

SAFETY DATA SHEET

ADVANCE^{+DFA} 

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : Advance+ DFA

Date of issue/ Date of revision : 20/01/2023

Date of previous issue : No previous validation

Version : 1

Product description : Mixture

Product type : Liquid.

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

Identified uses

Petrochemical industry: Fuel additive.

1.3 Details of the supplier of the safety data sheet

Supplier : Valiantech Sdn Bhd
Lot 10 & 12, Jalan PJU 3/39,
Kompleks Kilang SME Bank,
Sunway Damansara, 47810
Petaling Jaya, Selangor.

Telephone no.: : +6017-6881148

**e-mail address of person
responsible for this SDS** : admin@valiantech.com.my

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Carc. 2, H351

Repr. 1B, H360F

STOT SE 3, H336

Asp. Tox. 1, H304

Aquatic Chronic 2, H411

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word :

Danger

Hazard statements :

H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.
H360F - May damage fertility.
H411 - Toxic to aquatic life with long lasting effects.

Supplemental label elements :

Contains formaldehyde and maleic anhydride. May produce an allergic reaction.

Precautionary statements

General :

Not applicable.

SECTION 2: Hazards identification

- Prevention** : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.
P264 - Wash thoroughly after handling.
- Response** : P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.
- Storage** : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazardous ingredients** : Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]; Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]; naphthalene and Phenol, dodecyl-, branched

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	REACH #: 01-2119463583-34 EC: 918-811-1 CAS: 64742-94-5 Index: 649-424-00-3	≥25 - ≤50	STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1] [2]
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	REACH #: 01-2119463588-24, EC: 265-198-5 CAS: 64742-94-5	≥10 - ≤25	STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1] [2]
2-ethylhexan-1-ol	REACH #: 01-2119487289-20 EC: 203-234-3 CAS: 104-76-7	≥10 - ≤16	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1] [2]
naphthalene	REACH #: Compliant EC: 202-049-5 CAS: 91-20-3 Index: 601-052-00-2	≤3	Acute Tox. 4, H302 Carc. 2, H351 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
1,2,4-trimethylbenzene	REACH #: Compliant EC: 202-436-9 CAS: 95-63-6 Index: 601-043-00-3	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 2, H411	[1] [2]

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SECTION 3: Composition/information on ingredients

Oxyalklated alkylphenolic resin	REACH #: Polymer CAS: 63428-92-2	≤3	Eye Irrit. 2, H319	
Phenol, dodecyl-, branched	REACH #: 01-2119513207-49 CAS: 27193-86-8	<1	Skin Corr. 1C, H314 Eye Dam. 1, H318 Repr. 1B, H360F Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)	[1]
decamethylcyclopentasiloxane	REACH #: 01-2119511367-43 EC: 208-764-9 CAS: 541-02-6	≤0.3	Not classified.	[2] [4]
See Section 16 for the full text of the H statements declared above.				

Other CAS no.

Hydrocarbons C10, Aromatics, <1%	-	
Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	-	
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	-	
2-ethylhexan-1-ol	-	
naphthalene	-	
1,2,4-trimethylbenzene	-	
formaldehyde, polymer with methyloxirane, 4-nonylphenol and oxirane	-	
Phenol, dodecyl-, branched	-	27193-86-8 (210555-94-5, 27459-10-5, 74499-35-7, 104-43-8)

SECTION 4: First aid measures

4.1 Description of 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.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes 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. Get medical attention. If necessary, call a poison center or physician. 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.

SECTION 4: First aid measures

- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Remove dentures if any. Wash out mouth with water. Stop if the exposed person feels sick as vomiting may be dangerous. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced foetal weight
increase in foetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 4: First aid measures

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. 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
metal oxide/oxides

5.3 Advice for firefighters

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.

SECTION 6: Accidental release measures

6.1 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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

6.2 Environmental precautions : Avoid dispersal of spilt 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. Collect spillage.

6.3 Methods and material 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. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment. 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 swallow. Avoid breathing vapour or mist. Avoid release to the environment. 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.
- 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.

