

**Section 1. Identification**

**1.1 Product identifier**

**Product name:** Zendura VIVA®  
**Other identifiers:** None

**1.2 Relevant identified uses of the substance and uses advised against**

**Recommended use:** May be used as received, processed, or thermoformed to produce other articles, or as a component of other dental products.

**Uses advised against:** No information available

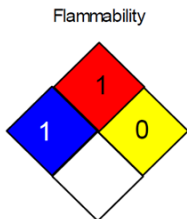
**1.3 Supplier details:**

**Company name:** Bay Materials  
**Address:** 48450 Lakeview Blvd.  
 Fremont, CA 94538  
**Telephone:** +1-(650)-566-0800  
 Email: complaints@baymaterials.com  
 Website: www.baymaterials.com

**1.4 Emergency telephone number:**

Emergency Phone Number  
 for Spill, Leak, Fire, Exposure, or Accident  
 Call INFOTRAC Day or Night  
**NORTH AMERICA 1-800-535-5053**  
**INTERNATIONAL 1-352-323-3500**

**Section 2. Hazard Identification**

<b>Classification of the product</b>	No need for classification according to GHS criteria for this product. This product is not hazardous in the form in which it is shipped from the manufacturer									
<b>Hazard Classification</b>	<p>Further information</p> <p>NFPA 704:</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;">Health</div>  <div style="margin-left: 10px;">Instability</div> </div> <p style="text-align: center;">Special hazard</p> <p>HMIS® IV:</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #0000FF; color: white;">HEALTH</td> <td style="width: 20px;">/</td> <td style="width: 20px;">1</td> </tr> <tr> <td style="background-color: #FF0000; color: white;">FLAMMABILITY</td> <td></td> <td>1</td> </tr> <tr> <td style="background-color: #FFD700; color: white;">PHYSICAL HAZARD</td> <td></td> <td>0</td> </tr> </table> <p>HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.</p>	HEALTH	/	1	FLAMMABILITY		1	PHYSICAL HAZARD		0
HEALTH	/	1								
FLAMMABILITY		1								
PHYSICAL HAZARD		0								
According to Regulation (EC) No. 1272/2008 [CLP] and Global Harmonized System (GHS) standards										

<b>Label elements</b>	The product does not require a hazard warning label in accordance with GHS criteria. <b>Hazards not otherwise classified.</b> No specific dangers known, if the regulations/notes for storage and handling are considered.
<b>Signal word</b>	Warning
<b>Hazard statements</b>	If fine particles are generated during further processing, handling or by other means, product may form combustible dust concentrations in air.
<b>Precautionary Statement</b>	P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P280: Wear protective gloves
<b>Labeling of special preparations (GHS)</b>	Under thermoforming or processing conditions, wear personal protective equipment to prevent thermal burns. Use with local exhaust ventilation.
<b>2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200</b>	According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200 This product does not contain any components classified as hazardous under the referenced regulation.

**Section 3. Composition / Information on Ingredients**

Chemical name	CAS Number	Content (W/W)
Thermoplastic Polyurethane	Proprietary	20-80%
Copolyester	Proprietary	20-80%

**Section 4. First-Aid Measures**

<b>Primary Routes of Exposure</b>	Eyes, skin, mouth or inhalation
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**4.1 Description of first aid measures**

- General advice** Remove contaminated clothing.
- If inhaled:** Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.
- If on skin:** Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention. Skin contact with hot molten substance/product may cause thermal burns.
- If in eyes:** In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

<b>If swallowed:</b>	Rinse mouth and then drink plenty of water. <i>Do not induce vomiting.</i> Immediate medical attention required.
<b>Most important symptoms and effects, both acute and delayed</b>	See Section 11 Acute: Contact with heated material can cause thermal burns. Causes a slipping hazard if spilled. Vapors released from thermal decomposition may cause eye irritation with symptoms of burning and tearing, as well as respiratory tract irritation
<b>Hazards:</b>	Contact with molten substance/product may cause severe burns to skin and eyes
<b>Treatment: In the event of possible diisocyanate exposure:</b>	Symptomatic Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: Treat symptomatically as for thermal burn. Ingestion: Treat symptomatically. Inhalation: Treatment is essentially symptomatic. An individual having a pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.
<b>Note to physician</b>	Treatment: Treat according to symptoms (decontamination, vital functions). No known specific antidote. Burns should be treated as thermal burns.

