Material Safety Data Sheet

Section 1 - Product and company identification

MANUFACTURER'S NAME
MISUNG CHEMICAL CO.,LTD.
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INFORMATION TELEPHONE NO.
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2009.06.23

PRODUCT CLASS
PAINT

CHEMICAL FAMILY
EPOXY

TRADE NAME & PRODUCT CODE
EPOXY TOPCOAT MC#2309(R)A

Color
Dark Gary

Section 2 - Composition of ingredients

INGREDIENT	CAS NO	PERCENT BY WEIGH	TWA(ppm)
XYLENE	1330-20-7	5 ~ 10	No Data
EPOXY	25036-25-3	30 ~ 50	No Data
3) Melamine Cyanurate	37640-57-6	20 ~40	No Data
TALC,NON-ASBESTOSFORM	14807-96-6	25 ~ 35	No Data
CARBON BLACK P.N-17	1333-86-4	0.3 ~ 1.0	No Data
TITANIUMDIOXIDE	13463-67-7	5 ~ 10	No Data
S1(business secret)		1 ~ 10	No Data

Section 3 - Hazards Identification

ROUTES OF EXPOSURE
Exposure may be by inhalation, skin, eye contact. To minimize exposure, ventilation personal protective equipment is recommended. Avoid breathing vapor
Avoid contact with eyes, skin, and clothing.
SHORT TERM & LONG TERM EFFECTS
- Short term effects -
Cause respiratory tract, skin and eye irritation.
Additional effects may include lack of sense of smell, nausea, headache, drowsiness drunkenness, tingling sensation, liver and kidney damage and nerve dar
- Long term effects -
In addition to effects from short term exposure, ringing in the ears, stomach pain, b vomit, difficulty speaking, chest pain, irregular heartbeat, fainting, loss of memory, blood disorder, brain damage, coma and heart failure may c
Extremly high concentration vapors may cause person to unconsciousness or death.
Drinking alcohol may worsen the effects.
Prolonged overexposure to solvent may cause liver, kidney, brain and nerve system and reproductive harm.

Section 4 - First Aid Measures

INHALATION : Remove from exposure area to fresh air immediately. Perform artificial respiration if necessary. Keep person warm and at rest. Get medical attention imme
EYES : Wash eyes immediately with large amounts of water occasionally lifting uppe lower lids, until no evidence of chemical remains(at least 15 ~ 20 minute medical attention immediately.
SKIN : Remove contaminated clothing and shoes immediately. Launder before re-use Wash affected area thoroughly with soap and water until no evidence of chemical remains(at least 15 ~ 20 minutes). Get medical attention immediately.
SWALLOW : Extreme care must be used to prevent aspiration. Do not induce vomitin Get medical attention immediately.

Section 5 - Fire Fighting Measures

EXTINGUISHING MEDIA : Regular foam, Carbon Dioxide, Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURE
Move container from fire area if you can do it without risk. Avoid breathing toxic va
Keep upwind. Full protective equipment including self-contained breathing apparatu should be used.
Water spray may be ineffective. If water is used, fog nozzles are prefer
Water may be used to cool closed containers to prevent pressure build-up and possi autoignition or explosion when exposed to extreme heat.
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode(due to the build-up of pressure) when exposed to extreme heat.

Section 6 - Spill or leak procedures

STEPS TO BE TAKEN IN CASE MATERIALS IS RELEASED OR SP
Keep unnecessary people away. Isolate hazard area and restrict entry.
Eliminate all sources of ignition(no smoking, flames or flares in hazard a
Use spark resistant tools. Ventilate and avoid breathing vap
For small spills, take up with sand or other absorbent material and place into contai later disposal. For larger spills, dike far ahead of spill for later disposal.

Section 7 - Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid contact with eyes, skin, and clothing. Keep out of the reach of children. Prote physical damage. Use with adequate ventilatior
Worker must wear air-purifying respirator, safety goggoles, protective clothing and prevent contact with this material. Keep container tightly cl
Flammable liquid and vapor. May cause flash fir
Keep away from all ignition sources such as heat, open flame, spark.
Store away from incompatible substances(oxidizing materials, acid or base). Keep container coo
Avoid prolonged breathing of vapors and mists. Use spark resistant tool
Approved air supplied type respirator should be used in confined spaces, especially inside of tank. Wash thoroughly after handling.
When electrostatic coating is required, please wear electric resistant shoes or protective equipm

Section 8 - Exposure controls / Personal Protection

RESPIRATORY PROTECTION
Use only with adequate ventilation.
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly
fitted organic vapor/particulate respirator approved by authorized instit
When sanding or abrading the dried film, wear a dust/mist respirator.
Approved air supplied type respirator should be used in confined spaces
VENTILATION
Provide adequate ventilation to keep vapor concentrations below an acceptable TLV
Use explosion-proof ventilation equipment.
PROTECTIVE GLOVES : Insoluble type (Neoprene) is recomme
EYE PROTECTION : Splash-proof or dust-resistant safety goggles is recommended.
OTHER PROTECTIVE EQUIPMENTS : Clean, long-legged, long-sleeved work clothes.

Section 9 - Physical and Chemical Properties

APPERANCE : Appointment Color Liquid
ODOR : Smell of liquor
SPECIFIC GRAVITY (H20=1) : 1.25 ~ 1.40
BOILING POINT(℉) : No Data
FLASH POINT : 23 ℃ (Closed Cup)
EVAPORATION RATE(VS.n-BuAc) : Slower
PH VALUE : Not availabl
SOLUBILITY IN WATER : Negligible
VAPOR DENSITY(VS.AIR) : Heavier
LOW EXPLOSIVE LIMIT(LEL) : 1 %
UPPER EXPLOSIVE LIMIT(UEL) : 14 %
AUTOIGNITION TEMPERATURE : 448

Section 10 - Stability and Reactivity

STABILITY : STABLE X UNSTABLE __ under normal conditions.
CONDITION TO AVOID : Keep away from heat, sparks, open f
INCOMPATIBILITY(materials to avoid) : Strong oxidants. May dissolve some plastics and rubber.
HAZARDOUS DECOMPOSITION PRODUCTS : Carbon Dioxide. Carbon Mon
HAZARDOUS POLYMERIZATION : Will not occur under normal conditions.

Section 11 - Toxicological Information

EFFECTS OF EXPOSURE : See section
ACUTE TOXICITY DATA :

	LD50(Oral-rat)	**LC50(Inh-rat)**
XYLENE	4300 mg/kg	5000 ppm/4hr
EPOXY	>2000mg/kg	No Data
TALC,NON-ASBESTOSFORM	No Data	No Data
CARBON BLACK P.N-17	No Data	No Data
TITANIUMDIOXIDE	>24000 mg/kg	6820 mg/m3/4hr

Section 12 - Environmental Information

Do not allow to enter soil, waterways and waste water char

Section 13 - Disposal Considerations

Discharge, treatment, or disposal may be subject to national, state, or lo
Mix with compatible chemical which is less flammable and incinerate.
Since emptied containers retain product residue, follow label warnings even after co
emptied. Residual vapors may explode on ignition; do not cut, drill, grind or weld ne
container.

Section 14 - Transport Information

US Department of Transportation(D
Shipping name : paint and paint related material
Hazard class : 3
ID number : UN 1263
Packing group : II
labels : flammable liquid

Section 15 - Regulatory Information

The law for occupational safety and health in Korea : section 39, 41
The law for hazardous chemical substances in K

Section 16 - Other Information

The data given here is based on our current knowledge and experience. The purpose
this safety data sheet is to describe the products in terms of their safety requiremen
The data does not signify any warranty with regard to the products prop