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MATERIAL SAFETY DATA SHEET

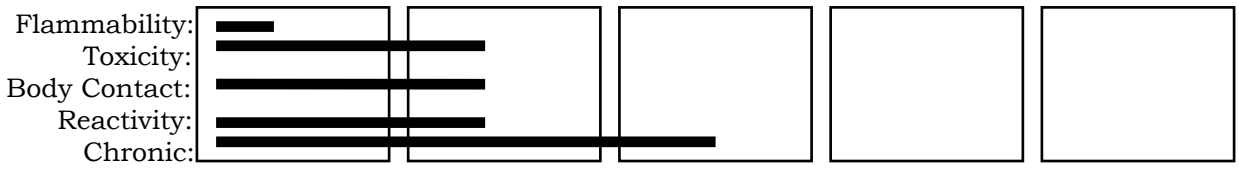
Lo Bi UREA (0.4%)

IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

Not classified as hazardous according to Worksafe Australia criteria.

CHEMWATCH HAZARD RATINGS



SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

PERSONAL PROTECTIVE EQUIPMENT FOR INDUSTRIAL/ COMMERCIAL ENVIRONMENTS

Gloves, Protective Eye Wear, ...

		Product Name: urea	
		CAS RN No(s):	57-13-6
		UN Number:	None
		Packaging Group:	None
		Dangerous Goods Class:	None
		Subsidiary Risk:	None
		Hazchem Code:	None
		Poisons Schedule Number:	None
	USE		
		Used widely as a soluble fertiliser (readily available source of nitrogen). In animal feeds. Reacted with aldehydes to make resins and plastics. Condensed with malonic ester to form barbituric acid. Used extensively in the paper industry to soften cellulose. In ammoniated dentrifices. In medicine used for treatment of cerebral oedema, also as a diuretic. Also used in detergents, yeast production, dyes and pigments.	
PHYSICAL DESCRIPTION/PROPERTIES			
	APPEARANCE		
		White crystals, granules, prill or powder, odourless or with a slight ammonia odour. Soluble in water; almost insoluble in chloroform, ether; soluble in concentrated hydrochloric acid. Grades available are: Fertiliser, Technical, Reagent and BP.	
		Boiling Point (deg C):	Not available
		Melting Point (degC):	132.7
		Vapour Pressure (kPa):	Not applicable

		Specific Gravity:	1.33@20C/4C
		Flash Point (degC):	Non Flammable
		Lower Explosive Limit (%):	Not available
		Upper Explosive Limit (%):	Not available
		Solubility in Water (g/L):	Miscible

IDENTIFICATION continued ....

INGREDIENTS

	NAME	**CAS RN**
	%	
	urea	57-13-6
	>99.5	

HEALTH HAZARD INFORMATION

ACUTE HEALTH EFFECTS		
	SWALLOWED	
	Considered an unlikely route of entry in commercial/industrial environments. Considered to be non toxic if swallowed but may be harmful if swallowed in quantity. Ingestion may result in nausea, abdominal irritation, pain and vomiting.	
	EYE	
	The dust may be discomforting to the eyes.	
	SKIN	
	The material may be mildly discomforting to the skin. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to vesiculation, scaling and thickening of the epidermis. Historically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Urea ointment acts to soften dry scaly skin, promotes skin absoption of other chemicals and is a common ingredient (2-20%) of skin ointments. Adverse reactions to clinical use of high doses of urea solution include nausea and vomiting. Prolonged skin contact may cause stinging sensation and mild irritation and may result in dermatitis.	
	INHALED	
	Generated dust may be discomforting to the upper respiratory tract if inhaled. Inhalation of dust may aggravate a pre-existing respiratory condition such as asthma, bronchitis, emphysema. Urea in small quantities is considered to be practically non-harmful by all exposure routes. The dust should be regarded as a nuisance dust and exposure should be kept as low as practical. Confirmed asthmatics should avoid prolonged contact with urea dust.	
	CHRONIC HEALTH EFFECTS	
	Primary route of exposure is usually by inhalation of generated dust. High levels of exposure to urea in the Russian workplace have been reported to produce emphysema. The backs of rats were treated by dermal application with 10%, 20%, 40% urea ointment daily for 4 to 24 weeks. No erythema or other responses were noted at the application site. At 25 weeks there was a decrease, in the 40% urea ointment group, of brain and prostate weights. In medicine, avoid urea in cases of renal or hepatic impairment. Urea is excreted as a product of normal body metabolic processes.	