**Section 5. Fire-Fighting Measures**

5.1	Extinguishing media	Suitable extinguishing media	Water, Dry powder, Carbon dioxide, Foam
		Unsuitable Extinguishing Media:	High Pressure Water Streams may scatter and spread fire.
		Special hazards arising from the substance or mixture	Hazards during firefighting: No particular hazards known.
5.2	Hazardous Decomposition Products	By Fire and Thermal Decomposition:	Carbon Dioxide, hydrogen cyanide, 4,4'-Diphenylmethane Diisocyanate (MDI) Aldehydes, Carbon monoxide, Amines, Nitriles, Nitrogen oxides (NOx), Hydrocarbons
5.3	Advice for fire-fighters	Protective equipment for firefighting	Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes and turn-out gear.
5.4	Unusual	Toxic and irritating gases/fumes may be given off during	

Fire/Explosion Hazards	burning or thermal decomposition. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
5.5 Further information	In case of fire and/or explosion do not breathe fumes. Minimize dust generation and accumulation

**Section 6. Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures	<b>No special precautions necessary. Wear appropriate personal protective equipment. Local authorities should be advised if significant spillages cannot be contained</b>
6.2 Environmental precautions	No special precautions necessary. Avoid release to the environment
6.3 Methods and material for containment and cleaning up	Spills should be contained and placed in suitable containers for disposal.
6.4 Spill and Leak Procedures	If molten, allow material to cool and place into an appropriate marked container for disposal. Sweep up and shovel into suitable containers for disposal. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture as they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (e.g., cleaning dust from surfaces with compressed air).

**Section 7. Handling and Storage**

7.1 Precautions for safe handling	<b>Provide suitable exhaust ventilation when thermoforming or trimming.</b>
7.2 Protection against fire and explosion:	No explosion proofing necessary. Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Avoid breathing dust. Containers should be kept tightly closed to prevent contamination. Material is hygroscopic and may absorb small amounts of atmospheric moisture. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces. Solid particulate can generate electrical charging during operations such as unloading from containers and pneumatic transfer. Provide adequate precautions, such as electrical grounding and bonding, where conductive equipment is involved.
7.3 Conditions for safe storage, including any incompatibilities	Segregate from foods and animal feeds. Suitable materials for containers: carbon steel (iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2) Further information on storage conditions: Avoid extreme heat. Avoid

deposition of dust.Storage stability: Protect against moisture.

7.4 Storage Period: Five years in intact packaging

7.5 Storage Temperature Maximum: 55 °C (131 °F)

**Section 8. Exposure Controls/Personal Protection**

**8.1 Control Parameters:**

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

**8.1.1 Exposure Limits** Thermoplastic Polyurethane (TPU) is generally non-hazardous under ambient conditions. The following exposure limits do not apply to the product in its supplied form; however, when the product is heated (i.e, during processing or thermal decomposition conditions), there is a potential for the release of 4,4'-diphenylmethane diisocyanate (MDI) vapors.

4,4'-Diphenylmethane Diisocyanate (MDI) (101-68-8)  
 US. ACGIH Threshold Limit Values  
 Time Weighted Average (TWA): 0.005 ppm  
 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)  
 Ceiling Limit Value: 0.02 ppm, 0.2 mg/m<sup>3</sup>

**8.1.2 Advice on system design** Provide local exhaust ventilation to control dust.

**Industrial Hygiene/Ventilation Measures** During normal processing, use general dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Special ventilation and personal protective equipment (PPE) is required to control exposure to potentially harmful decomposition products whenever a TPU is heated to temperatures above its decomposition temperature (of 230C). Examples would include hot knife cutting, grinding, or sawing.  
 Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**8.2 Personal protective equipment**

<b>8.2.1 Respiratory protection:</b>	Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator as needed. In the absence of sufficient general dilution or local exhaust ventilation, a NIOSH approved air-supplied respirator may be needed during high temperature processing, procedures that create particulate matter, or when thermal decomposition is suspected.
<b>8.2.2 Hand protection:</b>	Wear gloves to prevent contact during mechanical processing and/or hot melt conditions. Ensure gloves remain in good condition during use and replace if any deterioration is observed.
<b>8.2.3 Eye protection:</b>	Wear splash goggles to protect from hot molten substance/product.
<b>8.2.4 Body protection:</b>	Body protection not required.
<b>8.2.5 General safety and hygiene measures:</b>	Wear protective clothing to prevent contact during mechanical processing and/or hot melt conditions. Avoid inhalation of dust. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Educate and train employees in the safe use and handling of this product.

