SAFETY DATA SHEET



according to Workplace Safety and Health Regulations Singapore

Easy-Mix N 5000 Epoxy Adhesive Hardener

Section 1. Identification

Product identifier	:	Easy-Mix N 5000 Epoxy Adhesive Hardener
Product code	:	106522

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

Hardener for 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	: SKIN CORROSION/IRRITATION - Category 1B
substance or mixture	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
	SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements, including precautionary statements

Hazard pictograms	
Signal word	: Danger
Hazard statements	: H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements	
General	 P103 - Read label before use. P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand.
Prevention	 P280 - Wear protective gloves, protective clothing and eye or face protection. P273 - Avoid release to the environment. P261 - Avoid breathing vapor.
Response	 P391 - Collect spillage. P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. P363 - Wash contaminated clothing before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water.
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Section 2. Hazards identification

		P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Storage	:	P405 - Store locked up.
Disposal	:	P501 - Dispose of waste according to applicable legislation.
Other hazards which do not result in classification	:	None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	%	CAS number
Phenol, styrenated	≥50 - ≤75	61788-44-1
N-aminoethylpiperazine	≥10 - ≤25	140-31-8
bis(isopropyl)naphthalene	≤10	38640-62-9
diethylenetriamine	<1	111-40-0
2-(2-aminoethylamino)ethanol	<0.3	111-41-1

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

<u>Description of necessary first aid measures</u>			
Eye contact	: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.		
Inhalation	: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.		
Skin contact	: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.		

Section 4. First aid measures Ingestion : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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. Most important symptoms/effects, acute and delayed Potential acute health effects Eye contact : Causes serious eye damage. Inhalation : No known significant effects or critical hazards. Skin contact : Causes severe burns. 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 watering redness Inhalation : No specific data. Skin contact : Adverse symptoms may include the following: pain or irritation redness blistering may occur Ingestion : Adverse symptoms may include the following: stomach pains Indication of immediate medical attention and special treatment needed, if necessary : In case of inhalation of decomposition products in a fire, symptoms may be delayed. Notes to physician The exposed person may need to be kept under medical surveillance for 48 hours. Specific treatments : No specific treatment. **Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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

<u>Extinguishing media</u>	
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.

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Hazardous thermal decomposition products	: Decomposition products may include the follow carbon dioxide carbon monoxide nitrogen oxides	ving materials:
Special protective actions for fire-fighters	 Promptly isolate the scene by removing all pers there is a fire. No action shall be taken involvin suitable training. 	
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective breathing apparatus (SCBA) with a full face-pie mode.	

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. Do not breathe 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. 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.
Conditions for safe storage, including any incompatibilities	: 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.
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Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits	
diethylenetriamine	Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 1 ppm 8 hours. PEL (long term): 4.2 mg/m ³ 8 hours.	
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 meas	<u>res</u>	
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, befor 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.	
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

<u>Appearance</u>	
Physical state	: Liquid.
Color	: Colorless.
Odor	: Amine-like.
Odor threshold	: Not available.

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Section 9. Physical and chemical properties

рН	:	8 to 11
Melting point/freezing point	:	Not available.
Boiling point, initial boiling point, and boiling range	:	>35°C (>95°F)
Flash point	:	Closed cup: >93.3°C (>199.9°F)
Evaporation rate	:	Not available.
Flammability	:	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Lower and upper explosion	:	Not available.

limit/flammability limit Vapor pressure

Vapor pressure	:								
	\ \	apor Press	sure at 20°C	۱	/apor pres	sure at 50°C			
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method			
diethylenetriamine	0.16	0.021							
N-aminoethylpiperazine	0.04	0.0053							
2-(2-aminoethylamino)ethanol	0.01	0.0013							
bis(isopropyl)naphthalene	0	0	OECD 104						
Relative vapor density	: Not ava	ailable.							
Relative density	: Not ava	ailable.							
Density	: 0.97 g/cm ³								
Solubility(ies)	:								
Not available.									
Solubility in water	: Not ava	ailable.							
Miscible with water	: No.								
Partition coefficient: n- octanol/water	: Not ap	plicable.							
Auto-ignition temperature	: Not ap	plicable.							
Decomposition temperature	: Not ava	ailable.							
Viscosity	: Kinema	atic: <5 mm ²	²/s (<5 cSt)						
Flow time (ISO 2431)	: Not ava	ailable.							
Particle characteristics									
Median particle size	: Not ap	plicable.							

