

**SAFETY DATA SHEET**

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200) and Canada Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), as amended

SDS #: A-10627

**Toner - Cyan, Black, Magenta, Yellow**

Issuing Date 09-Feb-2021

Revision date 17-Apr-2026

Revision Number 3

**1. Identification****Product identifier****Product Name**

Toner for Xerox® C230 Color Printer, Xerox® C235 Color Multifunction Printer

**Part no.**

006R04383, 006R04384, 006R04385, 006R04386, 006R04387, 006R04388, 006R04389, 006R04390, 006R04391, 006R04392, 006R04393, 006R04394, 006R04395, 006R04396, 006R04397, 006R04398, 006R04409, 006R04410, 006R04411, 006R04412, 502S11756, 502S11757, 502S11758, 502S11759, 006R04529, 006R04530, 006R04531, 006R04532, 006R05212

**Other means of identification****Color**

Cyan, Black, Magenta, Yellow

**Pure substance/mixture**

Mixture

**Synonyms**

None

**Recommended use of the chemical and restrictions on use****Recommended use**

Xerographic printing

**Restrictions on use**

No information available.

**Details of the supplier of the safety data sheet****Supplier Address**

Xerox Corporation  
800 Phillips Rd  
Webster, NY 14580

Xerox Canada Ltd  
2 Sheppard Ave. East, Suite 1200  
Toronto, Ontario M2N 5Y7

**Emergency telephone number****Initial supplier phone number**

1-800-275-9376 (U.S. &amp; Canada)

**Emergency Telephone**

Safety Information US: (800) 275-9376  
Chemical Emergency only (Chemtrec) (800) 424-9300

**E-mail address**

askxerox@xerox.com

For the most current document <https://safetydatasheets.business.xerox.com>

## 2. Hazard(s) identification

### Classification

This product is not considered hazardous by either the US OSHA Hazard Communication Standard 2024, or Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended.

### Label elements

Not classified

### Hazard statements

No hazard statements required.

### Other information

May form explosible dust-air mixture if dispersed.

## 3. Composition/information on ingredients

### Substance

Not applicable.

### Mixture

Chemical name	CAS No.	Weight-%	GHS Classification
Polyester resin	Trade secret	80-90	--
Carbon black	1333-86-4	0-10	--
Yellow Pigment	Trade secret	0-10	-
Cyan Pigment	Trade secret	0-10	-
Magenta pigment	Trade secret	0-10	-
Titanium dioxide	13463-67-7	<0.5	--

**Full text of H- and EUH-phrases: see section 16**

### Note

"--" indicates no classification or hazard statements apply.

## 4. First-aid measures

### Description of first aid measures

#### **General advice**

For external use only. Get medical attention if irritation or other symptoms occur. Show this safety data sheet to the doctor in attendance.

#### **Inhalation**

Remove to fresh air.

#### **Eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water.

**Ingestion** Rinse mouth.

#### **Most important symptoms and effects, both acute and delayed**

**Symptoms** Dust irritates eyes and air passages.

**Effects of Exposure** No information available.

#### **Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

### **5. Fire-fighting measures**

**Suitable Extinguishing Media** Use water spray or fog; do not use straight streams.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** Fine dust dispersed in air may ignite.

**Hazardous combustion products** Hazardous decomposition products due to incomplete combustion. Carbon oxides. Nitrogen oxides (NOx).

#### **Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment and precautions for fire-fighters** In the event of fire and/or explosion do not breathe fumes. Wear fire/flame resistant/retardant clothing. Wear self contained breathing apparatus for fire fighting if necessary.

### **6. Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid generation of dust. Ensure adequate ventilation.

#### **Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information  
See section 16 for more information

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control Parameters

#### Exposure Limits

<b>ACGIH TLV TWA</b>	10 mg/m <sup>3</sup> (inhalable particles)
<b>ACGIH TLV TWA</b>	3 mg/m <sup>3</sup> (respirable dust)
<b>OSHA PEL TWA</b>	15 mg/m <sup>3</sup> (total dust)
<b>OSHA PEL TWA</b>	5 mg/m <sup>3</sup> (respirable dust)
<b>Xerox Exposure Limit</b>	2.5 mg/m <sup>3</sup> (total dust)
<b>Xerox Exposure Limit</b>	0.4 mg/m <sup>3</sup> (respirable dust)

