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**SunChemical**<sup>®</sup>  
a member of the DIC group 

RECOGNITION SYSTEMS INC.  
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May 19, 2017

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# SAFETY DATA SHEET

## Section 1. Identification

**Product code** : FLVSV5483680/K343  
**GHS product identifier** : HYBRYTE MAX G7 CYAN

### Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Colorant; Printing ink related material; Printing ink.

**Manufacturer / Distributor** : Sun Chemical Corporation  
 North American Inks  
 135 West Lake Street  
 Northlake, IL 60164  
 US: +1 866 786 8140

**Emergency telephone number (with hours of operation)** : (800) 424-9300 (U.S.) (24 hours)  
 (703) 527-3887 (International) (24 hours)

**Other information** : (513) 830-8500

## Section 2. Hazards identification

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

**Classification of the substance or mixture** : EYE IRRITATION - Category 2A  
 SKIN SENSITIZATION - Category 1  
 TOXIC TO REPRODUCTION (Fertility) - Category 2  
 TOXIC TO REPRODUCTION (Unborn child) - Category 2

### GHS label elements

#### Hazard pictograms



**Signal word** : Warning

**Hazard statements** : Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child.

### Precautionary statements

**Prevention** : 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. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

**Response** : IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage** : Store locked up.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

## Section 2. Hazards identification

Hazards not otherwise classified : None known.

## Section 3. Composition/information on ingredients

Substance/mixture : Mixture

### CAS number/other identifiers

Ingredient name	CAS number	%
2-propenoic acid, 2-[[[2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl ester	proprietary	20 - 25
Polyester Acrylate Oligomer	80100015-5078P	20 - 25
Multi-Functional Acrylate Ester	-----	2.5 - 5
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	Proprietary	1 - 2.5
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Proprietary	< 1
Phenyl Ketone Oligomer	Proprietary	< 1
4-Methoxyphenol	150-76-5	< 1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**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.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention. 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.
- Skin contact** : Wash with plenty of soap and 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.
- Ingestion** : 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. Get medical attention. Never give anything by mouth to an unconscious person. 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.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

## Section 4. First aid measures

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### Indication of immediate medical attention and special treatment needed, if necessary

- 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.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
metal oxide/oxides

**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.

**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.

**Remarks** :

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**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 for containment and cleaning up

## Section 6. Accidental release measures

- 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.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used, without Personal Protective Equipment measures. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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.

- Advice on general occupational hygiene** : 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. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : 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. Store locked up. 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.

- Remarks:** : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Soybean oil)  
Keep away from direct sunlight or strong incandescent light.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
4-Methoxyphenol	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor 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.

## Section 8. Exposure controls/personal protection

**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.

### Individual protection measures

**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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

**Hand protection** : 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. 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.

**Body protection** : 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.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : In case of inadequate ventilation wear respiratory protection. 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. 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

**Physical state** : Liquid.

**Color** : Blue.

**Odor** : Characteristic.

**Odor threshold** : Not applicable.

**pH** : Not tested

**Melting point** : Not available.

**Boiling point** : Lowest known value: 215°C (419°F)

**Flash point** : Lowest known value: >93.3°C (200°F)

**VOC** : 0.19

**Evaporation rate** : Highest known value: <1 (Polyester Acrylate Oligomer) Weighted average: 0.9 compared with butyl acetate

**Flammability (solid, gas)** : Not available.

**Lower and upper explosive (flammable) limits** : Not tested

**Vapor pressure** : Not available.

**Vapor density** : Not tested

**Density** : 1.159 g/cm<sup>3</sup> (9.676 lbs/gal)

## Section 9. Physical and chemical properties

Solubility : Not tested  
 Partition coefficient: n-octanol/water : Not applicable.  
 Auto-ignition temperature : Not applicable.  
 Decomposition temperature : Not applicable.  
 Viscosity : Not tested

## 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 : No specific data.  
 Incompatible materials : No specific data.  
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	LD50 Oral	Rat	>5000 mg/kg	-
4-Methoxyphenol	LD50 Oral	Rat	1600 mg/kg	-

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Irritation/Corrosion

##### Conclusion/Summary

**Skin** : No known significant effects or critical hazards.

**Eyes** : No known significant effects or critical hazards.

**Respiratory** : No known significant effects or critical hazards.

#### Sensitization

##### Conclusion/Summary

**Skin** : No known significant effects or critical hazards.

**Respiratory** : No known significant effects or critical hazards.

#### Mutagenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Carcinogenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Reproductive toxicity

**Conclusion/Summary** :

#### Teratogenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Specific target organ toxicity (single exposure)

Not available.



## Section 11. Toxicological information

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : May cause an allergic skin reaction.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness

**Inhalation** : Adverse symptoms may include the following:  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : Suspected of damaging fertility.

### Numerical measures of toxicity

## Section 11. Toxicological information

### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	EC50 >2 mg/l	Aquatic plants - Selanastrum capricornutum	72 hours
	EC50 >100 mg/l	Micro-organism	2 hours
4-Methoxyphenol	Acute EC50 0.8 mg/l	Daphnia - Daphnia Magna	24 hours
	Acute LC50 0.46 mg/l	Fish	96 hours
	Acute LC50 28500 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	2.91	-	low
4-Methoxyphenol	1.58	-	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

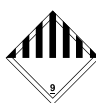
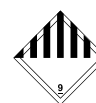
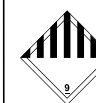
## Section 13. Disposal considerations

**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 non-recyclable 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number			UN3082	UN3082	UN3082

## Section 14. Transport information

UN proper shipping name			ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-propenoic acid, 2-[[[2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1, 3-propanediyl ester, 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-propenoic acid, 2-[[[2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1, 3-propanediyl ester, 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-propenoic acid, 2-[[[2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1, 3-propanediyl ester, 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone)
Transport hazard class(es)	Not regulated.	Not regulated.	9 	9 	9 
Packing group	-	-	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.	Yes.
Additional information	-	-	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

**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

**TSCA 8(b) inventory** : Listed

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** 4-Methoxyphenol  
**Clean Water Act (CWA) 307:** Phenol; toluene; Pigment Blue 15:3; Pigment Blue 15:4; Proprietary Pigment Additive; Phthalo Green; Hexachlorobenzene  
**Clean Water Act (CWA) 311:** Phenol; toluene

### SARA 313

	Product name	CAS number	%
Supplier notification	None identified.		

**Toxics in Packaging (CONEG)** : In compliance.

**Canada inventory** : At least one component is not listed in DSL but all such components are listed in NDSL.

### International regulations

## Section 15. Regulatory information

- International lists**
- : **Australia inventory (AICS)**: At least one component is not listed.
  - : **China inventory (IECSC)**: At least one component is not listed.
  - : **Japan inventory (ENCS)**: At least one component is not listed.
  - : **Korea inventory**: At least one component is not listed.
  - : **Malaysia Inventory (EHS Register)**: Not determined.
  - : **New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
  - : **Philippines inventory (PICCS)**: At least one component is not listed.
  - : **Taiwan Chemical Substances Inventory (TCSI)**: Not determined.
  - : **Turkey inventory**: Not determined.
  - : **Europe Inventory**: Please contact your supplier to get the information.

## Section 16. Other information

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



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### History

- Date of issue/Date of revision** : 2/15/2017
- Date of previous issue** : 1/12/2017
- Version** : 8.01
- Regulatory information** : Canada: (905) 796-2222  
US: (201) 933-4500  
PPG: (513) 681-5950

### Key to abbreviations

- : 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

### References

- : Not available.

Indicates information that has changed from previously issued version.

### 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.