

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : Defy Composite Deck Cleaner

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

Use of the substance/mixture : Bleaching agents, cleaning agent, oxidizing agents

1.3. Details of the supplier of the safety data sheet

SaverSystems, Inc.
800 S. 7th Street
Richmond, 47374 - U.S.A.
T (765) 966-5084

1.4. Emergency telephone number

Chemtel : 1 (800) 255-3924 24/7

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****GHS-US classification**

Skin Sens. 1 H317
Oxidizing Solids H272
Acute Tox. 4 H303
Eye Dam.1 H318

2.2. Label elements**GHS-US labelling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H302- Harmful if swallowed
H318- Cause serious eye damage

Precautionary statements (GHS-US) :
P264- Wash skin thoroughly after handling
P270- Do not eat, drink, or smoke when using this product
P280 - Wear protective gloves, protective clothing, eye protection
P301+P312+ P330 – IF SWALLOWED: Call a POISON CENTER or a doctor/physician if you feel unwell. Rinse mouth.
P305+P351+P338+310- IF IN EYES: Rinse cautiously with water for several minutes. Removing contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or a doctor/physician.

2.3. Other hazards

H402+H412- Harmful to aquatic life with long-lasting effects.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients**3.1. Substance**

Not applicable
Full text of H-phrases: see section 16

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3.2. Mixture

Name	Product identifier	%
Sodium carbonate peroxyhydrate	(CAS No) 15630-89-4	65-90
Carbonic acid sodium	(CAS No) 497-19-8	5-15
Sodium silicate	(CAS No) 1344-09-8	0.1-2

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Move to fresh air.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water. Get medical attention if irritation persists.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes, including under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention immediately. In case of difficulty in opening lids, administer an analgesic eye wash (oxybuprocaine).
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Never give an unconscious person anything to drink. Immediately call a POISON CENTER or doctor/physician. Oxygen and/or artificial respiration may be necessary.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after ingestion	: May cause severe irritation, nausea, abdominal pain, vomiting, and/or diarrhea.
Symptoms/injuries after skin contact	: Prolonged skin contact may cause skin irritation.
Symptoms/injuries after eye contact	: May cause severe eye irritation or serious damage to eyes. Symptoms include redness, lachrymation, or swelling of eye tissue.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water or water spray to extinguish.

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting	: Oxidizing. Oxygen released in thermal decomposition may support combustion. Contact with combustible material may cause fire. Contact with flammables may cause fire or explosions. Risk of explosion if heated under confinement
Hazardous combustion products	: Oxygen

5.3. Advice for firefighters

Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection. In case of fire, wear self-contained breathing apparatus. Use water spray to keep containers/tanks cool
Other information	: Keep product and empty container away from heat and sources of ignition.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No information available.

6.1.1. For non-emergency personnel

Emergency procedures : Keep away from incompatible products.

6.1.2. For emergency responders

Emergency procedures : Sweep up to prevent slipping hazard.

6.2. Environmental precautions

Should not be released into the environment. If limited quantities are released into sewers, flush with plenty of water. If large quantities of the product contaminate rivers and lakes or drains, inform respective authorities.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up and shovel into suitable containers for disposal. Do not mix waste streams during collection. Avoid dust formation. All receiving equipment should be clean, vented, dry, labeled, and made of material that is compatible with the product. Treat recovered material as described in the section 'Disposal considerations'. Never return spills in original containers for re-use.

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6.4. Reference to other sections

No additional information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid dust formation. Ensure adequate ventilation. Keep away from heat and sources of ignition. Use only clean and dry utensils. Never return unused material to storage receptacle. Keep away from water. Keep away from incompatible products.
- Hygiene measures : Use only in an area equipped with a safety shower. Use an eye wash bottle with pure water. Handle in accordance with good industrial hygiene and safety practice for diagnostics.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Avoid dust formation. In industrial installations, apply the rules for the prevention of major accidents (consult an expert). Keep away from heat/sparks/open flames/hot surfaces. Do not smoke when using this product. To avoid thermal decomposition, do not overheat. Keep away from incompatible products.
- Storage conditions : Keep in a cool, dry, and well-ventilated place. Keep away from heat and direct sunlight. Store in receptacle equipped with a vent or safety valve. Store only in original container. The container must be used exclusively for the product.
- Suitable packaging material : Stainless steel, polyethylene, paper + PE coating.

