

Section 1.0 – Identification Of Material And Supplier

Product Name : Lockwell UP110 BM (Hardener)
Proper Shipping Name : Polyurethane resin, applied polyurethane waterproofing membrane
Recommended use : Component of a Polyurethane System
Supplier Name : Lockwell Systems Co., Ltd
199/5 Moo.21 Soi Chongsiri Parkland
T.Bangphleeyai A.Bangplee Samutprakarn 10540, Thailand.
Country of Origin : Taiwan
Emergency Phone : +662 136 3868

Section 2.0 – Hazards Identification

HSNO Classification: Not defined as a dangerous good, NO HAZARDOUS SUBSTANCE.

Risk phrase(s): R20 – Harmful by inhalation.
R25 – Toxic if swallowed.
R34 – Causes burns.
R41 – Risk of serious damage to eyes.
R43 – May cause sensitization by skin contact.
R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effect in the aquatic environment.

Safety phrase(s): S23 – Do not breathe gas/fumes/vapour/spray.
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection
S61 – Avoid release to the environment. Refer to special instructions/safety data sheet.

Poison schedule: None allocated.

Section 3.0 – Composition / Information on Ingredients

Physical state : Liquid

Colour/Appearance :

Ingredient name	%	CAS number
Tolyene-2,4-diisocyanate	30~40	584-84-9
Polyether polyol	60~70	25214-63-5

Section 4.0 – First Aid Measures

Eye Contact : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Skin Contact : Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before re-use. Clean shoes thoroughly before re-use.

Inhalation : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Ingestion : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recover position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Note to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. If poisoning occurs, contact a doctor or Poisons Information Centre.

Section 5.0 – Fire Fighting Measures

Extinguishing media:

Use dry chemical, CO₂, water spray (fog) or foam.

Hazardous combustion products:

Decomposition products may include the following materials:
Carbon dioxide, carbon monoxide, nitrogen oxides.

Special protective equipment for fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Precautions for fire-fighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

In a fire or if heated, a pressure increase will occur and the container may burst.

Section 6.0 – Accidental Release Measure

SPILLS AND DISPOSAL

Emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and clean-up procedures:Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material eg sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. Note: See section 1 for emergency contact information and section 13 for waste disposal.

Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7.0 – Handling & Storage**Precautions for safe handling:**

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Refer to special instructions/safety data sheet. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Precautions for safe storage:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

Section 8.0 – Exposure Controls/ Personal Protection**National exposure standards:**

No value assigned to this material by the Australian regulatory authority.

Biological limit values:

No biological limit allocated.

Engineering controls:

If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protective equipment:**Eyes:**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Hands:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 9.0 – Physical & Chemical Properties

- Appearance & Odour** : Liquid.
- Boiling Point** : Not available
- Vapour Pressure** : Not available
- Specific Gravity** : Not available
- Flash Point** : Closed cup: >146°C
- % Volatile by Volume** : Not available
- Flammability Limits** : Not available
- Solubility in Water** : Not available
- Viscosity** : Dynamic: 3000 to 8000 mPa's
- PH** : 6.5

Section 10.0 – Stability & Reactivity

- Chemical Stability** : The product is stable
- Conditions to avoid** : No specific data
- Materials to avoid** : Reactive or incompatible with the following materials: acids
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous Reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 11.0 – Toxicology Information

Potential acute health effects

- Skin contact** : Corrosive to the skin. Causes burns. Harmful in contact with skin.
- Eye contact** : Corrosive to eyes. Causes burns.
- Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.
- Inhalation** : May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
	LD50 Dermal LD50 Oral			-

Potential chronic health effects:
Chronic Toxicity



Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure

Mutagenicity

Product/ingredient name	Test	Experiment	Exposure

- Chronic effects : Harmful – danger of serious damage to health by prolonged exposure if swallowed.
- Carcinogenicity : No known significant effects or critical hazards.
- Mutagenicity : No known significant effects or critical hazards.
- Teratogenicity : No known significant effects or critical hazards.
- Developmental effects : No known significant effects or critical hazards.
- Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Skin** : Adverse symptoms may include the following:
pain or irritation
redness
blistering
- Eyes** : Adverse symptoms may include the following:
pain
watering
redness
- Target organs** : Contains material which may cause damage to the following organs:
liver, peripheral nervous system, pancreas, thyroid

Section 12.0 – Ecological Information

Environmental effects:

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic Ecotoxicity

- Ecotoxicity** : On burning will emit toxic fumes of nitrogen,carbon monoxide and carbon dioxide
Some minor components are toxic to aquatic organisms

Conclusion/Summary : Not available

Biodegradability

Product/ingredient name	Test	Result	Dose	Inoculum
			-	-

Conclusion/Summary : Not available

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
			-

Bioaccumulative Potential

Product/ingredient name	logP _{ow}	BCF	Potential
			-

Mobility : Not available

Other adverse effects : No known significant effects or critical hazards

Section 13.0 – Disposal Consideration

Methods of disposal:

The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

Section 14.0 – Transport Information

Road and rail transport:

Not defined as a dangerous good, not regulated for transport under UN and local regulations

Marine transport:

Not defined as a dangerous good, not regulated for transport under UN and local regulations

Air transport:

Not defined as a dangerous good, not regulated for transport under UN and local regulations

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional Information

PG*: Packaging Group

Section 15.0 – Regulatory Information

Inventory status

Country	Inventory	Status
Australia	AICS	All components are listed or exempted.
Canada	DSL	All components are listed or exempted.
China	IECSC	All components are listed or exempted.
Europe	EINECS/ELINCS/NLP	All components are listed or exempted.
Japan	ENCS	All components are listed or exempted.
Korea	KECI	All components are listed or exempted.
New Zealand	NZIoC	All components are listed or exempted.
Philippines	PICCS	All components are listed or exempted.
United States	TSCA	All components are listed or exempted.

Carcinogen schedule (Australia) : None allocated.

Poison schedule (Australia) : None allocated.

Section 16.0 – Other Information

Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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