7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

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. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	DNEL	Long term Dermal	12.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	151 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	7.5 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	32 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	7.5 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	2.1 mg/kg bw/day	General population	Systemic
	DMEL	Long term Inhalation	3.25 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	10.2 mg/m ³	General population	Systemic
	DMEL	Long term Dermal	23.4 mg/kg bw/day	Workers	Systemic
	DMEL	Long term Dermal	42.4 mg/kg bw/day	General population	Systemic
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	DNEL	Long term Dermal	12.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	151 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	7.5 mg/kg	Consumers	Systemic

SECTION 8: Exposure controls/personal protection

2-ethylhexan-1-ol	DNEL	Long term Inhalation	bw/day 32 mg/m ³	Consumers	Systemic	
	DNEL	Long term Oral	7.5 mg/kg bw/day	Consumers	Systemic	
	DNEL	Long term Oral	2.1 mg/kg bw/day	General population	Systemic	
	DMEL	Long term Inhalation	3.25 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	10.2 mg/m ³	General population	Systemic	
	DMEL	Long term Dermal	23.4 mg/ kg bw/day	Workers	Systemic	
	DMEL	Long term Dermal	42.4 mg/ kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	106.4 mg/ m ³	Workers	Local	
	DNEL	Long term Dermal	23 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	53.2 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	53.2 mg/m ³	General population [Consumers]	Local	
	DNEL	Long term Dermal	11.4 mg/ kg bw/day	General population [Consumers]	Systemic	
	DNEL	Long term Inhalation	2.3 mg/m ³	General population [Consumers]	Systemic	
	DNEL	Long term Oral	1.1 mg/kg bw/day	General population [Consumers]	Systemic	
	DNEL	Long term Inhalation	12.8 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	26.6 mg/m ³	General population [Consumers]	Local	
	DNEL	Short term Inhalation	26.6 mg/m ³	General population [Consumers]	Local	
	DNEL	Long term Oral	1.1 mg/kg bw/day	General population	Systemic	
	naphthalene	DNEL	Long term Inhalation	2.3 mg/m ³	General population	Systemic
		DNEL	Long term Dermal	11.4 mg/ kg bw/day	General population	Systemic
DNEL		Long term Inhalation	12.8 mg/m ³	Workers	Systemic	
DNEL		Long term Dermal	23 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Inhalation	26.6 mg/m ³	General population	Local	
DNEL		Long term Inhalation	26.6 mg/m ³	General population	Local	
DNEL		Short term Inhalation	53.2 mg/m ³	Workers	Local	
DNEL		Long term Inhalation	53.2 mg/m ³	Workers	Local	
DNEL		Long term Dermal	3.57 mg/ kg bw/day	Workers	Systemic	
DNEL		Long term Inhalation	25 mg/m ³	Workers	Systemic	
DNEL	Long term Inhalation	25 mg/m ³	Workers	Local		

SECTION 8: Exposure controls/personal protection

1,2,4-trimethylbenzene	DNEL	Inhalation Long term Dermal	3.57 mg/ kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	25 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	25 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	100 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	100 mg/m ³	Workers	Local	
	DNEL	Long term Dermal	16171 mg/ kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	100 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	100 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	29.4 mg/m ³	General population [Consumers]	Systemic	
	DNEL	Short term Inhalation	29.4 mg/m ³	General population [Consumers]	Local	
	DNEL	Long term Dermal	9512 mg/ kg bw/day	General population [Consumers]	Systemic	
	DNEL	Long term Inhalation	29.4 mg/m ³	General population [Consumers]	Systemic	
	DNEL	Long term Oral	15 mg/kg bw/day	General population [Consumers]	Systemic	
	DNEL	Long term Inhalation	29.4 mg/m ³	General population [Consumers]	Local	
	DNEL	Long term Oral	15 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	29.4 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	29.4 mg/m ³	General population	Local	
	Phenol, dodecyl-, branched	DNEL	Short term Inhalation	29.4 mg/m ³	General population	Systemic
		DNEL	Long term Inhalation	29.4 mg/m ³	General population	Systemic
		DNEL	Short term Inhalation	100 mg/m ³	Workers	Local
DNEL		Long term Inhalation	100 mg/m ³	Workers	Local	
DNEL		Short term Inhalation	100 mg/m ³	Workers	Systemic	
DNEL		Long term Inhalation	100 mg/m ³	Workers	Systemic	
DNEL		Long term Dermal	9512 mg/ kg bw/day	General population	Systemic	
DNEL		Long term Dermal	16171 mg/ kg bw/day	Workers	Systemic	
DNEL		Short term Dermal	166 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Inhalation	44.18 mg/ m ³	Workers	Systemic	
DNEL		Long term Inhalation	0.25 mg/ kg bw/day	Workers	Systemic	
DNEL		Short term Dermal	50 mg/kg	General	Systemic	

