

MATERIAL SAFETY DATA SHEET

Section 1.

Manufacturer : S K S CO., LTD. Address : 384-4,CHEONG CHEON DONG,BUPYEONG-GU,INCHEON,KOREA Emergency telephone number : 82-2-2266-7722		-- HMIS -- HEALTH : 2 FLAMMABILITY : 3 REACTIVITY : 0 PERSONAL PROTECT : H	
Date : 2008. 12. 17	Prepared by		
Hazard Rating : 0=least, 1=slight, 2=moderate, 3=high, 4=extreme, R=chronic H = splash goggles, gloves, synthetic apron & vapor respirator			
Trade name ZINKY#200M-HB MAIN LIQUID		Chemical name EPOXY ZINC RICH PRIMER	

Section 2-1. HAZARDOUS COMPONENTS

NO.	COMPONENT	CAS NO.	% by wt	Vapor pressure (mmHg 20℃)
1	XYLENE	1330-20-7	15 ~ 20	6.6
2	ZINC DUST	7440-66-6	70 ~ 90	N/A
3	METHYL ISOBUTHYL KETON	108-10-1	1 ~ 5	16

(N/A = Not Applicable)

Section 2-2. OCCUPATIONAL EXPOSURE LIMITS

NO.	(OSHA) PEL / TWA	PEL / CEILING	PEL / STEL	SKIN
1	100 PPM	N/E	150 PPM	N/E
2	5.00 mg/m ³	N/E	10.00 mg/m ³	N/E
3	50 PPM	N/E	75 PPM	N/E
NO.	(ACGIH) TLV / TWA	TLV / CEILING	TLV / STEL	SKIN
1	100 PPM	N/E	150 PPM	N/E
2	N/E	N/E	N/E	N/E
3	50 PPM	N/E	75 PPM	N/E

(N/E = Not Established)

Section 3. PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling point	N/E	°C	Specific gravity (H ₂ O=1)	2.3 ± 0.1	at 25 °C
Vapor pressure (at 20°C)	N/A	mmHg	Melting point	N/A	°C
Vapor density (Air=1)		> 1	Freezing point	N/A	°C
Evaporation rate (BAc=1)		> 1	Percent volatile by volume	55 ± 2%	
Solubility in water	Nil		Solubility in other solvent	Solved in almost all solvents	
Appearance and odor All Color Liquid with solvent odor.					

Section 4. FIRE AND EXPLOSION HAZARD DATA

Flash point (Method Used) 24 °C (Closed Cup)			
Flammable limits (%)	LEL	UEL	FLAMMABILITY CLASSIFICATION (OSHA)
	1.1	7.0	FLAMMBLE LIQUID - CLASS IB
Extinguishing media CO ₂ , Foam , Dry chemical, Halon (Avoid water)			
Special fire fighting procedures . Air supplied face masks where expose to fumes occures.			
Unusual fire and explosion hazards . Isolate from heat, electrical equipment, Sparks and opened flame. . Wear Self-Contained breathing apparatus.			

Section 5. REACTIVITY DATA

Stability	Unstable		Conditions to avoid contact with elevated temperatures or flame. Store below 50°C
	Stable	●	
Incompatibility (Materials to avoid) Strong oxidizing agents			
Hazardous decomposition or by-products No information			
Hazardous Polymerization	May occur		Condition to avoid Contact with Oxidizing, Strong, acid. alkalis, amine and alkanol- amines, chlorinated compound, aldehydes.
	Will not occur	●	

Section 6. HEALTH HAZARD DATA

Route of entry	Inhalation? Yes	Skin? Yes	Ingestion? No
Health hazard (Acute and chronic) Inhalation : May cause nose and throat irritation Skin and eye contact : May cause skin irritation or burning of the eyes.			
Signs and symptoms of exposure Eye contact may cause irritation or burning.			
Medical conditions Gellerally aggravated by exposure.			
Emergency and first aid procedures Inhalation : Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention. Skin Contact : Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed. Eyes Contact : Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately. Ingestion : Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately. Note to Physician: For ingestion, consider gastric lavage.			

