

MATERIAL SAFETY DATA SHEET

1. Product and manufacturer identity

Product:	Hubless Epoxy Pipe Repair Coating
Manufacturer:	Ningbo NORIKA Hardware PTE LTD
Supply Company:	Ningbo NORIKA Hardware PTE LTD
Address:	No.36, Huangsu East Road, Dongqian Lake, Ningbo, Zhejiang, China.
Telephone:	+86-574-88112345
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Application & restriction	As an automotive accessory and topcoat for steel Impact on the environment, inhalation is harmful to the human body.

2. Summary of hazards

GHS Classification

Physical & chemical hazards:	This product is flammable and irritating. Its vapor can form an explosive mixture with air, which can cause combustion and explosion when exposed to open flames and high heat energy. It can react strongly with oxidants. Excessive flow rate can easily generate and accumulate static electricity. Its vapor is heavier than air and can diffuse to a considerable distance at lower points. When it comes into contact with a fire source, it will ignite and reignite.	
hazards:	Inflammable liquids	Class 3
	Acute toxicity – oral	Class 5
	Swallowing	May be harmful
Health hazards:		
Acute poisoning:	Inhaling high concentrations of this product in the short term can cause significant irritation to the eyes and upper respiratory tract, conjunctival and pharyngeal congestion, dizziness, headache, nausea, vomiting, chest tightness, limb weakness, blurred consciousness, and gait confusion. Severe cases may have restlessness, convulsions, or coma. Some have hysterical attacks.	
Chronic poisoning:	Long term exposure leads to neurasthenia syndrome, female workers have menstrual abnormalities, and workers often experience dry skin, cracked skin, and dermatitis.	
Environmental hazards:	No data.	
Sign or symbol:		
Warning word:	Warning	
Hazard information:	Flammable liquids and vapors; Swallowing may be harmful. Can cause skin irritation, dermatitis, and continuous contact can cause skin cracking and degreasing.	
Description of precaution:	Stay away from heat sources, sparks, open flames, and hot surfaces. Smoking is prohibited. Keep the container sealed and maintain low temperature. Grounding/equipotential connection of containers and loading equipment. Use explosion-proof electrical, ventilation, lighting and other equipment. Only tools that do not generate sparks can be used. Take measures to prevent electrostatic discharge. Wear protective gloves, protective clothing, protective goggles, and protective masks.	
Accident response:		
If skin (or hair) is contaminated:	Immediately remove all contaminated clothing. Wash skin with water and take a shower.	
In case of fire:	If feeling unwell, call a detoxification center or doctor. Use foam, carbon dioxide, dry powder and sand to extinguish the fire. Safe storage: Store in a well ventilated place.	
Disposal:	Dispose of this product or its container in accordance with local regulations.	

3. Composition and component information

Nature of composition: Mixture

Hazardous Components	Content	CAS Number
Acrylic resin	40 to 50 %	04/01/9003
Xylene	10 to 15 %	1330-20-7

4. First aid

First aid:	When there is suspicion or symptoms persist, medical attention should be sought. Do not give any oral medication to unconscious individuals.
If attached to skin:	Remove contaminated clothing, thoroughly rinse the skin with soap and water, or clean with personal skin. Agent cleaning. Never use solvents or diluents. If symptoms persist, seek medical help.
If gets in eye:	Immediately lift the eyelids and rinse thoroughly with plenty of flowing water.
If inhaled:	Quickly evacuate the scene to a place with fresh air. Maintain airway patency. Administer oxygen when breathing is difficult. Immediate artificial respiration and cardiac compressions should be performed for those who have stopped breathing and heartbeat. Seek medical attention.
If swallowed:	If swallowed unexpectedly, do not induce vomiting, maintain a resting state, and seek medical attention.

5. Fire-fighting process

Extinguishing agents:	Use foam, carbon dioxide, dry powder and sand to extinguish the fire.
Specific hazards:	Flammable, its vapor forms an explosive mixture with air, which can cause combustion and explosion when exposed to open flames and high heat energy. It can react strongly with oxidants. Its vapor is heavier than air and can diffuse to a considerable distance at lower points, causing it to ignite when encountering a fire source.
Fire extinguishing precautions and measures:	Two fires can cause thick black smoke. Exposure to decomposed substances can be harmful to the body. Firefighters must use self-contained breathing apparatus. Closed containers in a fire must be cooled with water. Do not allow the substances generated after extinguishing the fire to flow into the sewer or drainage pipe.

6. Actions for leakage

Health hazard precaution, protective wear and first-aid	Isolate the contaminated area and restrict entry and exit. Eliminate all ignition sources. It is recommended that emergency personnel wear gas masks and anti-static clothing. Do not come into contact or cross over leaked materials. Use anti ignition tools for work.
Environmental hazard precaution:	Prevent leakage from entering water bodies, sewers, and confined spaces.
Recovery and neutralization:	For small scale leakage, absorb with non combustible materials such as sand, vermiculite, diatomaceous earth, etc., and collect in containers. For large scale leakage, build embankments or dig pits for collection or transportation to waste disposal sites for disposal.

