



Anti Corrosion Technology For Future

NAKI 7 NZB™
 Wear Resistant Epoxy

(Base & Activator)

HEALTH AND SAFETY

1. Chemical Product & Company Identification

- 1.1 Product Identifier: PT Nuscaco Anti Korosi Indonesia
- 1.2 Relevant identified uses of the substances or mixture and uses advised against
- Intended Use Refer to Technical Datasheet
- Application Method Refer to Technical Datasheet
- 1.3 Details of the supplier of the data sheet imported or manufacturer
- PT Nuscaco Anti Korosi Indonesia
 Nuscaco Group
 Jl. Raya Cakung Cilincing Km.1, No.7
 13910, Jakarta Timur, Indonesia

Telephone: +62 (021) 4608686

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1.4 Emergency (08:00-16:00): +62 (021) 4600338

2. Composition and Ingredients information

2.1 Classification of substance or mixture:

Item	Category	Hazard
Flammability	4	Flammable liquid and vapour
Acute Toxicity (Mouth)	5	May be harmful if swallowed
Acute Toxicity (Skin)	Not Classified	Not Applicable
Acute Toxicity (Inhalation)	Not Classified	Not Applicable
Acute Toxicity (Ingestion)	Not Classified	Not Applicable
Skin irritation	2	Causes skin irritation
Eye Damage	2A	Causes serious eye irritation
Sensitization (Respiratory)	Not Classified	Not Applicable
Sensitization (Skin)	1	May cause allergic reaction
Germ Toxicity	Not Classified	Not Applicable
Specific Target organ systemic toxicity (Single Exposure)	1	Central Nerve system
	2	Not Applicable
	3	Narcotic effects
Specific Target organ systemic toxicity (Repeated exposure)	1	Blood, liver, Respiratory system
	2	Not Applicable
Aspiration Hazard	Not Classified	Not Applicable
Harmfulness to aquatic Environment (Acute)	2	Causes serious damage to aquatic organism
Harmfulness to aquatic Environment (Long term effect)	2	May be harmful to aquatic ecosystem
Carcinogenicity	Not Classified	Not Applicable
Organic Peroxide	Not Classified	Not Applicable



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2.2 Label Elements

**WARNING**

Hazard Phrases

- H314 Causes severe skin burn and eye damage
H317 May cause an allergic skin reaction
H315 Harmful if contact with skin
H319 Causes serious eye irritation
H411 Toxic to aquatic life with long lasting effects

Safety Phrases

- S23 Do not breathe vapour
S25 Avoid Contact with skin
S41 Wear protective gloves/eye protection
S49 Keep only in original containers
S39 Wear eye shield protection
S30 Never add water to this product

3. Hazard Identification

This product contains the following hazardous substances

Chemical Designation	CAS No	Percent
Bisphenol A (epichlorhydrin)	25068-38-6	30-60
Reaction Product		
Aluminium Oxide	1344-28-1	1.0-10
Silicon Carbide	409-21-2	30-60

There are no additional ingrediets present which, within the current knowledge of the supplier and in the concentration applicable, are classified as hazardous to health or the environment and hence do not require reporting in this section



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4. First Aid Measures

4.1 Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial concentrations applicable, are classified as hazardous to health or the environment and hence do not require reporting in this section.

Skin Contact

Remove contaminated clothing immediately. Wash skin thoroughly with soap and water or use a recognised skin cleanser. Do NOT use solvents and thinners. Do NOT reuse clothing without thorough cleaning, preferably dispose of the contaminated clothing.

Eye Contact

Material is corrosive. Severe damage to eyes will result unless urgent attention is given. Irrigate copiously with clean fresh water for at least 15 minutes, holding the eyelids apart. Immediately seek medical attention.

Ingestion

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

No data available

5. Fire Fighting measures

5.1 Extinguishing Media

Recommended extinguishing media; alcohol resistant foam, powder, Carbon dioxide.

Do not use - Water jet

Note; Fire will produce dense black smoke. Decomposition products may be hazardous to health. Avoid exposure and use breathing apparatus as appropriate.

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.



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Fire will produce dense black smoke. Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Avoid exposure and use breathing apparatus as appropriate.

5.3. Advice for fire-fighters

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

6. Accidental release measures**6.1 Personal precautions, protective equipment, and emergency procedures**

Remove sources of ignition, do not turn lights or unprotected electrical equipment on or off.

In case of a major spill or spillage in a confined space evacuate the area and check that solvent vapour levels are below the Lower Explosive Limit before re-entering

6.2. Environmental precautions

Do not allow spills to enter drains or watercourses.

6.3. Methods and material for containment and cleaning up

Contain and absorb spillage with non-combustible materials e.g. sand, earth, vermiculite.

Place in closed containers outside buildings and dispose of according to relevant regulations.

Clean, preferably with a detergent. Do not use solvents.

Empty containers may contain product residues, including flammable or explosive vapours.

Do not cut, puncture or weld on or near containers. All label warnings must be observed until the containers have been cleaned or reconditioned.

7. Handling and Storage

Prevention of Worker Exposure: Use only in well ventilated area. Keep container tightly closed. Wear protective equipment. Keep away from food and drink.

Fire Precautions: Keep away from ignition sources. No smoking.

Incompatible Materials: Amine Activators, acid, alkalis, and oxidising agents.

Suitable Storage: In closed containers, away from direct sun or heat.
Temperature below 20 C are recommended to prevent shelf life problems.