SECTION 8: Exposure controls/personal protection

decamethylcyclopentasiloxane	DNEL	Short term Inhalation	bw/day 13.26 mg/m ³	population [Consumers] General population	Systemic
	DNEL	Short term Oral	1.26 mg/kg bw/day	population [Consumers] General population	Systemic
	DNEL	Long term Dermal	0.075 mg/kg bw/day	population [Consumers] General population	Systemic
	DNEL	Long term Inhalation	0.79 mg/m ³	population [Consumers] General population	Systemic
	DNEL	Long term Oral	0.075 mg/kg bw/day	population [Consumers] General population	Systemic
	DNEL	Short term Inhalation	97.3 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	24.2 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	97.3 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	24.2 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	17.3 mg/m ³	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	4.3 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Inhalation	17.3 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	4.3 mg/m ³	General population [Consumers]	Local
	DNEL	Short term Oral	5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	4.3 mg/m ³	General population	Local
	DNEL	Long term Inhalation	4.3 mg/m ³	General population	Local
	DNEL	Short term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	17.3 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	17.3 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	24.2 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	24.2 mg/m ³	Workers	Local
DNEL	Short term Inhalation	97.3 mg/m ³	Workers	Systemic	
DNEL	Long term Inhalation	97.3 mg/m ³	Workers	Systemic	

SECTION 8: Exposure controls/personal protection

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
2-ethylhexan-1-ol	PNEC	Fresh water	0.017 mg/l	-
	PNEC	Marine	0.0017 mg/l	-
	PNEC	Sewage Treatment Plant	10 mg/l	-
	PNEC	Fresh water sediment	0.28 mg/kg dwt	-
	PNEC	Marine water sediment	0.028 mg/kg dwt	-
	PNEC	Soil	0.047 mg/kg dwt	-
	PNEC	Intermittent release	0.17 mg/l	-
	PNEC	Marine water	0.002 mg/l	-
	PNEC	Secondary Poisoning	55 mg/kg	-
naphthalene	PNEC	Fresh water	2.4 µg/l	-
	PNEC	Marine	0.24 µg/l	-
	PNEC	Sewage Treatment Plant	2.9 mg/l	-
	PNEC	Fresh water sediment	67.2 µg/kg dwt	-
	PNEC	Marine water sediment	67.2 µg/kg dwt	-
	PNEC	Soil	53.3 µg/kg dwt	-
1,2,4-trimethylbenzene	PNEC	Fresh water	0.12 mg/l	-
	PNEC	Marine	0.12 mg/l	-
	PNEC	Sewage Treatment Plant	2.41 mg/l	-
	PNEC	Fresh water sediment	13.56 mg/kg dwt	-
	PNEC	Marine water sediment	13.56 mg/kg dwt	-
	PNEC	Soil	2.34 mg/kg dwt	-
Phenol, dodecyl-, branched	PNEC	Fresh water	0.074 µg/l	-
	PNEC	Fresh water	0.0074 µg/l	-
	PNEC	Sewage Treatment Plant	100 mg/l	-
	PNEC	Fresh water sediment	0.226 mg/kg dwt	-
	PNEC	Marine water sediment	0.0226 mg/kg dwt	-
	PNEC	Soil	0.118 mg/kg dwt	-
decamethylcyclopentasiloxane	-	Fresh water	0.0012 mg/l	-
	-	Marine water	0.0012 mg/l	-
	-	Fresh water sediment	2.39 mg/kg	-
	-	Marine water sediment	0.239 mg/kg	-
	-	Soil	3.34 mg/kg	-
	-	Sewage Treatment Plant	>10 mg/l	-
	-	Plant		-

8.2 Exposure controls

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.

