

MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME IN CHINESE	环氧面漆 (硬化剂)		
PRODUCT NAME IN ENGLISH	EPICON MARINE HB (HARDENER)		
NAME OF MANUFACTURER	CHUGOKU MARINE PAINTS (SHANGHAI) LTD.		
ADDRESS OF MANUFACTURER	4677, JIASONG ROAD(NORTH),JIADING,SHANGHAI,CHINA		
ZIP CODE	201814		
FAX NO.	86-21-59501300		
EMERGENCY TEL NO.	86-21-59501000		
MSDS CODE	SHA 0478	EFFECTIVE DATE	AUGUST 25,2008
FIRE-FIGHTING TEL. NO.	119		

2 COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

CHEMICAL NAME	EPICON MARINE HB (HARDENER)		
HAZARDOUS INGREDIENTS	CONCENTRATION(%)	CAS NO.	
XYLENE	35-45	1330-20-7	
N-BUTANOL	5-10	71-36-3	
ISO-BUTANOL	1-5	78-83-1	
MODIFIED POLYAMIDE	40-50	-	

3 HAZARD IDENTIFICATION

CLASSIFICATION OF HAZARD	FLAMMABLE LIQUID TYPE 3
IN VIVO PATHWAY	INHALATION、INGESTION、SKIN CONTACT
HUMAN HEALTH EFFECTS	MAY CAUSE IRRITATION TO SKIN,EYE AND RESPIRATORY SYSTEM
ENVIRONMENTAL EFFECTS	TAKE PRE-CAUTION TO PREVENT CONTAMINATION TO SOIL AND WATER
SPECIAL HAZARDS	ACCUMULATION OF VAPOR MAY RESULT IN EXPLOSION

4 FIRST-AID MEASURES

SKIN CONTACT	REMOVE CONTAMINATED CLOTHING WASH WITH SOAP, WATER OR INDUSTRIAL CLEANSER. DO NOT USE SOLVENT.
EYE CONTACT	FLUSH THOROUGHLY WITH RUNNING WATER. SEEK MEDICAL ADVICE
INHALATION	REMOVE INTO FRESH AIR. LOOSEN COLLAR KEEP AT REST; OXYGEN THERAPY IF NECESSARY; ARTIFICIAL RESPIRATION WHEN APNEA; SEEK MEDICAL ADVICE.
INGESTION	GARGLE,VOMIT,GASTROLAVAGE IMMEDIATELY. SEEK MEDICAL ADVICE.

5 FIRE-FIGHTING MEASURES

PHYSICAL AND CHEMICAL HAZARDS	FLAMMABLE LIQUID, ACCUMULATION OF VAPOR MAY RESULT IN EXPLOSION EASILY GET FIRE WHEN MEET WITH NAKED FLAME OR HIGH TEMPERATURE. VAPOR IS HEAVIER THAN AIR.
HARMFUL REACTIVE PRODUCTS	FIRE WITH SMOKE、CO、CO ₂
EXTINGUISHING MEDIA	CO ₂ 、FOAMS、DRY SAND AND CHEMICAL POWDER.
FIRE FIGHTING MEASURES	1.FIRE FIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENTS. 2.REMOVE IMFLAMMABLE MATERIALS NEAR FIRE IMMEDIATELY. 3.NO USING WATER.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	CLEANER SHOULD WEAR PERSONAL PROTECTIVE EQUIPMENT
ENVIRONMENTAL PRECAUTIONS	SLUDGE SHALL BE KEPT IN CONTAINER & SEALED
METHODS FOR CLEANING UP	SPILLAGE OR LEAKAGE SHOULD BE CLEANED WITH PROPER MATERIAL AND THE WASTE SHOULD BE DISPOSED IN ACCORDANCE TO ALL LOCAL REGULATIONS

7 HANDLING AND STORAGE

PRECAUTIONS IN HANDLING & STORAGE	1. KEEP CONTAINER TIGHTLY CLOSED 2. KEEP AWAY FROM HEAT & FIRE 3. DON'T MIX WITH FOREIGN MATERIALS 4. KEEP IN COOL, DRY AREA (MAX.37° C & RH80%) 5. AVOID PHYSICAL DAMAGE SUCH AS KNOCKING
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8 EXPOSURE CONTROLS/PERSONAL PROTECTION

