SAFETY DATA SHEET

GuardCoat™ EC

SECTION 1: IDENTIFICATION

Product identifier used on a label:	**GuardCoat™ EC**
Product code:	
Recommended use of the chemical and restrictions on use:	Coating for surface finishing industry.
Chemical family:	Mixture.
Name, address and phone # of supplier:	Aqua Bond Inc. 440 Passmore ave. Scarborough, ON, M1V 5J8 (416) 754-7211
24 Hr. Emergency phone #	**CANUTEC (613) 996-6666**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the chemical: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:
FLAMMABLE LIQUIDS - Category 3
SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), kidneys, liver) - Category 2
Health Hazards Not Otherwise Classified - Category 1

Label elements:



Signal word: Danger

Hazard statements:
Flammable liquid and vapor.
Causes severe skin burns and eye damage.
Prolonged or repeated contact may dry skin and cause irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), kidneys, liver)

Precautionary statements: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapor. Wash hands thoroughly after handling. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician.

Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards: Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 29.4%

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/ mixture: Mixture

Ingredient name	**CAS Number**	**Concentration (%)**
2-hexyloxyethanol	112-25-4	5-15
Xylene	1330-20-7	1-7
n-butyl acetate	123-86-4	1-7
2-butoxyethanol	111-76-2	1-7
Ethylbenzene	100-41-4	0.1-1

Concentrations are shown as ranges due to batch variation.

SECTION 4: FIRST-AID MEASURES

Description of first aid measures:

Ingestion Get medical attention immediately. Call a poison center or physician. 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 due to aspiration. 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 lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in a recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

Inhalation Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that mists 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.

Skin contact	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Eye contact	Get medical attention immediately. Call a poison center or physician. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Chemical burns must be treated promptly by a physician.

Most important symptoms and effects, both acute and delayed:
Causes serious eye damage. Adverse symptoms may include pain, watering, redness. Causes severe burns. Symptoms may include pain or irritation, redness, blistering. Adverse symptoms of ingestion may include stomach pains.
Indication of any immediate medical attention and special treatment needed:
No specific treatment. Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable	Use dry chemical, CO2, water spray (fog) or foam.
Unsuitable	Do not use water jet.
Special hazards arising from the substance:	Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products:	Carbon dioxide and carbon monoxide.
Special protective actions 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Environmental precautions:	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).
Methods and materials	Small spill: Stop leak if without risk. Move containers from spill area. Use

for containment and cleaning up:	spark-proof tools and explosion-proof equipment. 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. Large spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach 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 noncombustible, 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.
Special spill response procedures:	In case of transportation accident, contact CHEMTREC at 1-800-424-9300.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Put on appropriate personal protective equipment (see Section 8). Avoid exposure -obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Conditions for safe storage:	Do not store below the following temperature: 5°C (41°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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.
Incompatible materials:	Oxidizing agents, strong alkalis, strong acids.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Exposure limits

Ingredient	Exposure limits
2-hexyloxyethanol	**IPEL (PPG).** TWA: 20 ppm
Xylene	**CA Alberta Provincial (Canada, 4/2009).** 15 min OEL: 651 mg/m³ 15 minutes. 15 min OEL: 150 ppm 15 minutes. 8 hrs OEL: 434 mg/m³ 8 hours. 8 hrs OEL: 100 ppm 8 hours. **CA British Columbia Provincial (Canada, 5/2015).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours. **CA Quebec Provincial (Canada, 1/2014).** STEV: 651 mg/m³ 15 minutes. STEV: 150 ppm 15 minutes. TWAEV: 434 mg/m³ 8 hours. TWAEV: 100 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
n-butyl acetate	**CA Alberta Provincial (Canada, 4/2009). Skin sensitizer.** 15 min OEL: 950 mg/m³ 15 minutes. 15 min OEL: 200 ppm 15 minutes. 8 hrs OEL: 713 mg/m³ 8 hours. 8 hrs OEL: 150 ppm 8 hours. **CA British Columbia Provincial (Canada, 5/2015).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours. **CA Quebec Provincial (Canada, 1/2014).** STEV: 950 mg/m³ 15 minutes. STEV: 200 ppm 15 minutes. TWAEV: 713 mg/m³ 8 hours. TWAEV: 150 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 200 ppm 15 minutes.

	TWA: 150 ppm 8 hours.
2-butoxyethanol	**CA Alberta Provincial (Canada, 4/2009).** **Skin sensitizer.** 8 hrs OEL: 97 mg/m³ 8 hours. 8 hrs OEL: 20 ppm 8 hours. **CA British Columbia Provincial (Canada, 5/2015).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** **Absorbed through skin.** TWA: 20 ppm 8 hours. **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 97 mg/m³ 8 hours. TWAEV: 20 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 30 ppm 15 minutes. TWA: 20 ppm 8 hours.
Ethylbenzene	**CA Alberta Provincial (Canada, 4/2009).** 15 min OEL: 543 mg/m³ 15 minutes. 15 min OEL: 125 ppm 15 minutes. 8 hrs OEL: 434 mg/m³ 8 hours. 8 hrs OEL: 100 ppm 8 hours. **CA British Columbia Provincial (Canada, 5/2015).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 20 ppm 8 hours. **CA Quebec Provincial (Canada, 1/2014).** STEV: 543 mg/m³ 15 minutes. STEV: 125 ppm 15 minutes. TWAEV: 434 mg/m³ 8 hours. TWAEV: 100 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.
Engineering controls:	Use only with adequate ventilation. 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. Use explosion-proof ventilation equipment.
Individual protection measures:	Eyes/face: Chemical splash goggles and face shield. Skin: Chemical-resistant, impervious gloves (nitrile neoprene) complying

