Conforms to ANSI Z400.5-2004 Standard (United States, Canada).

Material Safety Data Sheet

Unicare Water-based Sealant for Pavers

1 . Product and company identification

Product name : Unicare Water-based Sealant for Pavers

Material uses : Protects pavers and slabs made of concrete or natural stone.

Supplier/Manufacturer : Techniseal
300, avenue Liberté
Candiac, QC, Canada, J5R 6X1
Tel: (514) 523-2110
Toll free: 1-800-465-7325
Fax: (450) 633-3035

Validation date : 09/11/2009

Responsible name : Atrion Regulatory Services, Inc

In case of emergency : CANUTEC (613) 996-6666

2 . Hazards identification

Physical state : Liquid.

Odor : Soap.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

MAY BE FATAL IF INHALED. HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be fatal if inhaled. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : Harmful if swallowed.

Skin : Harmful in contact with skin. Irritating to skin.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage.

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.

Target organs : Contains material which may cause damage to the following organs: blood, kidneys, liver, lymphatic system, upper respiratory tract, skin, eyes, central nervous system (CNS).

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

2 . Hazards identification

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3 . Composition/information on ingredients

United States

Name	CAS number	%
2-Butoxyethanol	111-76-2	1 - 5
N-Methyl-2-pyrrolidone	872-50-4	1 - 5

Canada

Name	CAS number	%
2-Butoxyethanol	111-76-2	1 - 5
N-Methyl-2-pyrrolidone	872-50-4	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

Eye contact : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention.

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

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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.

5 . Fire-fighting measures

Flammability of the product : May be combustible at high temperature.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : 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.

Hazardous thermal decomposition 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.

6 . Accidental release measures

Personal precautions : 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

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 for cleaning up

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.

Large spill : Stop leak if without risk. Move containers from spill area. 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 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.

7 . Handling and storage

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 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. 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.

8 . Exposure controls/personal protection

United States

Product name	Exposure limits
2-Butoxyethanol	**ACGIH TLV (United States, 1/2008).** TWA: 20 ppm 8 hour(s). **NIOSH REL (United States, 6/2008). Absorbed through skin.** TWA: 24 mg/m³ 10 hour(s). TWA: 5 ppm 10 hour(s). **OSHA PEL (United States, 11/2006). Absorbed through skin.** TWA: 240 mg/m³ 8 hour(s). TWA: 50 ppm 8 hour(s). **OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.** TWA: 25 ppm 8 hour(s). TWA: 120 mg/m³ 8 hour(s).
N-Methyl-2-pyrrolidone	**AIHA WEEL (United States, 1/2008). Absorbed through skin.** TWA: 10 ppm 8 hour(s).

Canada

Product name	Exposure limits
2-Butoxyethanol	**CA Alberta Provincial (Canada, 6/2008). Absorbed through skin.** 8 hrs OEL: 97 mg/m³ 8 hour(s). 8 hrs OEL: 20 ppm 8 hour(s). **CA British Columbia Provincial (Canada, 6/2008).** TWA: 20 ppm 8 hour(s). **CA Ontario Provincial (Canada, 6/2008). Absorbed through skin.** TWAEV: 20 ppm 8 hour(s). **CA Quebec Provincial (Canada, 6/2008).** TWAEV: 20 ppm 8 hour(s). TWAEV: 97 mg/m³ 8 hour(s).
N-Methyl-2-pyrrolidone	**CA Ontario Provincial (Canada, 6/2008).** TWAEV: 400 mg/m³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : 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.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or supplied air 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.

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.

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. Recommended: Splash goggles.

8 . Exposure controls/personal protection

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.
Recommended: Synthetic apron.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Closed cup: >100°C (>212°F) [Pensky-Martens.]
Color : Milky.
Odor : Soap.
pH : 7.8
Boiling/condensation point : 100°C (212°F)
Melting/freezing point : -3°C (26.6°F)
Specific gravity : 1.023
VOC : 3.3 % (w/w) [ISO 11890-1]
Viscosity : Dynamic: 6.5 mPa·s (6.5 cP)
Solubility : Not available.

10 . Stability and reactivity

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

11 . Toxicological information

Acute toxicity

Product/ingredient name	Species	Dose	Result	Exposure
2-Butoxyethanol	Rabbit	220 mg/kg	LD50 Dermal	-
	Rat	917 mg/kg	LD50 Oral	-
	Rat	250 mg/kg	LD50 Oral	-
	Rat	2900 mg/m3	LC50 Inhalation Vapor	7 hours
	Rat	450 ppm	LC50 Inhalation Gas.	4 hours
N-Methyl-2-pyrrolidone	Rabbit	8 g/kg	LD50 Dermal	-
	Rat	3914 mg/kg	LD50 Oral	-

Inhalation : May be fatal if inhaled. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion : Harmful if swallowed.
Skin : Harmful in contact with skin. Irritating to skin.
Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Carcinogenicity

Classification

11 . Toxicological information

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
2-Butoxyethanol	A3	3	-	-	-	-

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Species	Exposure	Result
2-Butoxyethanol	Fish	96 hours	Acute LC50 1490000 ug/L
	Fish	96 hours	Acute LC50 1250000 ug/L
	Crustaceans	48 hours	Acute LC50 800000 to 1000000 ug/L

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information

DOT/ TDG / IMDG/ IATA : Not regulated.

15 . Regulatory information

United States

HCS Classification : Highly toxic material
Irritating material
Target organ effects

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: 2-Butoxyethanol; N-Methyl-2-pyrrolidone
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-Butoxyethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; N-Methyl-2-pyrrolidone: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Triethylamine; Ammonium hydroxide

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

Form R - Reporting requirements :

Product name	CAS number	Concentration
2-Butoxyethanol	111-76-2	1 - 5
N-Methyl-2-pyrrolidone	872-50-4	1 - 5

15 . Regulatory information

Supplier notification :

2-Butoxyethanol	111-76-2	1 - 5
N-Methyl-2-pyrrolidone	872-50-4	1 - 5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

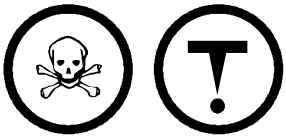
State regulations : **Connecticut Carcinogen Reporting**: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: The following components are listed: 2-Butoxyethanol;N-Methyl-2-pyrrolidone
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: 2-Butoxyethanol
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: None of the components are listed.
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: 2-Butoxyethanol;N-Methyl-2-pyrrolidone
Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65 : **WARNING:** This product contains a chemical or chemicals known to the state of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
N-Methyl-2-pyrrolidone	No.	Yes.	No.	3200 µg/day (inhalation)

Canada

WHMIS (Canada) : Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).



Canadian lists : **CEPA Toxic substances**: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: 2-Butoxyethanol;N-Methyl-2-pyrrolidone
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

15 . Regulatory information

International lists : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

16 . Other information

Label requirements : MAY BE FATAL IF INHALED. HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Hazardous Material Information System (U.S.A.) :

Health	*	2
Fire hazard		1
Physical Hazard		0
Personal protection		J

HAZARD RATINGS

4- Extreme
3- Serious
2- Moderate
1- Slight
0- Minimal
See section 8 for more detailed information on personal protection.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.