Safety Data Sheet

Issued Date: October 28, 2008
Revised Date: February 24, 2010

1.IDENTIFICATION

PRODUCT NAME	ThreeBond 2082E Base resin
ISSUED NUMBER	kenkyukanri 470-5
ISSUED NUMBER	Three Bond Co.,Ltd
NAME OF MANUFACTURER	1456, Hazama-cho, Hachioji-shi, Tokyo, Japan
ADDRESS	Administration Department Research Division
NAME OF SECTION	81-42-661-1367/81-42-669-7235
TEL / FAX NUMBER	81-42-661-1367
EMERGENCY TEL NUMBER	Adhesive and sealant

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION

PHYSICAL HAZARDS	Flammable liquids	Not classified
HEALTH HAZARDS	Skin corrosion/irritation	Category 2
	Serious eye damage/Eye irritation	Category 2B
	Skin sensitization	Category 1
ENVIRONMENTAL HAZARDS	Acute hazards to the aquatic environment	Category 2
	Chronic hazards to the aquatic environment	Category 2

*Not above mentioned hazard classification items; Not classified or Not classifiable.

LABEL ELEMENTS

SYMBOL

SIGNAL WORD		Warning
HAZARD STATEMENT	H315	Causes skin irritation
	H320	Causes eye irritation
	H317	May cause an allergic skin reaction
	H401	Toxic to aquatic life
	H411	Toxic to aquatic life with long lasting effects

NOTICE

SAFETY MEASURE	Wear appropriate chemical protectors; gloves, glasses when handling Use personal protection and ventilation equipment to avoid exposure, if necessary.
FIRST AID MEASURE	If you feel unwell, remove victim to fresh air and keep at rest in a position comfortable for breathing. If on skin: Wash with plenty of soap and water. Remove contaminated clothing. If skin irritation or rash occurs: Get medical advice, attntion. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice, attention.
STORAGE	Keep container tightly closed. Protect from direct sunlight. Store the product at moderate temperature.
DISPOSAL	Dispose by qualified waste disposal experts.

GHS Hazard Communication is mentioned in accordance with Japanese Law.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE/MIXTURE Mixture

Safety Data Sheet

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CHEMICAL COMPOSITION

INGREDIENTS	Wt%	Formula	CAS Number
Bisphenol A type epoxy resin, liquid	80	—	25068-38-6
Other epoxy resin	10 — 20	—	—
Silica	< 5	SiO_2	—
Inorganic filler	< 5	—	—

IMPURITIES AND STABILIZING ADDITIVES WHICH ARE THEMSELVES CLASSIFIED AND WHICH CONTRIBUTE TO THE CLASSIFICATION OF THE SUBSTANCE: No information

4.FIRST-AID MEASURES

IF INHALED
In case of poisoning, remove victim to fresh air, calm down, keep warm then get medical advice, attention.

IF ON SKIN
Wash soap and water. Remove contaminated clothing.
If skin irritation or rush occurs: get medical advice, attention.

IF IN EYES
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing, then get medical advice, attention.

IF SWALLOWED
Rinse mouth.
Get medical advice, attention.

5.FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Dry powder, alcohol-resistant foam and carbon dioxide extinguisher, dry sand, water spray

SPECIFIC HAZARDS
May produce poisonous and irritated gasses upon a fire.

SPECIFIC FIRE-FIGHTING MEASURES
Workers should wear appropriate protection (safety glasses, protective clothes, mask for organic poisonous gasses, etc.), then extinguish from up wind position.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES
Wear appropriate protective equipment (refer to 8. Exposure Control/Personal Protection) to avoid contact to eyes, skin and inhalation.

ENVIRONMENTAL PRECAUTIONS, RECOVERY/NEUTRALIZATION
Caution not to allow product flow into rivers and not to effect to environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP
In case of a small spill, absorb with dry sand, soil, sawdust, cloth, etc., then place in a sealable container.

In case of large spills, dike and prevent overflow. Guide to a safe place then dispose properly.

SECONDARY ACCIDENT PRIVENTION MEASURE
All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources)

7.HANDLING AND STORAGE

HANDLING

ENGINEERING MEASURES
Wear protective equipment. Perform engineering measures in accordance with 「8. Exposure Control / Personal Protection」.

LOCAL VENTILATION /GENERAL VENTILATION
Perform local and general ventilation in accordance with 「8. Exposure Control/Personal Protection」.