7. Precaution for handling and storage

Operating precautions:	Closed operation with comprehensive ventilation. Operators must undergo specialized training and strictly adhere to operating procedures. It is recommended that operators wear self-priming filter type gas masks (half face masks), safety goggles, anti venom penetration work clothes, and oil resistant gloves. Stay away from sparks and heat sources. Smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment to prevent steam leakage into the workplace air. Avoid contact with oxidants, pay attention to flow rate during filling, and have a grounding device to prevent static electricity accumulation. When handling, it is important to load and unload with care to prevent damage to the packaging and containers. Equip corresponding types and quantities of fire-fighting equipment and emergency response equipment for leaks. Empty containers may contain residual toxins.
Storage:	Store in a cool and ventilated warehouse. Keep away from sparks and heat sources, the temperature of the warehouse should not exceed 30 °C, the packaging should be sealed, and stored separately from oxidants. Avoid mixing storage, and use explosion-proof lighting and ventilation facilities. Prohibit the

storage, and use explosion-proof lighting and ventilation facilities. Prohibit the use of mechanical equipment and tools that are prone to generating sparks. The storage area should be equipped with emergency response equipment for leaks and appropriate containment materials.

8. Control of human exposure and protective measures

Facility measures:	The production process is sealed and ventilation is strengthened.
Maximum allowable concentration:	/
xylene	GBZ-2 (China, 1/2002)
	STEL: 100mg/m ³ for 15 minutes. Formation: All forms
	TWA: 50mg/m ³ (milligrams/cubic meter) for 8 hours. Formation: All forms
Monitoring method:	No data
Protective wears:	
Respiratory protection:	When the air concentration exceeds the standard, a filtered gas mask should be worn. During emergency rescue or evacuation, air respirators or oxygen respirators should be worn.
Hand protection:	Wear rubber and oil resistant gloves.
Eye protection:	Wear chemical safety goggles
Skin and body protection:	Wear anti-static work clothes
Other protections:	Smoking is strictly prohibited at the workplace. Avoid long-term repeated contact. Shower and change clothes after work, maintain good hygiene habits.

9. Physical and chemical properties

Physical state, form, color:	Various colored liquids
Odor:	Irritating odor
pH:	No data
Melting point (°C):	No data
Boiling point (°C):	No data
Relative density (water=1):	1.40–1.45g/cm ³
Relative vapor density (air=1):	No data
Critical pressure (MPa):	No data
Octanol/water partition coefficient:	No data
Flash point (°C):	Closed cup: 23 °C
Ignition temperature (°C):	No data
Lower explosive limit [% (V/V)]:	Lower 1.6%
Upper explosive limit [% (V/V)]:	Higher 7.5%

10. Stability and reactivity

Stability:	Stable
Aggregation hazards:	Not aggregated
Prohibitive conditions:	Strong oxidizing agent
Prohibitive contact:	Open flame, high heat
Hazardous decomposed substances:	No data

11. Health hazard information

Acute toxicity:	
LD50:	No data
LC50:	No data
Acute toxicity :	Discomfort such as headache, dizziness, nausea, vomiting, etc.
Skin irritation or corrosion:	It has a stimulating effect on the skin.
Eye irritation or corrosion:	It has a stimulating effect on the eyes.
Respiratory or skin allergies:	May cause skin allergies to susceptible individuals.
Germ cell mutagenicity:	No data
Carcinogenicity:	No data
Reproductive toxicity:	No data
Specific target organ systemic toxicity – single exposure:	No data
Specific target organ systemic toxicity – repeated exposure:	No data
Irritability:	No data
Subacute and chronic toxicity:	No data

12. Environmental hazards

Ecotoxicity:	This product does not have specific information yet. This product is not allowed to be poured into sewers or drainage ditches according to environmental protection laws, and cannot be discarded in places that may affect soil and groundwater.
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Persistence and degradability:	No data
Potential bioaccumulation:	No data
Mobility in soil:	No data

13. Precaution for disposal

Unclean packaging:	Return the emptied container to the manufacturer or dispose of it according to national and local regulations.
Disposal precautions:	Before disposal, relevant national and local regulations should be consulted.

14. Precaution for transportation

Transportation precautions:	Before transportation, the packaging container should be checked for completeness and sealing. During transportation, it should be ensured that the container does not leak, collapse, fall, or be damaged. It is strictly prohibited to mix with acids, oxidants, food, etc. for transportation. Transport vehicles should be equipped with corresponding types and quantities of fire-fighting equipment and emergency response equipment for leaks during transportation.
Packing Group:	Iron bucket
Marine pollutants (yes/no)	No

15. Applicable laws

The following laws, regulations, and standards have made corresponding provisions for the safe use, storage, transportation, loading and unloading, classification, and labeling of chemicals:	Series of standards for chemical classification, warning labels, and warning instructions (GB20576-2006~GB20602-2006). Work Safety Law of the People's Republic of China (passed at the 10th meeting of the Standing Committee of the 12th National People's Congress on August 31, 2014 and implemented from December 1, 2014); Regulations on the Safety Management of Hazardous Chemicals (revised and passed at the 144th Executive Meeting of the State Council on February 16, 2011, and implemented from December 1, 2011); Regulations on Work Safety Licenses (passed at the 34th Executive Meeting of the State Council on January 7, 2004); The Occupational Disease Prevention and Control Law of the People's Republic of China (passed at the 24th meeting of the Standing Committee of the 11th National People's Congress of the People's Republic of China on December 31, 2011, and implemented from the date of promulgation); Environmental Protection Law of the People's Republic of China (promulgated by the 8th Meeting of the Standing Committee of the 12th National People's Congress of the People's Republic of China in 2014) Revised and passed on April 24, 2015, effective from January 1, 2015.
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16. Miscellaneous information

Revision instructions:	This MSDS is prepared in accordance with the GB/T16483-2008 standard for the content and project sequence of chemical safety technical instructions; As the country has not yet issued a GHS classification catalog for chemicals, the GHS classification of chemicals in this SDS is based on the series of standards for chemical classification, warning labels, and warning instructions (GB20576-2006~GB20602-2006) that enterprises classify themselves. Corresponding adjustments will be made after the national GHS catalog for chemicals is issued.
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