Section 7. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled. Wash spill down with water.
Waste disposal method Incinerate absorbed material in accordance with federal, state and local regulations.
Precautions to be taken in handling and storing Although it is not corrosive to skin, avoid eye and skin contact.
Other precautions Wash thoroughly after handling and before eating.

Section 8. CONTROL MEASURES

Respiratory protection (Specify type)	Do not breathe mist of paint	
Ventilation	Local exhaust	Recommend
	Mechanical (General)	Recommend
	Special	None
	Other	None
Protective gloves	Rubber gloves.	
Eye protection	Safety goggles.	
Other protective clothing or equipment	Eye washer, safety shower	
Work/Hygienic practices	None	

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Hazard Rating : 0=least, 1=slight, 2=moderate, 3=high, 4=extreme, R=chronic H = splash goggles, gloves, synthetic apron & vapor respirator			
Trade name HARDENER OF ZINKY#200M-HB		Chemical name HARDENER OF EPOXY ZINC RICH PRIMER	

Section 2-1. HAZARDOUS COMPONENTS

NO.	COMPONENT	CAS NO.	% by wt	Vapor pressure (mmHg 20°C)
1	XYLENE	1330-20-7	45 ~ 60	6.6
2	N-BUTHYL ALCOHOL	71-36-3	5 ~ 10	4.2
3	POLYAMIDE AMINE RESIN	68910-91-8	30 ~ 40	N/A

(N/A = Not Applicable)

Section 2-2. OCCUPATIONAL EXPOSURE LIMITS

NO.	(OSHA) PEL / TWA	PEL / CEILING	PEL / STEL	SKIN
1	100 PPM	N/E	150 PPM	N/E
2	50 PPM	50 PPM	N/E	N/E
3	N/E	N/E	N/E	N/E
NO.	(ACGIH) TLV / TWA	TLV / CEILING	TLV / STEL	SKIN
1	100 PPM	N/E	150 PPM	N/E
2	50 PPM	50 PPM	N/E	Y
3	N/E	N/E	N/E	N/E

(N/E = Not Established)

Section 3. PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling point	N/E	°C	Specific gravity (H ₂ O=1)	1.00 ± 0.1	at 25 °C
Vapor pressure (at 20°C)	N/A	mmHg	Melting point	N/A	°C
Vapor density (Air=1)		> 1	Freezing point	N/A	°C
Evaporation rate (BAc=1)		> 1	Percent volatile by volume	52 ± 2 %	
Solubility in water	Nil		Solubility in other solvent	Solved in almost all solvents	
Appearance and odor All Color Liquid with solvent odor.					

Section 4. FIRE AND EXPLOSION HAZARD DATA

Flash point (Method Used) 30 °C (Closed Cup)			
Flammable limits (%)	LEL	UEL	FLAMMABILITY CLASSIFICATION (OSHA)
	1.1	7.0	FLAMMBLE LIQUID - CLASS IC
Extinguishing media CO ₂ , Foam , Dry chemical, Halon (Avoid water)			
Special fire fighting procedures . Air supplied face masks where expose to fumes occures.			
Unusual fire and explosion hazards . Isolate from heat, electrical equipment, Sparks and opened flame. . Wear Self-Contained breathing apparatus.			

Section 5. REACTIVITY DATA

Stability	Unstable		Conditions to avoid contact with elevated temperatures or flame. Store below 50°C
	Stable	●	
Incompatibility (Materials to avoid) Strong oxidizing agents			
Hazardous decomposition or by-products No information			
Hazardous Polymerization	May occur		Condition to avoid Contact with Oxidizing, Materials, strong acide, alkalise, aldehydes, chlorinated compound.
	Will not occur	●	

Section 6. HEALTH HAZARD DATA

Route of entry	Inhalation? Yes	Skin? Yes	Ingestion? No
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Eye protection	Safety goggles.	
Other protective clothing or equipment	Eye washer, safety shower	
Work/Hygienic practices	None	