SAFETY HANDLING PRECAUTIONS
Take precautions against fire

Safety Data Sheet

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STORAGE

ENGINEERING MEASURES	Keep container tightly closed. Protect from direct sunlight. Store the product moderate temperature.
	Refer to the technical data, specifications, and a product label about handling range of temperature.
CONTAINER AND PACKAGING MATERIALS	Keep only in original container. Do not transfer the product to another bottle.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

	ACGIH TLV	OSHA PEL
Bisphenol A type epoxy resin, liquid	Not established	Not established
Silica	Not established	Not established

ENGINEERING MEASURES	If handling this product indoors, seal off sources or use a local mechanical ventilation system, etc.
	Place a safety shower, hand washing sink and an eye wash shower near work area with clearly markings.

PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION	Wear mask to prevent organic gas poisoning, if necessary.
HAND PROTECTION	Wear appropriate protective gloves (Polyethylene, rubber, etc., solvent impervious materials).
EYE PROTECTION	Use eye protection. (preferably goggles)
SKIN AND BODY PROTECTION	Wear personal protection apron, boots, if necessary. Do not work with short sleeve shirts.
SANITARY MEASURES	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE

APPEARANCE	Paste
COLOUR	White
ODOR	Slight odor
FLASHPOINT	196°C
SPECIFIC GRAVITY (DENSITY)	1.19
SOLUBILITY	Slightly soluble in water
VISCOSITY	95 Pa·s

PHYSICAL STATE as Silica

MELTING POINT/FREEZING POINT	1710 °C, 1600-1750 °C(Sublimation at 1750 °C)
BOILING POINT (INITIAL AND RANGE)	2230°C
SPECIFIC GRAVITY (DENSITY)	2.65(20°C)
SOLUBILITY	Water: 0.2g(100ml, 3N Ammonia water, 18 °C)
	Slightly soluble in water

10. STABILITY AND REACTIVITY

STABILITY	Stable in normal handling..
POSSIBLY HAZARDOUS REACTION	Reacts violently with strong oxidizers, strong Lewis acids, strong inorganic acids, strong inorganic bases, organic bases (especially aliphatic amines class 1&2), then may cause a fire.
CONDITION TO AVOID	When mixing a large quantities of base resin and hardener at once, it also generates a great deal of heat as well as a rapid curing reaction. Harmful gas is produced and may cause carbonization or decomposition.

Safety Data Sheet

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INCOMPATIBLE MATERIALS	Oxidizer, Inorganic bases.
HAZARDOUS DECOMPOSITION	Incineration may produce poisonous gasses (Carbon monoxide, Low molecule organic compounds, etc.) upon condition.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS

ACUTE TOXICITY	No data as product
SKIN CORROSION/IRRITATION	No data as product but causes skin and mucous membrane irritation

Information on GHS Hazard Communication is in accordance with Japanese Law

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS

HAZARDS TO THE AQUATIC ENVIRONMENT	No data as product
MOBILITY	No data

Information on GHS Hazard Communication is in accordance with Japanese Law

13.DISPOSAL CONSIDERATIONS

METHOD OF DISPOSAL	To dispose product, solicit waste disposal management experts. Do not discharge waste nor cleaning agents containing this product into rivers, etc. And do not bury or landfill as is. Handle in used container and cloth same as above.

14.TRANSPORT INFORMATION

INTERNATIONAL REGULATION

SEA TRANSPORTATION	In accordance with IMO regulations
UN number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n. o. s.
UN Classification	9
UN packing group	III
Marine pollutant	P
AIR TRANSPORTATION	In accordance with ICAO/IATA regulations
UN number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n. o. s.
UN Classification	9
UN packing group	III

DOMESTIC REGULATION

LAND TRANSPORTATION	In accordance with Japanese Law
SEA TRANSPORTATION	In accordance with Japanese Law
UN number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n. o. s.
UN Classification	9
UN packing group	III
Marine pollutant	P
AIR TRANSPORTATION	In accordance with Japanese Law
UN number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n. o. s.
UN Classification	9
UN packing group	III

EMERGENCY ACCIDENTAL MEASURE

Yellow card number	171

15. REGULATORY INFORMATION

Handle in accordance with applicable laws and regulations.

Safety Data Sheet

Issued Date: October 28, 2008
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16. OTHER INFORMATION

Portions of the above evaluation of dangerous and harmful effects may be insufficient, please perform adequate investigation.

The content in this report is based on information which was available as of the Effective date.
But Three Bond Co.,Ltd. and its affiliates are not responsible for guaranteeing the above data and evaluations.

The above data assumes usage under normal working conditions.
In case of special handling is required, please handle with suitable safety measures according to the application and usage.

The content in this report may change due to new evaluation and tests, etc.

In case there are differences in the translation, the Japanese language version takes precedence.