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.

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

SECTION 8: Exposure controls/personal 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Amber. [Light]
- Odour** : Not available.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Lowest known value: 168.01°C (334.4°F) (1,2,4-trimethylbenzene). Weighted average: 193.98°C (381.2°F)
- Flash point** : Closed cup: 62°C (143.6°F) [ASTM D93]
- Evaporation rate** : Highest known value: 0.05 (Solvent naphtha (petroleum), heavy arom.)
Weighted average: 0.04 compared with butyl acetate
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Greatest known range: Lower: 0.79% Upper: 12.7% (2-ethylhexan-1-ol)
- Vapour pressure** : Highest known value: 0.1 kPa (0.8 mm Hg) (at 20°C) (Solvent naphtha (petroleum), heavy arom.). Weighted average: 0.09 kPa (0.68 mm Hg) (at 20°C)
- Vapour density** : Highest known value: 4.6 to 5.5 (Air = 1) (Solvent naphtha (petroleum), heavy arom.). Weighted average: 4.91 (Air = 1)
- Relative density** : Not available.
- Density** : 0.925 g/cm³ [15°C (59°F)]
- Solubility(ies)** : Insoluble in the following materials: cold water, hot water, methanol, diethyl ether.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Lowest known value: 270 to 330°C (518 to 626°F) (2-ethylhexan-1-ol).
- Decomposition temperature** : Not available.

SECTION 9: Physical and chemical properties

Viscosity	: Kinematic (40°C (104°F)): 0.1496 cm ² /s (14.96 cSt)
Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2 Other information

Pour point	: <-39°C
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SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Species	Result type	Dose
Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	-	Rat	LC50 Inhalation Vapour	>590 mg/m ³
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	-	Rabbit	LD50 Dermal	>2 mL/kg
	-	Rabbit	LD50 Dermal	2000 mg/kg
	-	Rat	LDLo Oral	5 mL/kg
	-	Rat	LC50 Inhalation Vapour	>590 mg/m ³
2-ethylhexan-1-ol	-	Rabbit	LD50 Dermal	>2 mL/kg
	-	Rabbit	LD50 Dermal	2000 mg/kg
	-	Rat	LDLo Oral	5 mL/kg
	OECD 403 Acute Inhalation Toxicity	Rat - Male, Female	LC50 Inhalation Dusts and mists	<5.3 mg/l
OECD 403 Acute Inhalation Toxicity	Rat - Male, Female	LC50 Inhalation Vapour	>0.89 mg/l	
OECD 402 Acute Dermal Toxicity	Rat - Male, Female	LD50 Dermal	>3000 mg/kg	
OECD 401 Acute Oral Toxicity	Rat - Male	LD50 Oral	2047 mg/kg	
naphthalene	-	Rat	LC50 Inhalation	>340 mg/m ³

SECTION 11: Toxicological information

Phenol, dodecyl-, branched decamethylcyclopentasiloxane	-	Rabbit	Vapour LD50 Dermal	>2000 mg/kg
	-	Rat	LD50 Oral	490 mg/kg
	-	Rabbit	LD50 Dermal	5000 mg/kg
	-	Rat	LD50 Oral	2100 mg/kg
	OECD 403 Acute Inhalation Toxicity	Rat - Male, Female	LC50 Inhalation Dusts and mists	8.67 mg/l Aerosol.
	OECD 402 Acute Dermal Toxicity	Rabbit - Male, Female	LD50 Dermal	>2000 mg/kg
OECD 401 Acute Oral Toxicity Acute oral toxicity (LD50)	Rat	LD50 Oral	>5000 mg/kg	
	Rat	LD50 Oral	>24134 mg/kg	