Prevent unauthorised access



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8. Exposure Controls and Personal Protection

8.1 Control Parameters

Exposure standard are those provided by ACGIH (American Conference of Government Industrial Hygienists). Health data standard provided by NIOSH (National Institute for Occupational Safety and Health). Carcinogen data standard provided by International Agency for Research on Cancer)

Exposure			
Ingredient	CAS No.	Source	Value
Bisphenol A (epichlorhydrin)	25068-38-6	ACGIH	50 ppm TWA 150ppm TEL
Reaction Product			
Aluminium Oxyde	1344-28-1	ACGIH	10 mg/m3 TWA
Silicon Carbide	409-21-2	ACGIH	No Established Limit
Healthy Data			
Ingredient	CAS No.	Source	Value
Bisphenol A (epichlorhydrin)	25068-38-6	NIOSH	Respiratory Irritation
Reaction Product			
Aluminium Oxyde	1344-28-1	NIOSH	Lung tumor on animals
Silicon Carbide	409-21-2	NIOSH	No Established Limit
Carcinogen Data			
Ingredient	CAS No.	Source	Value
Bisphenol A (epichlorhydrin)	25068-38-6	IARC	Group 1: No; Group 2A: No; Group 2B: No; Group 3: Yes; Group 4: No.
Reaction Product			
Aluminium Oxyde	1344-28-1	IARC	Group 1: No; Group 2A: No; Group 2B: Yes; Group 3: No; Group 4: No.
Silicon Carbide	409-21-2	IARC	Group 1: No; Group 2A: No; Group 2B: Yes; Group 3: No; Group 4: No.

8.2 Exposure Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapour below occupational exposure limits suitable respiratory protection must be worn.



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Wear a full face shield if mixing or pouring this material

Skin Protection

Wear gloves. Gloves must be resistant to . Nitrile or PVC gloves are suitable. Do not use cotton or leather gloves.

Respiratory Protection

When concentrations exceed the exposure limits shown above, workers must wear appropriate approved respirators. Provision of other controls such as exhaust ventilation should be considered if practical.

Thermal hazards

No Data Available

9. Physical/Chemical Properties**9.1 Properties**

Appearance:	Paste
Colour:	Red.
Odour:	Aromatic odour of epoxy
Boiling Point:	Greater than 260 C
Flash Point:	Greater than 250 C
Auto Ignition Temperature:	Greater than 350 C
Evaporation rate (ether=1):	Slower than ether
Flammability limits in air:	Not known for product values
Values for flammability or explosive limit:	
Lower Explosion Limit:	No data available
Upper Explosion Limit:	No data available
Vapour Pressure:	Not Measured
Vapour Density:	Heavier than air
Density:	1.5 gms/cm-3
Solubility in water:	Insoluble
Solubility in organics:	Soluble in most aromatic and aliphatic solvents
VOC Level:	22.2 g/litre
Partition coefficient n-octanol:	Not measured
Decomposition Temperature:	Not measured
Percentage Volatile by Volume:	10% (Volatile material monomeric in nature)
Percentage Solids:	90% (Solvent free)
Viscosity:	Not Measured

9.2 Other Information

No further information



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10. Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage and handling conditions. When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke.

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid possible exothermic reactions.

10.3 Possibilities of Hazardous reaction

May react exothermically with: oxidising agents, strong alkalis, strong acids.

10.4 Conditions to avoid

Stable under recommended storage and handling conditions.

10.5 Incompatible materials

Keep away from the following materials: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products

Fire will produce dense black smoke. Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Avoid exposure and use breathing apparatus as appropriate.

11. Toxicological Information

11.1 Classification of substance or mixture:

Exposure to solvent vapour concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

The preparation has been assessed using the Acute Toxicity Data listed below, and classified for toxicological hazards accordingly.



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Ingredient	Oral LD50(mg/kg)	Skin LD50(mg/kg)	Inhalation Vapor LD50 (mg/L/4hr)
Bisphenol A (epichlorhydrin) (25068-38-6)	-	-	-
Pigment Red (2786-76-7)	-	-	-
Aluminum Oxide (1344-28-1)	>5,000, Rat- Category: 5	23,000, Rabbit- Category: 5	-
Silicon Carbide (409-21-2)	-	-	-

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

No additional information provided for this product.

12. Ecological Information**12.1 Toxicity**

There are no data available on the product itself

The product should not be allowed to enter drains or water courses

12.2 Persistence and degradability

Method: OECD Guideline 301 F

Ready biodegradability, Manometric Respirometry Test : 5 %

12.3 Bioaccumulative potential

Not measured

12.4 Mobility in soil

No data available

12.5 Other adverse effects

No data available



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13. Disposal Consideration

13.1 Measures for Disposals:

Dispose of all waste accordance with local regulations. Normally this would involve incineration of liquid waste and controlled landfill for polymerised matter.

14. Transport Information

SEA (IMDG)

Proper shipping name:	Enviromentally Hazardous Substance, liquid, N.O.S
UN Number:	3082
Class:	9
Packing Group:	III
Marine Pollutant:	No

AIR (ICAO/IATA)

Proper shipping name:	Enviromentally Hazardous Substance, liquid, N.O.S
UN Number:	3082
Class:	9
Packing Group:	III (Passengers: 964, Cargo: 964)

LAND

Proper transport name:	Enviromentally Hazardous Substance, liquid, N.O.S
Class:	9

15. Regulatory Information

This product and all its components complies with the chemical and transport regulation from the country list in section 1.3.

Other regulatory information specific to the hazardous chemical(s):
None noted

16. Other Information

The information on this MSDS is based upon the present state of our knowledge and on current law.

It is always the responsibility of the user to take all necessary steps to meet the demands of applicable legislation.

The information in this Safety Data Sheet is required according to legislation.

Disclaimer

The information in this sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, product is often under conditon beyond our control; we cannot guarantee anything but the quality of product itself. We deserve the right to modify from time to time according to manufacturer experience and continuous development program