**Section 9. Physical and Chemical Properties**

**9.1 Information on basic physical and chemical properties**

9.1.1	<b>Form:</b>	Sheet
9.1.2	<b>Odor:</b>	mild
9.1.3	<b>Colour:</b>	colorless
9.1.4	<b>pH value:</b>	Not applicable
9.1.5	<b>Melting point:</b>	220°C
9.1.6	<b>Boiling point:</b>	Not applicable.
9.1.7	<b>Sublimation point:</b> <b>Flash point:</b>	> 300°C No applicable information available.
9.1.8	<b>Flammability:</b>	not flammable
9.1.9	<b>Lower explosion limit:</b>	For solids not relevant for classification and labelling.
9.1.10	<b>Upper explosion limit:</b>	For solids not relevant for classification and labelling

9.1.11	<b>Autoignition:</b>	Not applicable
9.1.12	<b>Vapour pressure:</b>	Not applicable.
9.1.13	<b>Relative density:</b>	1.12 - 1.2
9.1.14	<b>Bulk density:</b>	500 - 1200 kg/m3 (20 °C)
9.1.15	<b>Auto-ignition Temperature:</b>	> 210 °C (> 410 °F)
9.1.16	<b>Softening point:</b>	180 °C (356 °F)
9.1.17	<b>Decomposition Temperature:</b>	Decomposition begins at 230 °C
9.1.18	<b>Dynamic Viscosity</b>	No Data Available
9.1.19	<b>Kinematic Viscosity:</b>	No Data Available

**Section 10. Stability and Reactivity**

10.1	<b>Reactivity</b>	None reasonably foreseeable
10.2	Corrosion to metals	No corrosive effect on metal.
10.3	Oxidizing properties	Not an oxidizer
10.4	Chemical stability	The product is stable if stored and handled as prescribed/indicated
10.5	Possibility of hazardous reactions	The product is chemically stable. No hazardous reactions if stored and handled as prescribed/indicated.
10.6	Conditions to avoid	No conditions known that should be avoided. Generation of dust clouds and dust accumulation
10.7	Incompatible materials	No substances known that should be avoided.

**10.8 HAZARDOUS DECOMPOSITION PRODUCTS**

<b>Decomposition products</b>	carbon monoxide, carbon dioxide, hydrogen cyanide
<b>Thermal decomposition</b>	No decomposition if stored and handled as prescribed/indicated < 230 °C Thermal decomposition above the indicated temperature is possible. Prolonged thermal loading can result in products of degradation being given off
<b>By Fire and Thermal Decomposition</b>	Carbon Dioxide; hydrogen cyanide; 4,4'-Diphenylmethane Diisocyanate (MDI); Aldehydes, Carbon monoxide, Amines, Nitriles, Nitrogen oxides (NOx), Hydrocarbons

**Section 11. Toxicological information**

**11.1 Information on likely routes of exposure** Routes of entry for solids and liquids are ingestion and inhalation but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

<b>ACUTE TOXICITY</b>	
Acute Toxicity/Effects	Contact with heated material can cause thermal burns., Causes a slipping hazard if spilled, Vapors released from thermal decomposition may cause eye irritation with symptoms of burning and tearing, as well as respiratory tract irritation.
Assessment of acute toxicity:	Inhalation of particulates may cause respiratory tract irritation. Ingestion may cause gastrointestinal disturbances. Contact with molten product may cause thermal burns. In the event of material decomposition due to exceeding the decomposition temperature of this product, release of MDI may occur.
Acute Inhalation:	The following effects reflect the potential health hazards associated with overexposure to MDI. Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.
<b>ASSESSMENT OF OTHER ACUTE EFFECTS</b>	
Assessment of STOT single:	Based on the available information there is no specific target organ toxicity to be expected after a single exposure
<b>IRRITATION / CORROSION</b>	
Assessment of irritating effects:	Not irritating to the eyes. Not irritating to the skin. Not irritating to the oral mucosa.
Assessment of sensitization:	The chemical structure does not suggest a sensitizing effect.