Acute toxicity estimates (ATE)

Route	ATE value
Oral	23093.68 mg/kg
Inhalation (vapours)	88.8 mg/l
Inhalation (dusts and mists)	14.5 mg/l

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	-	Rabbit	Skin - Mild irritant - -
	-	Mammal - species unspecified	Eyes - Mild irritant - -
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	-	Rabbit	Skin - Mild irritant - -
	-	Mammal - species unspecified	Eyes - Mild irritant - -
2-ethylhexan-1-ol	-	Rabbit	Eyes - Moderate irritant - -
	-	Rabbit	Eyes - Severe irritant - -
decamethylcyclopentasiloxane	-	Rabbit	Skin - Moderate irritant - -
	-	Rabbit	Eyes - Mild irritant - -
-	Rabbit	Skin - Mild irritant - -	

Sensitisation

Product/ingredient name	Test	Species	Result
2-ethylhexan-1-ol	-	Guinea pig	Not sensitizing -
decamethylcyclopentasiloxane	OECD 429 Skin Sensitisation: Local Lymph Node Assay	Mouse	Not sensitizing -

Potential chronic health effects

Product/ingredient name	Test	Species	Result	Dose
2-ethylhexan-1-ol	OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat - Male, Female	Sub-chronic NOEL Oral	125 mg/kg
	OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat - Male, Female	Sub-chronic NOAEL Oral	250 mg/kg
	OECD 413 Subchronic Inhalation Toxicity: 90-day Study	Rat - Male, Female	Sub-chronic NOAEC	120 ppm

SECTION 11: Toxicological information

decamethylcyclopentasiloxane	-	Rat - Male	Inhalation Vapour Chronic NOAEL Oral	100 mg/kg
	-	Rat - Male, Female	Chronic NOAEL Dermal	1600 mg/kg
	-	Rat - Male, Female	Chronic NOAEL Inhalation Vapour	0.081 mg/l

Mutagenicity

Product/ingredient name	Test	Experiment	Result
2-ethylhexan-1-ol	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: with and without	Negative
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: with and without	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: with and without	Negative
decamethylcyclopentasiloxane	-	Experiment: In vitro Subject: Bacteria	Negative

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

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:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations

SECTION 11: Toxicological information

- Skin contact** : Adverse symptoms may include the following:
 irritation
 redness
 dryness
 cracking
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 nausea or vomiting
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Delayed and immediate effects as well as 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.

General : 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.

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 : May damage fertility.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Test	Species	Exposure	Result
Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	-	Algae	72 hours	Acute EC50 1 to 3 mg/l
	-	Daphnia	48 hours	Acute EC50 3 to 10 mg/l
	-	Fish	96 hours	Acute LC50 2 to 5 mg/l
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	-	Algae	72 hours	Acute EC50 1 to 3 mg/l
	-	Daphnia	48 hours	Acute EC50 3 to 10 mg/l
	-	Fish	96 hours	Acute LC50 2 to 5 mg/l
2-ethylhexan-1-ol	-	Algae	72	Acute EC50 11.5 mg/l

SECTION 12: Ecological information

naphthalene	-	Daphnia - Daphnia	48 hours	Acute EC50 39 mg/l
	-	Daphnia - Water flea - Daphnia magna	48 hours	Acute EC50 1.96 mg/l
	-	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours	Fresh water
	-	Fish - Oncorhynchus mykiss	48 hours	Acute LC50 2350 µg/l
	-	Crustaceans - Fiddler crab - Uca pugnax - Adult	48 hours	Marine water
	-	Fish - Mozambique tilapia - Oreochromis mossambicus	96 hours	Acute LC50 1.6 mg/l
1,2,4-trimethylbenzene	-	Fish - Pimephales promelas	3 weeks	Chronic NOEC 0.5 mg/l
	-	Fish - Atlantic salmon	60 days	Chronic NOEC 1.5 mg/l
Phenol, dodecyl-, branched	-	Fish - Mozambique tilapia - Oreochromis mossambicus	96 hours	Acute LC50 7.72 mg/l
	-	Fish - Atlantic salmon	96 hours	LC50 0.14 mg/l
	-	Daphnia	48 hours	Acute EC50 0.037 mg/l
	-	Fish - Minnows	96 hours	Acute LC50 24 mg/l

