7	Kaolin
112-24-3	3,6-diazaoctanethylenediamin
13463-67-7	titanium dioxide
111-41-1	2-(2-aminoethylamino)ethanol
140-31-8	2-piperazin-1-ylethylamine
112-57-2	3,6,9-triazaundecamethylenediamine
111-40-0	2,2'-iminodiethylamine

· Pennsylvania Special Hazardous Substance List:

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

1332-58-7	Kaolin	A4
13463-67-7	titanium dioxide	A4
1333-86-4	Carbon black	A4

· MAK (German Maximum Workplace Concentration)

13463-67-7	titanium dioxide	3A
1333-86-4	Carbon black	3B

· NIOSH-Ca (National Institute for Occupational Safety and Health)

13463-67-7	titanium dioxide
1333-86-4	Carbon black

· National regulations:

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:** Environment protection department.

· **Creation Date:** 11/30/2016

· **Date of preparation / last revision** 12/05/2016 / 2

· 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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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*CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**Resp. Sens. 1: Respiratory sensitisation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1*

USA