with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Respiratory: 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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid. Opaque.
Odor:	Aromatic.
Odor threshold:	Not available.
pH:	5-5.6
Melting point:	Not available.
Freezing point:	Not available.
Initial boiling point and boiling range:	100°C (212°F)
Flash point:	Closed cup: 43.33°C (110°F)
Evaporation rate:	0.35 (butyl acetate=1)
Flammability:	Not available.
Upper and lower flammability limits:	Lower 9.9%, Upper not available.
Vapour pressure:	2.3kPa (17.2 mm Hg) room temperature.
Vapour density:	Not available.
Relative density:	1.02
Solubility:	Insoluble in cold water.
Partition coefficient n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Kinematic (40°C): >0.21 cm^2/s

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials:	Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products:	Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure:	SKIN AND EYES: yes INHALATION: yes INGESTION: yes
Potential health effects (acute):	EYE: Causes serious eye damage. Adverse symptoms may include pain, watering, redness. INHALATION: No known significant effects or critical hazards. SKIN: Causes severe burns. Defatting to the skin. Adverse symptoms may include redness, dryness, cracking, blistering. INGESTION: No known significant effects or critical hazards. May cause stomach pains.
Delayed and immediate effects, chronic effects from short and long term exposure:	There are no data available on the mixture itself. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also

	chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.
Potential chronic health effects:	May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity:	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Classification:

Product	**OSHA**	**IARC**	**NTP**
Xylene	Not listed/not regulated	3	Not listed/not regulated
2-butoxyethanol	Not listed/not regulated	3	Not listed/not regulated
Ethylbenzene	Not listed/not regulated	2B	Not listed/not regulated

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.
Sensitization:	There are no data available on the mixture itself.

Toxicological effects:

Acute toxicity:

Product	**Result**	**Species**	**Dose**	**Exposure**
2-hexyloxyethanol	LD50 dermal	Rabbit	720mg/kg	-
	LD50 oral	Rat	830mg/kg	-
Xylene	LC50 inhalation gas	Rat	6670 ppm	4 hours
	LC50 inhalation vapour	Rat	5000 ppm	4 hours
	LD50 dermal	Rabbit	>1.7g/kg	-
	LD50 oral	Rat	4.3g/kg	-
n-butyl acetate	LC50 inhalation vapour	Rat	>21.1 mg/L	4 hours
	LC50 inhalation vapour	Rat	2000 ppm	4 hours
	LD50 dermal	Rabbit	>17600 mg/kg	-
	LD50 oral	Rat	10.768 g/kg	-
2-butoxyethanol	LD50 dermal	Rabbit	1060 mg/kg	-
	LD50 oral	Rat	470 mg/kg	-
Ethylbenzene	LC50 inhalation vapour	Rat	4000 ppm	4 hours
	LD50 dermal	Rabbit	17.8 g/kg	-
	LD50 oral	Rat	3.5g/kg	-

Acute toxicity estimate:

Route	**ATE value**
Oral	6032.4 mg/kg

Dermal	5651.3 mg/kg
Inhalation (gases)	89645.7 ppm
Inhalation (vapors)	176.6 mg/L
Inhalation (dusts and mists)	24.09 mg/L

Irritation/corrosion:

Product	Result	Species	Score	Exposure
Xylene	Skin-moderate irritant	Rabbit	-	24 hr 500 mg

Specific target organ toxicity single exposure:

Name	Category	Route	Target organs
Xylene	Category 3	Not applicable.	Respiratory tract irritation.
n-butyl acetate	Category 3	Not applicable.	Narcotic effects.

Specific target organ toxicity repeated exposure:

Name	Category	Route	Target organs
Xylene	Category 2	Not determined	Central nervous system (CNS), kidneys and liver.
Ethylbenzene	Category 2	Not determined	Hearing organs.

Target organs: Contains material which causes damage to the following organs: brain, central nervous system (CNS). Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, spleen, lymphatic system, gastrointestinal tract, upper respiratory tract, skin, bone marrow, eye, lens or cornea.

Aspiration hazard

Name	Result
Xylene	Aspiration hazard- category 1
Ethylbenzene	Aspiration hazard- category 1

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Name	Result	Species	Exposure
Ethylbenzene	Acute LC50 150-200 mg/L fresh water	Fish- Lepomis macrochirus- young of the year	96 hours

Persistence and degradability

Name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
2-butoxyethanol	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Name	LogPow	BCF	Potential
2-hexyloxyethanol	1.86	-	Low
Xylene	3.16	7.4-18.5	Low
n-butyl acetate	1.78	-	Low
2-butoxyethanol	0.81	-	Low
Ethylbenzene	3.15	79.43	Low

Mobility in soil: Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

	TDG
UN Number:	Not regulated.
UN proper shipping name:	-
Transport hazard class:	-
Packing group:	-
Environmental hazard:	No.
Special precautions for user:	**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: REGULATORY INFORMATION

Canada inventory (DSL): At least one component is not listed.

SECTION 16: OTHER INFORMATION

Revision date: January 19, 2017

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Disclaimer

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