12.2 Persistence and degradability

Product/ingredient name	Test	Result
2-ethylhexan-1-ol	OECD 301C Ready Biodegradability - Modified MITI Test (I)	79 to 99.9 % - Readily - 14 days
Phenol, dodecyl-, branched	OECD 301F Ready Biodegradability - Manometric Respirometry Test	>60 % - Readily - 28 days
	OECD 301B Ready Biodegradability - CO2 Evolution Test	78 % - Readily - 28 days
	OECD 301B 301B Ready Biodegradability - CO2 Evolution Test	25 % - Inherent - 28 days
	OECD 302D 302D Inherent Biodegradability - CONCAWE Test	10 % - Inherent - 56 days
	OECD 301B 301B Ready Biodegradability - CO2 Evolution Test	6 % - Inherent - 28 days
decamethylcyclopentasiloxane	OECD 310 Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)	0.14 % - Not readily - 28 days

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	-	-	Inherent
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	-	-	Inherent
2-ethylhexan-1-ol	-	-	Readily
Phenol, dodecyl-, branched	-	50%; < 28 day(s)	Inherent
decamethylcyclopentasiloxane	Fresh water 0.39 days, pH 4, 25°C (OECD 111)	50%; < 28 day(s)	Not readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Hydrocarbons C10, Aromatics, <1% Naphthalene, [Solvent naphtha (petroleum), heavy arom.]	2.8 to 6.5	<100	low
Hydrocarbons, C10, aromatics, >1% naphthalene [Solvent naphtha (petroleum), heavy arom.]	-	<100	low
2-ethylhexan-1-ol	2.3 to 3.1	25.33	low
naphthalene	3.4	36.5 to 168	low
1,2,4-trimethylbenzene	4.09	275	low
Phenol, dodecyl-, branched	5.5	823	high
decamethylcyclopentasiloxane	8.023	7060	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised 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.


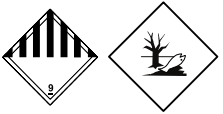

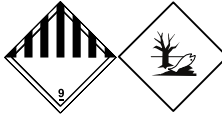
Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN3082	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom.)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom.)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom.). Marine pollutant (Solvent naphtha (petroleum), heavy arom.)	Environmentally hazardous substance, liquid, n.o.s. (Solvent naphtha (petroleum), heavy arom.)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.
Additional information	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. Hazard identification number 90 Limited quantity 5 L Special provisions 274, 335, 601, 375	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. Special provisions 274, 335, 375, 601	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. Emergency schedules F-A, S-F Special provisions 274, 335, 969	
14.6 Special precautions for user				
14.7 Transport in bulk according to IMO instruments				

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

SECTION 15: Regulatory information

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
naphthalene	Not supported	-	-	-
Phenol, dodecyl-, branched	-	-	-	-

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms

- : ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Carc. 2, H351	Calculation method
Repr. 1B, H360F	Calculation method
STOT SE 3, H336	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

- : H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H360F May damage fertility.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- EUH066 Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

- : Acute Tox. 4 ACUTE TOXICITY - Category 4
- Aquatic Acute 1 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
- Aquatic Chronic 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
- Aquatic Chronic 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
- Asp. Tox. 1 ASPIRATION HAZARD - Category 1
- Carc. 2 CARCINOGENICITY - Category 2
- Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
- Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
- Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3
- Repr. 1B REPRODUCTIVE TOXICITY - Category 1B
- Skin Corr. 1C SKIN CORROSION/IRRITATION - Category 1C
- Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2
- STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

Date of issue/ Date of revision

: 20/01/2023

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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.