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 SADT	 Under normal conditions of storage and use, hazardous decomposition products should not be produced. Not available.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
diethylenetriamine	LD50 Dermal	Rabbit	1090 mg/kg	-
	LD50 Oral	Rat	1080 mg/kg	-
2-(2-aminoethylamino) ethanol	LD50 Dermal	Rat	2250 mg/kg	-
	LD50 Oral	Rat	3 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Phenol, styrenated	Eyes - Mild irritant	Rabbit	-	0.1 MI	-
N-aminoethylpiperazine	Eyes - Moderate irritant	Rabbit	-	24 hours 20	-
	Skin - Severe irritant	Rabbit	-	mg 24 hours 5 mg	-
diethylenetriamine	Skin - Moderate irritant	Rabbit	-	500 mg	-
2-(2-aminoethylamino) ethanol	Eyes - Severe irritant	Rabbit	-	50 mg	-
	Skin - Mild irritant	Rabbit	-	445 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2-(2-aminoethylamino)ethanol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result	
bis(isopropyl)naphthalene	ASPIRATION HAZARD - Category 1	

Information on the likely : Not available. routes of exposure

Potential acute health effect	<u>s</u>						
Eye contact	:	Causes ser	rious eye damage.				
Inhalation	:	No known s	No known significant effects or critical hazards.				
Skin contact	:	Causes sev	Causes severe burns. May cause an allergic skin reaction.				
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watering redness
: No specific data.
: Adverse symptoms may include the following: pain or irritation redness blistering may occur
: Adverse symptoms may include the following: stomach pains

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

belayed and inimediate effects and also chronic effects from short and long term exposure						
:	Not available.					
:	Not available.					
:	Not available.					
:	Not available.					
ect	<u>S</u>					
:	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.					
:	No known significant effects or critical hazards.					
:	No known significant effects or critical hazards.					
:	No known significant effects or critical hazards.					
:	No known significant effects or critical hazards.					
:	No known significant effects or critical hazards.					
	: : : : : : : :					

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
diethylenetriamine	1080		N/A	N/A	N/A
2-(2-aminoethylamino)ethanol	3000		N/A	N/A	N/A

Acute toxicity estimates

Route	ATE value
Not available.	

Section 12. Ecological information

Т	oxicity	

Product/ingredient name	Result	Species	Exposure
diethylenetriamine	Acute LC50 1014000 μg/l Fresh water	Fish - Poecilia reticulata	96 hours

Persistence/degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
N-aminoethylpiperazine bis(isopropyl)naphthalene diethylenetriamine 2-(2-aminoethylamino)	-1.48 6.081 -5.58 -1.46	- 1800 to 6400 2.8 to 6.3 <0.2	low high low low
ethanol	-1.40	NO.Z	

<u>Mobility in soil</u>

Soil/water partition	: Not available.
coefficient (Koc)	

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	ΙΑΤΑ	ADR/RID
UN number	UN2815	UN2815	UN2815	UN2815
UN proper shipping name	N- AMINOETHYLPIPERAZINE	N- AMINOETHYLPIPERAZINE	N- Aminoethylpiperazine	N- AMINOETHYLPIPERAZINE
Transport hazard class(es)	8 (6.1)	8 (6.1)	8 (6.1)	8 (6.1)
Packing group				
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www.fenafunte.com

Section 14. Transport information

in minorigrapio.com
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Call us at: +65 9816 1980

Environmental	Yes. The	Yes.	Yes. The	Yes.
hazards	environmentally		environmentally	
	hazardous substance		hazardous substance	
	mark is not required.		mark is not required.	

Additional information	
IMDG	: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-A, S-B
ΙΑΤΑ	 The environmentally hazardous substance mark may appear if required by other transportation regulations. <u>Quantity limitation</u> Passenger and Cargo Aircraft: 5 L. Packaging instructions: 852. Cargo Aircraft Only: 60 L. Packaging instructions: 856. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y841. <u>Special provisions</u> A803
ADR/RID	 The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Hazard identification number</u> 86 <u>Limited quantity</u> 5 L <u>Tunnel code</u> (E) <u>ADR Classification Code:</u> CT1
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

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

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Philippines	: All compo	onents are listed or exempted	ed.		
New Zealand	: All compo	onents are listed or exempted	ed.		
Japan	•	ventory (CSCL): All compo ventory (ISHL): Not determ		exempted.	
Eurasian Economic Union	: Russian	Federation inventory: All	components are liste	ed or exempted.	
China	: All compo	onents are listed or exempted	ed.		
Canada	: All compo	onents are listed or exempte	ed.		
Australia	: All compo	onents are listed or exempte	ed.		

Section 15. Regulatory information

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

Section 16. Other information

<u>History</u>	
Date of printing	: 5/14/2023
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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 = International Air Transport Association IBC = 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 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1	Calculation method Calculation method Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

References

Hatam

: 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.