A Division of Appropriate Chemical International Ltd.

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MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Urea 50% Soultion UR100-50

SECTION 01: PRODUCT INFORMATION AND COMPANY INFORMATION

MANUFACTURER:	Same as above		
PREPARED BY:	Production Department		
VERSION DATE:	15-Aug-16		
TELEPHONE NO.:	(519) 451-1614		
EMERGENCY PHONE NO.:	(888) 226-8832		
CHEMICAL FAMILY	Not Available	**CHEMICAL FORMULA**	Not Applicable
MOLECULAR WEIGHT	Not Applicable	**MATERIAL USE:**	Fertilizer

SYNONYMS:

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	Conc. Approx. %	C.A.S. #	LD/50 (RTE/SPEC)	LC/50 (RTE/SPEC)	TLV
Urea	30-60	57-13-6	8471 mg/kg	N.Av.	10/mg/m 3 8 hrs/

SECTION 03: HAZARD IDENTIFICATION

ROUTE OF ENTRY

Eyes: Splashes in eyes can cause irritation, redness and pain. There is a risk of thermal burns if the product is not removed promptly.

Skin: Skin contact may cause irritation, especially under the nails (and other places as small as a ring or a watch strap). There is a risk of destruction of the natural fatty layer of skin, drying and cracking. A prolonged and repeated contact may cause dermatitis. There is a risk of thermal burns if the product is not removed promptly.

Inhalation A prolonged or repeated overexposure to vapors of the product may cause mild respiratory irritation. The excessive contact with vapors or mists may irritate mucous membranes and cause coughing and breathing difficulties.

Ingestion: This product causes irritation, a burning sensation in the mouth and throat and abdominal pain.

SECTION 04: FIRSTAID

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention.

Eye Contact: Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention.

Inhalation, Acute Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Notes 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.

SECTION 05: FIRE EXPLOSION HAZARD AND FIRE FIGHTING MEASURES

FLAMMABLE?	No
IF YES, UNDER WHICH CONDITIONS?	
FLASH POINT (TCC) (C):	Not Available
FLAMMABLE LIMITS:	**LEL(% BY VOL.):** Not Available **UEL(% BY VOL):** Not Available
AUTO IGNITION TEMPERATURE (C)	Not Available
EXTINGUISHING MEDIA	Use an extinguishing agent suitable for the surrounding fire.
SPECIAL PROCEDURES:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HAZARDOUS COMBUSTION PRODUCTS:	Decomposition products may include the following materials: carbon dioxide carbon monoxide and nitrogen oxides.
UNUSUAL FIRE AND EXPLOSION HAZARDS	None
SENSITIVITY TO STATIC DISCHARGE	Not Available
SENSITIVITY TO MECHANICAL IMPACT:	Not Available

SECTION 06: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: PPE: Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental Protections: Avoid dispersal of spilled 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).
Small Spill: Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large Spill: 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 e.g. 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 spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

SECTION 07: HANDLING AND STORAGE

Handling Procedures and Storage Requirements

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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.
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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 08: PERSONAL PROTECTIVE EQUIPMENT / EXPOSURE CONTROLS

GLOVES/TYPE:	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. Recommended: Lab coat. Use gloves appropriate for work or task being performed. Recommended: Natural rubber (latex).
RESPIRATOR/TYPE:	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. Recommended: Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits.
EYE/TYPE:	Safety eyewear should be used when there is a likelihood of exposure. Recommended: Safety glasses with side shields.
OTHER/TYPE:	Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

ENGINEERING CONTROL Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIE

PHYSICAL STATE/APPEARANCE:	Colorless/ Hazy Liquid		
ODOUR:	Ammonia	**ODOUR THRESHOLD:**	17 ppm
VAPOUR PRESSURE (mm Hg @ 20C):	14 mm Hg	**VAPOUR DENSITY (Air=1):**	N. Av.
EVAPORATION RATE (Ether = 1):	N. Av.	**SPECIFIC GRAVITY:**	1.1-1.2
BOILING POINT (C):	N. Av.	**FREEZING POINT (C)**	17.8 C
Ph (% SOLUTION):	9.5	**% VOLATILE (WT):**	
SOLUBILITY IN WATER (% W/W)	Miscible		

SECTION 10: STABILITY AND REACTIVITY

CHEMICALLY STABLE? Yes

IF NO, UNDER WHICH CONDITIONS?

INCOMPATIBILITY WITH OTHER SUBTANCES Yes

IF YES, WITH WHICH ONES: Oxidizers. Reducing agents. halogens. Acids. Alkalis. Acrylonitrile butadiene styrene. Polyethylene. Iron and alloys. Copper and alloys. Aluminum and aluminum alloys. Zinc and alloys. Mild steel. Sodium nitrite. Potassium nitrite. Chloride chromyl. Nitrosyl perchlorate. Gallium perchlorate. Titanium tetrachloride. Sodium hypochlorite, calcium hypochlorite or phosphorous pentachloride react with urea to form nitrogen trichloride which explodes spontaneously in air.

SPECIAL REACTIVITY AND UNDER WHAT CONDITIONS

HAZARDOUS DECOMPOSITION PRODUCTS:

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL	See Section 2
LC 50 OF MATERIAL, SPECIES AND ROUTE	Not Avaiable
LD 50 OF MATERIAL, SPECIES AND ROUTE	See Section 2
CARCINOGENICITY OF MATERIAL	Not known
REPRODUCTIVE EFFECTS:	Not known
IRRITANCY OF MATERIAL	may cause irritation
SENSITIZING CAPABILITY OF MATERIAL	Not known
SYNERGISTIC MATERIALS	No known

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY Acute LC50 >1000 mg/L Marine Water | Crustaceans - Chaetogammarus marinus - Youg - 5 mm 48 hrs.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

SECTION 14: TRANSPORT INFORMATION

TDG CLASSIFICATION Class 0, Non-Regulated

UN NUMBER:

PACKING GROUP:

Special Provisions for Transport

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION

SECTION 16: OTHER INFORMATION

ABBREVIATIONS USED: N.Av. = Not Available
N.App. / N.Ap. = Not Applicable

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SOURCES: Supplier MSDS

For updated copies of an MSDS, please contact Anchem Sales at the address/phone number on Page 1 or fax the MSDS Co-ordinator at (519) 451-4593.

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