SAFETY DATA SHEET



according to Workplace Safety and Health Regulations Singapore

WEICON HT 111 Epoxy Resin

Section 1. Identification

Product identifier : WEICON HT 111 Epoxy Resin

Product code : 102601

Relevant identified uses of the substance or mixture and uses advised against

Epoxy resins

Supplier's details : WEICON GmbH & Co. KG

Königsberger Str. 255

48157 Münster

Germany

Phone: +49 251 93220 Fax: +49(0)251 / 9322 - 244 Internet: www.weicon.de

e-mail address of person responsible for this SDS

: msds@weicon.de

Emergency telephone

number

: EMERGENCY CONTACT – UK, UAE, South Africa (24h): Tel: ++44 1865 407333

(English)

TRANSPORT EMERGENCY CONTACT - UK, UAE, South Africa (24h): Tel: ++44

1865 407333 (English)

Section 2. Hazards identification

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

SKIN SENSITIZATION - Category 1 **CARCINOGENICITY - Category 2**

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements, including precautionary statements

Hazard pictograms







Signal word : Warning

Hazard statements : H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H351 - Suspected of causing cancer.

H373 - May cause damage to organs through prolonged or repeated exposure.

H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P273 - Avoid release to the environment.

P260 - Do not breathe vapor.

P264 - Wash thoroughly after handling.

Date of issue/Date of revision : 5/11/2023 Date of previous issue : 11/23/2022 Version : 2

Section 2. Hazards identification

Response

P308 + P313 - IF exposed or concerned: Get medical advice or attention. P362 + P364 - Take off contaminated clothing and wash it before reuse.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of waste according to applicable legislation.

Other hazards which do not : None known.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	≥25 - ≤50	25068-38-6
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	≥10 - ≤25	9003-36-5
nickel	≤3	7440-02-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Chemical formula : Not applicable.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide

artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or

waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before

reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been

> swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open

airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Date of issue/Date of revision : 5/11/2023 Date of previous issue : 11/23/2022 Version : 2

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain or irritation

watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It

may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear

gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water

contaminated with this material must be contained and prevented from being

discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide

halogenated compounds metal oxide/oxides

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without

suitable training.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure

mode.

Date of issue/Date of revision: 5/11/2023Date of previous issue: 11/23/2022Version: 23/11

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

including any incompatibilities

Conditions for safe storage. : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
	Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 1 mg/m³ 8 hours.

Date of issue/Date of revision : 5/11/2023 Date of previous issue : 11/23/2022 Version : 2

Section 8. Exposure controls/personal protection

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended: 1 - 4 hours (breakthrough time): nitrile rubber; 4 - 8 hours (breakthrough time): Viton®/butyl rubber

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapor (Type AX) and particulate filter

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.
Color : Gray.

Odor : Characteristic.
Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point, initial boiling : Not available.

point, and boiling range

Flash point : Closed cup: >100°C (>212°F)

Evaporation rate: Not available.Flammability: Not available.Lower and upper explosion: Not available.

limit/flammability limit

Vapor pressure :

Date of issue/Date of revision: 5/11/2023Date of previous issue: 11/23/2022Version: 25/11

Section 9. Physical and chemical properties

	Vapor Pressure at 20°C		\	Vapor pressure at 50°C		
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	0.62	0.083	EU A.4			
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	0	0	EU A.4			

Relative vapor density : Not available.

Relative density : Not available.

Density : 2.2 to 2.3 g/cm³ [20°C (68°F)]

Solubility(ies)

Not available.

Solubility in water : Not available.

Miscible with water : No.

Partition coefficient: n-

octanol/water

: Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Viscosity : Dynamic: 24000000 mPa·s (24000000 cP)

Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials: No specific data.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

SADT : Not available.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Date of issue/Date of revision: 5/11/2023Date of previous issue: 11/23/2022Version: 26/11

Section 11. Toxicological information

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

<u>Specific target organ toxicity (repeated exposure)</u>

Name	Category	Route of exposure	Target organs
nickel	Category 1	-	-

Aspiration hazard

Not available.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation watering

redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not

: Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Date of issue/Date of revision : 5/11/2023 Date of previous issue : 11/23/2022 Version : 2 7/11

Section 11. Toxicological information

General : May cause damage to organs through prolonged or repeated exposure. Once

sensitized, a severe allergic reaction may occur when subsequently exposed to very

low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of

exposure.

Mutagenicity: No known significant effects or critical hazards.Teratogenicity: No known significant effects or critical hazards.Developmental effects: No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
nickel	Acute EC50 2 ppm Marine water	Algae - Macrocystis pyrifera - Young	4 days
	Acute EC50 450 μg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 1000 μg/l Marine water	Daphnia - Daphnia magna	48 hours
	Acute IC50 0.31 mg/l Marine water	Crustaceans - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 47.5 ng/L Fresh water	Fish - Heteropneustes fossilis	96 hours
	Chronic NOEC 100 mg/l Marine water	Algae - Glenodinium halli	72 hours
	Chronic NOEC 3.5 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks

Persistence/degradability

Not available.

Bioaccumulative potential

Product/ingredient name LogPow	BCF	Potential
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane	-	low

Mobility in soil

Date of issue/Date of revision: 5/11/2023Date of previous issue: 11/23/2022Version: 28/11

Section 12. Ecological information

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA	ADR/RID
UN number	UN3082	UN3082	UN3082	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, Formaldehyde, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, Formaldehyde, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and phenol)	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, Formaldehyde, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and phenol)
Transport hazard class(es)	9	9	9	9
Packing group	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

UN

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Special provisions 274, 331, 335, 375

IMDG

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules F-A, S-F Special provisions 274, 335, 969

Date of issue/Date of revision : 5/11/2023 Date of previous issue : 11/23/2022 Version : 2 9/11

Section 14. Transport information

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L

or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1,

5.0.2.6.1.1 and 5.0.2.8.

Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities -

Passenger Aircraft: 30 kg. Packaging instructions: Y964.

Special provisions A97, A158, A197

ADR/RID This product is not regulated as a dangerous good when transported in sizes of ≤5 L

or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2

and 4.1.1.4 to 4.1.1.8.

Hazard identification number 90

Limited quantity 5 L

Special provisions 274, 335, 601, 375

Tunnel code (-)

ADR Classification Code: M6

Special precautions for user : Transport within user's premises: always transport in closed containers that are

upright and secure. Ensure that persons transporting the product know what to do in

the event of an accident or spillage.

Transport in bulk according : Not available.

to IMO instruments

Section 15. Regulatory information

Singapore - hazardous chemicals under government control

None.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted. Canada : All components are listed or exempted. China : All components are listed or exempted.

Eurasian Economic Union : Russian Federation inventory: All components are listed or exempted.

Japan inventory (CSCL): All components are listed or exempted. Japan

Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted. **Philippines** : All components are listed or exempted. Republic of Korea : All components are listed or exempted. **Taiwan** : All components are listed or exempted. **Thailand** : All components are listed or exempted. Turkey : All components are listed or exempted.

Date of issue/Date of revision : 5/11/2023 Date of previous issue : 11/23/2022 Version : 2 10/11 WEICON HT 111 Epoxy Resin

Section 15. Regulatory information

United States : All components are active or exempted.Viet Nam : All components are listed or exempted.

Section 16. Other information

History

Date of printing : 5/14/2023 Date of issue/Date of : 5/11/2023

revision

Date of previous issue : 11/23/2022

Version : 2

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

References: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Date of issue/Date of revision : 5/11/2023 Date of previous issue : 11/23/2022 Version : 2 11/11