FIRST AID			
	SWALLOWED		
		Rinse mouth out with plenty of water. If poisoning occurs, contact a doctor or Poisons Information Centre. If swallowed, do **NOT** induce vomiting. Give a glass of water.	
	EYE		
		If this product comes in contact with the eyes: Immediately hold the eyes open and wash with fresh running water. Ensure irrigation under the eyelids by occasionally lifting upper and lower lids. If pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be taken by skilled personnel.	
HEALTH HAZARD continued			
	SKIN		
		If product comes in contact with the skin: Immediately remove all contaminated clothing, including footwear (after rinsing with water). Wash affected areas thoroughly with water (and soap if available). Seek medical attention in event of irritation.	
	INHALED		
		If fumes or combustion products are inhaled: Remove to fresh air. Lay patient down. Keep warm and rested. If breathing is shallow or has stopped, ensure clear airway and apply resuscitation. Transport to hospital, or doctor.	
ADVICE TO DOCTOR			
		Treat symptomatically.	

PRECAUTIONS FOR USE

EXPOSURE STANDARDS			
		No exposure limits set by NOHSC or ACGIH. CEL TWA: 10mg/m^3 (compare WEEL-TWA) Even if individuals inhaled 10mg/m^3 of urea through the whole workday, they would only inhale 100mg/day. This increment, even if totally absorbed, would be insignificant when compared to the 30g/day normal excretion rate. The workplace environmental exposure limit (WEEL) established by the AIHA is protective against the effects of urea as a nuisance dust.	
ENGINEERING CONTROLS			
		Use in a well-ventilated area. General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved dust respirator. Correct fit is essential to obtain adequate protection.	
PERSONAL PROTECTION			
	EYE		
		Safety glasses with side shields; or as required. Chemical goggles. Contact lenses pose a special hazard: soft lenses may absorb irritants and all lenses concentrate them.	
	HANDS/FEET		

		Wear chemical protective gloves. eg. PVC gloves with barrier cream. Wear safety footwear.	
	OTHER		
		Overalls. Eyewash unit.	

RESPIRATOR				
	Protection Factor	Half-Face Respirator	Full-face Respirator	Powered Air Respirator
	10 xES	P1	-	PAPR-P1
		Air-line *	-	-
	50 xES	Air-line**	P2	PAPR-P2
	100 xES	-	P3	-
			Air-line*	-
	100+ xES	-	Air-line**	PAPR-P3

* - Negative pressure demand. ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information, consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

SAFE HANDLING INFORMATION

STORAGE AND TRANSPORT			
	SUITABLE CONTAINER		
		Multi ply paper bag with sealed plastic liner or heavy gauge plastic bag.. Check that all containers are clearly labelled and free from leaks. Packing as recommended by manufacturer Glass container.	
	STORAGE INCOMPATIBILITY		
		Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine, etc., as ignition may result. Avoid contamination with strong oxidising agents, particularly peroxides, perchlorates, etc. as violent decomposition/detonation may result. Avoid storage/contamination with hypochlorites as reaction with formation of explosive nitrogen trichloride may occur.	
	STORAGE REQUIREMENT		
		Keep dry. Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuffs containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storing and handling recommendations.	
	TRANSPORTATION		
		No restrictions.	
SPILLS AND DISPOSAL			
	MINOR SPILLS		
		Clean up all spills immediately. Wear impervious gloves and safety glasses. Use dry clean up procedures and avoid generating dust. Sweep up. Place in clean drum then flush area with water. Small quantities may be discharged to sewer with a large excess of water.	
	MAJOR SPILLS		

		Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact by using protective equipment and dust respirator. Prevent spillage from entering drains, sewers or water courses. Recover product wherever possible. Avoid generating dust. Sweep/shovel up. If required, wet with water to prevent dusting. Put residues in labelled plastic bags or other containers for disposal. Wash area down with large quantity of water and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.
	DISPOSAL	
		Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill. Recycle containers where possible, or dispose of in an authorised landfill.
	FIRE/EXPLOSION HAZARD	
		Non combustible. In fire situation urea melts and flows, on further heating it decomposes giving off ammonia gas. Thermal and oxidative degradation products can include ammonia, biuret, cyanuric acid, carbon dioxide and/or carbon monoxide. Avoid creating dust - may present dust explosion hazard. Dry dust can be electrostatically charged by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport. Build-up of electrostatic charge may be prevented by grounding.

CONTACT PIONT

CONTACT	
	AUSTRALIAN POISONS INFORMATION CENTRE 24 HOUR SERVICE : 13 11 26 POLICE OR FIRE BRIGADE : 000 (exchange)
	NEW ZEALAND POISONS INFORMATION CENTRE Dunedin : (03) 479 1200 (Normal Hours) (03) 474 0999 (Emergency)

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