Aspiration Hazard	No aspiration hazard expected.	
<b>11.2 INFORMATION ON CHRONIC TOXICITY / EFFECTS</b>		
Repeated dose toxicity	<p>Assessment of repeated dose toxicity: No known chronic effects.</p> <p>Repeated exposure to the substance by dermal administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by inhalative administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by oral administration leads to effects similar to those found after single exposure</p>	
Chronic Inhalation:	<p>As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to diisocyanates at levels well below the TLV or PEL. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic overexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent.</p>	
<b>GENETIC TOXICITY</b>		
Assessment of mutagenicity	The chemical structure does not suggest a specific alert for such an effect. The material did not show mutagenicity in testing per ISO 10993	
<b>CARCINOGENICITY</b>		
Assessment of carcinogenicity:	The chemical structure does not suggest a specific alert for such an effect.	
	No carcinogenic substances as defined by IARC, NTP and/or OSHA	
	IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen

		by IARC.
	OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.
	NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>REPRODUCTIVE TOXICITY</b>		
Assessment of reproduction toxicity:	The chemical structure does not suggest a specific alert for such an effect.	
Teratogenicity	Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect	
Endocrine Disruptor Information	Bisphenol A or other known endocrine disruptors are not used in the manufacture or formulation of this product	
Other Information	This product has been tested and found to be biocompatible per the requirements of ISO 10993	
Symptoms of Exposure	No significant reaction of the human body to the product known	
Medical conditions aggravated by overexposure	Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.	

**Section 12. Ecological Information**

**12.1 ECOTOXICITY**

**Aquatic toxicity**

There is a high probability that the product is not acutely harmful to aquatic organisms.

**Ecotoxicity**

No data available

**12.2 Persistence and degradability**

No data available

**Assessment biodegradation and elimination (H<sub>2</sub>O)**

Poorly biodegradable.

**12.3 Bioaccumulative potential**

No data available

**Elimination information**

Poorly biodegradable.

**Bioaccumulation potential**

The product has not been tested.

**12.4 Mobility in soil**

No data available

**12.5 Assessment transport between**

Due to the product characteristics the test is

**environmental compartments** impossible.

**12.6 Additional information**

**Absorbable organically bound halogen (AOX):** This product contains no organically bound halogen.

**12.7 Other ecotoxicological advice:** The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Section 13. Disposal considerations**

**Dispose of waste according to applicable legislation.**

**13.1 Waste disposal of substance:**

Incinerate in a licensed facility. Do not discharge substance/product into sewer system. Dispose of in a licensed facility.

**13.2 Container disposal:**

Dispose of in accordance with national, state, and local regulations.

**Section 14. Transport Information**

<b>Land transport USDOT</b>	Not regulated.
<b>Sea transport IMDG</b>	Not regulated.
<b>Air transport IATA/ICAO</b>	Not regulated.
<b>Code of Emergency Measure:</b>	Not regulated.
<b>Domestic Standard:</b>	In compliance with domestic law.
<b>Environmental hazards:</b>	Not regulated.
<b>Special precautions for user:</b>	No special precautions.
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: International Regulations</b>	None known.
<b>IATA-DGR</b>	Not regulated as a dangerous good
<b>IMDG-Code</b>	Not regulated as a dangerous good
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable for product as supplied
<b>Domestic regulation 49 CFR</b>	Not regulated as a dangerous good

**Section 15. Regulatory Information****15.1 Safety, health, and environmental regulations/legislation specific for the product:****Federal Regulations****Registration status:**

Chemical TSCA, US released / listed

No substances are subject to TSCA 12(b) export notification requirements.

**EPCRA 311/312 (Hazard categories):** Not hazardous**SARA Section 311/312 Hazard Categories:**

Non-hazardous under Section 311/312

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA)  
SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355,  
Appendix A) Components:**

None

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA)  
SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier  
Notification Required Components:**

None

**US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of  
Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):**

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

**State Right-To-Know Information**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight percent	Components
>=1%	Polyurethane Elastomer

**CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals**

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release

No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

**EPCRA - Emergency Planning and Community Right-to-Know  
CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards:** Combustible dust

**SARA 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop.65:** This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

TCSI: On the inventory, or in compliance with the inventory

TSCA: All substances listed as active on the TSCA inventory

AICS: On the inventory, or in compliance with the inventory

DSL: All components of this product are on the Canadian DSL

ENCS: On the inventory, or in compliance with the inventory

ISHL: On the inventory, or in compliance with the inventory

KECI: On the inventory, or in compliance with the inventory

PICCS: Not listed

IECSC: On the inventory, or in compliance with the inventory

NZIoC: On the inventory, or in compliance with the inventory

COSHH: Not listed

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Section 16. Other Information**

Zendura VIVA® Thermoformable sheet is a trademark of Bay Materials, LLC

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardization; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New

Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

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**SDS Number:** SDS-004

**Version Date:** 10/22/2024

**SDS Version:** C

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