7.3. Specific end use(s)

Contact your supplier for additional information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium Carbonate Peroxyhydrate	
Solvay acceptable exposure limit	5 mg/m3

Carbonic acid sodium salt (1:2)	
Solvay acceptable exposure limit	10 mg/m3

Particles not otherwise specified	
American Conference of Governmental Industrial Hygienists (Respirable fraction)	3 mg/m3
American Conference of Governmental Industrial Hygienists (Inhalable fraction)	10 mg/m3
Occupational Safety and Health Administration (Respirable fraction)	5 - 15 mg/m3

8.2. Exposure controls

- Control measures : Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Eye wash with pure water.
- Appropriate engineering controls : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Apply technical measures to comply with the occupational exposure limits.
- Personal protective equipment : Gloves. Protective clothing. Protective goggles.



- Hand protection : Wear suitable gloves. PVC, neoprene, and natural rubber gloves recommended. Leather and cotton not recommended.
- Eye protection : Wear chemical splash goggle.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Work in well-ventilated zones. Use proper respiratory protection. Use NIOSH-approved respiratory protection/ respiratory protection that conforms to international/national standards. Use a respirator with a dust filter.
- Environmental exposure controls : Avoid discharge to the environment.
- Other information : Handle in accordance with good industrial hygiene and safety practice for diagnostics.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder
Color	: White
Odor	: Odorless
Odour threshold	: No data available
pH	: 10.4 – 10.6 (10.1 g/l)
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 950 – 1,200 kg/m ³
Solubility	: Water Soluble: 150 g/l (68° F (20°C))
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: Category 3: Oxidizing
Explosive limits	: No data available
Self-accelerating decomposition temperature (SADT)	: >131°F (>55°C)) 50 kg

9.2. Other information

Henry's Constant	: Air
Molecular weight	: 314.06 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity

Decomposes when moist. Decomposes on heating. Potential for exothermic hazard.

10.2. Chemical stability

Potential for exothermic hazard. Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Contact with combustible material may cause fire. Contact with flammables may cause fire or explosions. Risk of explosion if heated under confinement. Fire or intense heat may cause violent rupture of packages.

10.4. Conditions to avoid

Exposure to moisture. Heat. To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Water, acids, bases, heavy metal salts, reducing agents, organic materials, flammable materials, and combustible material.

10.6. Hazardous decomposition products

Oxygen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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Acute toxicity	
Oral (rat)	LD50: 1,034 mg/kg
Inhalation (rat)	LC0- 1 h > 4,580 mg/m ³
Dermal (rabbit)	LD 10 > 2,000 mg/kg

Skin corrosion/irritation	: Slight irritation (rabbit)
Serious eye damage/irritation	: Risk of serious damage to eyes (rabbit)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: NOEL parent: > 159 mg/kg. Repeated exposure- rat. According to a standardized method, no embryotoxic or teratogenic effects have been observed.
Specific target organ toxicity (single exposure)	: Sodium silicate SiO ₂ /Na ₂ O. Inhalation. The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.
Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Symptoms/injuries after inhalation	: Irritating to respiratory system.
Symptoms/injuries after skin contact	: Irritating to skin.
Symptoms/injuries after eye contact	: Risk of serious damage to eyes.
Symptoms/injuries after ingestion	: Harmful if swallowed