LIMIT VALUE	HAZARDOUS INGREDIENTS	ACGIH(TLV)
	XYLENE	100 ppm
	N-BUTANOL	C25 ppm
	ISO-BUTANOL	50 ppm
	MODIFIED POLYAMIDE	-
HYGIENE MEASURES	THE HARMFUL GAS CONCENTRATION IN THE AIR TESTED BY GAS CHROMATOGRAPHY. DUST CONTENT IN AIR TESTED ACCORDING TO GB/T5748-1985.	
ENGINEERING MEASURES	VENTILATION EQUIPMENT : 1. USE EXPLOSION PROFF EXHAUST VENTILATION 2. USE NONSPARK CLOSED TYPE GROUND VENTILATION SYSTEM	
PERSONAL PROTECTIVE EQUIPMENT	RESPIRATORY : USE A RESPIRATORY MASK FOR ORGANIC SOLVENT GASSES EYE : WEAR PROTECTIVE GOGGLES SKIN AND BODY : WORKER SHOULD WEAR OVERALL WORKING SUIT & SAFETY SHOES HAND : WEAR PROTECTIVE GLOVES	

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	LIQUID WITH SOLVENT SMELL
PH VALUE	NOT AVAILABLE
MELTING POINT(°C)	NOT AVAILABLE
BOILING POINT(°C)	NOT AVAILABLE
SPECIFIC DENSITY (WATER=1)	0.89 - 0.93
VAPOUR DENSITY (AIR=1)	>1
OCTANOL/WATER PARTITION COEFFICIENT	NOT AVAILABLE
FLASH POINT(°C)	28 °C (close cup)
AUTOIGNITION TEMPERATURE (°C)	NOT AVAILABLE
EXPLOSION LIMIT (UEL) (%)	NOT AVAILABLE
EXPLOSION LIMIT (LEL) (%)	NOT AVAILABLE
SOLUBILITY	INSOLUBLE IN WATER
EVAPORATION RATE	>1

10 STABILITY AND REACTIVITY

STABILITY	STABLE
MATERIALS TO AVOID	STRONG OXIDIZED AGENTS,ACIDS,ALKALIS.
CONDITIONS TO AVOID	HEAT, SPARK & FLAME
HAZARDOUS POLYMERIZATION	IMPOSSIBLE
HAZARDOUS DECOMPOSED PRODUCTS	FIRE WITH SMOKE、CO、CO ₂

11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	HAZARDOUS INGREDIENTS	LD50
	XYLENE	4300 mg/kg
	N-BUTANOL	790 mg/kg
	ISO-BUTANOL	2460 mg/kg
	MODIFIED POLYAMIDE	-

12 ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY	NOT AVAILABLE
BIODEGRADATION	NOT AVAILABLE
NON-BIODEGRADATION	NOT AVAILABLE

13 DISPOSAL CONSIDERATIONS

WASTE TYPE	HAZARDOUS WASTE
DISPOSAL METHODS	DISPOSING SHOULD FOLLOW ALL LOCAL REGULATIONS
NOTES	STORAGE AND DISPOSING SHOULD FOLLOW ALL LOCAL REGULATIONS

14 TRANSPORT INFORMATION

DANGEROUS GOODS NO.	33646
UN NO.	1263
CLASSIFICATION OF HAZARD	FLAMMABLE LIQUID
HAZARD LABEL	III
PACKING METHODS	PACKAGING INSIDE:STEEL DRUM;PACKAGING OUTSIDE:CARTON BOX
PRECAUTIONS IN TRANSPORT	1. KEEP CONTAINER TIGHTLY CLOSED 2. KEEP AWAY FROM STRONG SUNSHINE 3. AVOID PHYSICAL DAMAGE SUCH AS KNOCKING

15 REGULATORY INFORMATION

NO. 170 International Regulation (<作业场所安全使用化学品公约>)

Regulations for Safety Using Chemical Product in Work-place (<作业场所安全使用化学品规定>)

Regulations on the Control over Safety of Dangerous Chemicals (<危险化学品管理条例>)

Rules on Management and Control Ships Carrying Dangerous Cargo (<船舶装载危险货物监督管理规则>)

16 OTHER INFORMATION

REFERENCE LIST

- RAW MATERIAL DATA BASE (JAPANESE PAINT MANUFACTURERS ASSOCIATION)
- SOLVENT POCKET BOOK (YUUKIE KAGAKU KYOKAI)
- INTERNATIONAL CHEMICAL SUBSTANCE SAFETY CARD (KAGAKU KOGYO NIPPON)
- REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCE (NIOSH)
- ACGIH : 1990-1991 THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS.
- HAND BOOK OF HAZARDS AND HARM OF CHEMICAL SUBSTANCE (CHUOH RODOHSAIGAI BOHSHI KYOKAI)
- DATA BOOK OF HAZARDOUS SUBSTANCE (MARUZEN)

DATE PREPARED	2008-8-25
DIVISION IN CHARGE	CHUGOKU MARINE PAINTS(SHANGHAI)LTD./TECH. DIV.
SECTION TO REVIEW	CHUGOKU MARINE PAINTS(SHANGHAI)LTD.
COMMENTS OF REVISION	NO INFORMATION

OTHER INFORMATION

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