

SAFETY DATA SHEET



DURASHIELD PLUS

Section 1. Identification

Product name	: DURASHIELD PLUS
Other means of identification	: Not available.
Product type	: Liquid.
<u>Relevant identified uses of the substance or mixture and uses advised against</u>	
Supplier's details	: DuBois Chemicals, Inc. 3630 E. Kemper Road Cincinnati, Ohio 45241 Phone: 1-800-438-2647
Emergency telephone number (24hr)	: 1-866-923-4919 (US and Canada) 01-651-523-0314 (Int'l and Mexico)
e-mail address of person responsible for this SDS	: cs@duboischemicals.com

Section 2. Hazards identification

EPA Group Standard:	This material is hazardous according to criteria of EPA New Zealand. HSR002526 - Cleaning Products (Corrosive) Group Standard
HSNO Classification:	3.1 - FLAMMABLE LIQUIDS - Category C 6.1 - ACUTE TOXICITY: ORAL - Category E 6.3 - SKIN IRRITATION - Category A 6.4 - EYE IRRITATION - Category A (Irritant) 9.1 - AQUATIC ECOTOXICITY - Category A Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1.3% Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.6%

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001. This material is classified as a dangerous good according to criteria in New Zealand Standard 5433:2007 Transport of Dangerous Goods on Land.

GHS label elements

Signal word	: Warning
Hazard statements	: Flammable liquid and vapor. May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Very toxic to aquatic life.

Precautionary statements

Prevention	: Wear protective gloves: > 8 hours (breakthrough time): Chemical-resistant gloves. Wear eye or face protection: Recommended: splash goggles. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Wash thoroughly after handling.
Response	: Collect spillage. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Take off contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water. If skin irritation occurs, seek medical advice/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 advice/attention. Wash hands after handling. Call a POISON CENTER or doctor/physician if you feel unwell.

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Date of issue/Date of revision : 16/11/2020

Section 2. Hazards identification

- Storage** : Store in cool/well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Symbol :



Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.
- CAS number/other identifiers**
- CAS number** : Not applicable.
- EC number** : Mixture.
- Product code** : BLE00225

Ingredient name	%	CAS number
Distillates (petroleum), straight-run middle	10 - 20	64741-44-2
Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides	10 - 20	61789-77-3
(2-methoxymethylethoxy)propanol	5 - 10	34590-94-8
propan-2-ol	1 - 5	67-63-0
Amines, coco alkyl, ethoxylated	1 - 5	61791-14-8
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	1 - 5	61789-40-0
Fatty Amine Derivative	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.

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

Section 4. First aid measures

Description of necessary first aid measures

- 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 adverse health effects persist or are severe. 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.
- 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 if adverse health effects persist or are severe. 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.

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Section 4. First aid measures

- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : May be harmful if swallowed. Irritating to mouth, throat and stomach.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Eye contact** : Causes serious eye irritation.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

- Specific treatments** : Not available.
- 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.
- 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** : 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. This material is very toxic to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
- Hazchem code** : Not available.
- Special precautions 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.

Section 5. Fire-fighting measures

- 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. 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 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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and 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. Use spark-proof tools and explosion-proof equipment. 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). Use spark-proof tools and explosion-proof equipment. 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** : 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. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. 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. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
(2-methoxymethylethoxy)propanol	NZ OSH (New Zealand, 2/2013). Absorbed through skin. WES-TWA: 100 ppm 8 hours. WES-TWA: 606 mg/m ³ 8 hours. WES-STEL: 909 mg/m ³ 15 minutes. WES-STEL: 150 ppm 15 minutes.
propan-2-ol	NZ OSH (New Zealand, 2/2013). WES-TWA: 400 ppm 8 hours. WES-TWA: 983 mg/m ³ 8 hours. WES-STEL: 1230 mg/m ³ 15 minutes. WES-STEL: 500 ppm 15 minutes.