SECTION 12: Ecological information

12.1. Toxicity

Defy Composite Deck Cleaner	
LC50 fishes 1	71 mg/l (Exposure time: Not established - Species: Pimephales promelas (fathead minow))
NOEC fishes 1	7.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas (fathead minow))
EC50 Daphnia 2	4.9 mg/l (Exposure time: Not established – Species: Dahnia pulex (water flea))
NOEC Daphnia 2	2 mg/l (Exposure time: 48 h – Species: Daphnia pulex (water flea))
Sodium silicate (SiO ₂ /Na ₂ O)	
EC50 Algae	345.4 mg/l (Exposure time: 72 h - Species: Desmondesmus subspicatus (Scenedesmus subspicatus))
EbC50 Algae	207 mg/l (Exposure time: 72 h - Species: Desmondesmus subspicatus (Scenedesmus subspicatus))

12.2. Persistence and degradability

Defy Composite Deck Cleaner	
Stability in water	Medium, water, soil, hydrolysis
Photodegradation	Not established
Biodegradability	Inorganic substance- not established
Degradability assessment	Carbonic acid sodium salt: Not considered rapidly degradable in environment

12.3. Bioaccumulative potential

Defy Composite Deck Cleaner	
Bioaccumulative potential	Not established.

12.4. Mobility in soil, adsorption potential (Koc)

Defy Composite Deck Cleaner	
Air	Not applicable.
Water	Considerable solubility and mobility
Soil/sediments	Non-significant adsorption

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12.5. Ecotoxicity assessment

Product contains a (many) hazardous substance(s) for the environment. Under massive form, product is biologically inert and non-degradable. Ingestion of solids may cause harm to wildlife due to intestinal mechanical blockage or starvation from false feeling of satiation.

12.6. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : To dispose of product: dilute with plenty of water. Dispose of wastes in an approved waste disposal facility. Can be landfilled when in compliance with local regulations.

To dispose of packaging: Clean container with water. Empty containers should be taken to an approved waste handling site for recycling or disposal. Uncleaned empty packing should be disposed of as unused product.

Dispose of both contents and container in accordance with local and national regulations.

Waste Code : The Environmental Protection Agency labels this as a hazardous waste (RCRA Hazardous

Ecology - waste materials : Waste (40 CFR 302), D001- Ignitable waste – (I)).

Avoid release to the environment.

SECTION 14: Transport information

14.1 DOT Regulations

Sodium Carbonate Peroxyhydrate (UN 3378)

Transport hazard class label	5.1
Packaging group	III
ERG No.	140
Marine pollutant	No
Chronic Health Hazard	No

14.1.2 IATA

Sodium Carbonate Peroxyhydrate (UN 3378)

Transport hazard class label	5.1
Packaging group	III
Packing instruction (cargo aircraft)	563
Max net qty/pkg	100.00 kg
Packing instruction (passenger aircraft)	559
Max net qty/pkg	25.00 kg

Additional information

Special precautions for user : F-A, S-Q
EmS

ADR

Transport document description : No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Defy Composite Deck Cleaner

Listed on the SARA Hazard Designation Sections 311/312 (40 CRF 370)	
Fire hazard	Yes
Ractivity Hazard	No
Sudden Release of Pressure Hazard	No
Acute Health Hazard	No

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Chronic Health Hazard No

15.2. International regulations

EU-Regulations

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

No additional information available

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

Defy Composite Deck Cleaner

In compliance with:

New Zealand Inventory of Chemical substances

United States TSCA Inventory

Canadian Domestic Substance List (DSL)

Australia Inventory of Chemical Substances (AICS)

Japan CSCL, Inventory of Existing and New Chemical Substances

Korean Existing Chemicals Inventory (KECI)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

China IECSC, Inventory of Existing Chemical Substances in China

15.3. US State regulations

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: Other information

Sources of Key data : Supplier's Safety Data Sheet.

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Sens. 1	Sensitisation — Skin, category 1
H302	Harmful if swallowed
H318	Causes serious eye damage

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product