Appropriate 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.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : If a risk assessment indicates this is necessary, use a properly fitted, air-purifying or airfed respirator complying with an approved standard. 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.

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. > 8 hours (breakthrough time): Chemical-resistant gloves

Eye 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. Recommended: splash goggles

Skin 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. 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.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Amber. [Dark]
Odor	: Fruity. [Slight]
Odor threshold	: Not available.
pH	: 6.5
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: 57.7°C (135.9°F) [Pensky-Martens (ASTM D93)] [Product does not sustain combustion.]
Burning rate	: Not applicable.
Burning time	: Not applicable.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 0.952
Solubility	: Easily soluble in the following materials: cold water and hot water.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
SADT	: Not available.
Viscosity	: Not available.
Aerosol product	
Type of aerosol	: Not applicable.
Heat of combustion	: Not available.
Ignition distance	: Not applicable.
Enclosed space ignition - Time equivalent	: Not applicable.
Enclosed space ignition - Deflagration density	: Not applicable.
Flame height	: Not applicable.
Flame duration	: Not applicable.

Section 10. Stability and reactivity

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	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on the likely routes of exposure

- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : May be harmful if swallowed. Irritating to mouth, throat and stomach.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Eye contact** : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), straight-run middle Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides propan-2-ol Amines, coco alkyl, ethoxylated Fatty Amine Derivative	LC50 Inhalation Dusts and mists	Rat	1700 mg/m ³	4 hours
	LD50 Oral	Rat	>500 mg/kg	-
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
	LD50 Oral	Rat	750 mg/kg	-
LD50 Oral	Rat	>2000 mg/kg	-	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Distillates (petroleum), straight-run middle 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-

Sensitization

Not available.

Potential chronic health effects

- General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Section 8. Toxicological information

Skin contact	: No known significant effects or critical hazards.
Eye contact	: No known significant effects or critical hazards.
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.

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Specific target organ toxicity

Not available.

Aspiration hazard

Name

Distillates (petroleum), straight-run middle

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4057.6 mg/kg
Inhalation (dusts and mists)	10.67 mg/l

Section 12. Ecological information

Ecotoxicity : This material is very toxic to aquatic life.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), straight-run middle Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides propan-2-ol	Chronic EC50 50 mg/l	Algae	72 hours
	LC50 0.195 mg/l	Fish	96 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours

Persistence/degradability

Not available.

Bioaccumulative potential

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Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
(2-methoxymethylethoxy) propanol	0.0043	-	low
propan-2-ol	0.05	-	low
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	1.79	71	low

Mobility in soil





Soil/water partition coefficient (K_{oc}) : 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. 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

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
New Zealand Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides)	9	III	 	-
ADG Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides)	9	III	 	-

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Section 14. Transport information

UN Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides)	9	III	 	-
ADR/RID Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides)	9	III	 	Tunnel code (E)
IATA Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides)	9	III	 	-
IMDG Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides)	9	III	 	-

PG* : Packing group

Section 15. Regulatory information

New Zealand Inventory of Chemicals (NZIoC) : All components are listed or exempted.

HSNO Approval Number : Not available.

HSNO Group Standard : HSR002526 - Cleaning Products (Corrosive) Group Standard

HSNO Classification : 3.1 - FLAMMABLE LIQUIDS - Category C
6.1 - ACUTE TOXICITY: ORAL - Category E
6.3 - SKIN IRRITATION - Category A
6.4 - EYE IRRITATION - Category A (Irritant)
9.1 - AQUATIC ECOTOXICITY - Category A

Australia inventory (AICS) : All components are listed or exempted.

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

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Date of issue/Date of revision : 16/11/2020

Section 16. Other information

History

Date of printing	: 16/11/2020
Date of issue/Date of revision	: 16/11/2020
Date of previous issue	: No previous validation.
Version	: 1
Key to abbreviations	: ADG = Australian Dangerous Goods ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road 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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail 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.