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Carbon black	TWA: 3 mg/m <sup>3</sup> inhalable particulate matter	TWA: 3.5 mg/m <sup>3</sup> (vacated) TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> ; TWA: 0.1 mg/m <sup>3</sup> ; Carbon black in presence of Polycyclic aromatic hydrocarbons PAH IDLH: 1750 mg/m <sup>3</sup>
Cyan Pigment	TWA: 1 mg/m <sup>3</sup> Cu dust and mist	-	TWA: 1 mg/m <sup>3</sup> ; Cu dust and mist IDLH: 100 mg/m <sup>3</sup> Cu dust and mist
Titanium dioxide	TWA: 0.2 mg/m <sup>3</sup> nanoscale respirable particulate matter TWA: 2.5 mg/m <sup>3</sup> finescale respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	TWA: 2.4 mg/m <sup>3</sup> ; CIB 63 fine TWA: 0.3 mg/m <sup>3</sup> ; CIB 63 ultrafine, including engineered nanoscale IDLH: 5000 mg/m <sup>3</sup>

Chemical name	Alberta	British Columbia	Ontario	Quebec
Carbon black	TWA: 3.5 mg/m <sup>3</sup> ;	TWA: 3 mg/m <sup>3</sup> ; inhalable	TWA: 3 mg/m <sup>3</sup> ; inhalable particulate matter	TWAEV: 3 mg/m <sup>3</sup> ; inhalable dust
Titanium dioxide	TWA: 10 mg/m <sup>3</sup> ;	TWA: 10 mg/m <sup>3</sup> ; total dust TWA: 3 mg/m <sup>3</sup> ; respirable fraction	TWA: 10 mg/m <sup>3</sup> ;	TWAEV: 10 mg/m <sup>3</sup> ; total dust

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Carbon black	TWA: 3 mg/m <sup>3</sup> ; inhalable particulate matter	TWA: 3 mg/m <sup>3</sup> ; inhalable fraction	TWA: 3 mg/m <sup>3</sup> ; inhalable particulate matter	TWA: 3 mg/m <sup>3</sup> ; inhalable particulate matter

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Cyan Pigment	TWA: 1 mg/m <sup>3</sup> ; dust and mist	TWA: 1 mg/m <sup>3</sup> ; dust and mist	TWA: 1 mg/m <sup>3</sup> ; dust and mist	TWA: 1 mg/m <sup>3</sup> ; dust and mist
Titanium dioxide	TWA: 0.2 mg/m <sup>3</sup> ; nanoscale respirable particulate matter TWA: 2.5 mg/m <sup>3</sup> ; finescale respirable particulate matter	TWA: 10 mg/m <sup>3</sup> ;	TWA: 0.2 mg/m <sup>3</sup> ; nanoscale respirable particulate matter TWA: 2.5 mg/m <sup>3</sup> ; finescale respirable particulate matter	TWA: 0.2 mg/m <sup>3</sup> ; nanoscale respirable particulate matter TWA: 2.5 mg/m <sup>3</sup> ; finescale respirable particulate matter

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Carbon black	TWA: 3.5 mg/m <sup>3</sup> ; STEL: 7 mg/m <sup>3</sup> ;	TWA: 3 mg/m <sup>3</sup> ; inhalable particulate matter	TWA: 3.5 mg/m <sup>3</sup> ; STEL: 7 mg/m <sup>3</sup> ;	TWA: 3.5 mg/m <sup>3</sup> ; STEL: 7 mg/m <sup>3</sup> ;
Cyan Pigment		TWA: 1 mg/m <sup>3</sup> ; dust and mist		
Titanium dioxide	TWA: 10 mg/m <sup>3</sup> ; STEL: 20 mg/m <sup>3</sup> ;	TWA: 0.2 mg/m <sup>3</sup> ; nanoscale respirable particulate matter TWA: 2.5 mg/m <sup>3</sup> ; finescale respirable particulate matter	TWA: 10 mg/m <sup>3</sup> ; STEL: 20 mg/m <sup>3</sup> ;	TWA: 30 mppcf; TWA: 10 mg/m <sup>3</sup> ; STEL: 20 mg/m <sup>3</sup> ;

#### Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

#### Appropriate engineering controls

**Engineering controls** None under normal use conditions.

#### Individual protection measures, such as personal protective equipment

**Eye/face protection** No special protective equipment required.

**Hand protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**Thermal hazards** None under normal processing.

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

<b>Appearance</b>	Powder
<b>Physical state</b>	Solid
<b>Color</b>	Cyan, Black, Magenta, Yellow
<b>Odor (includes odor threshold)</b>	Faint
<b>Odor threshold</b>	Not applicable

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>Melting point / freezing point</b>	Not applicable	None known
<b>Boiling point (or initial boiling point or boiling range)</b>	Not applicable	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	Not flammable	
<b>Lower flammability or explosive limits</b>	Not flammable	
<b>Flash point</b>	Not applicable	None known
<b>Autoignition temperature</b>	Not applicable	None known
<b>Decomposition temperature</b>	Not applicable	None known
<b>SADT (°C)</b>	No data available	None known
<b>pH</b>	Not applicable	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Kinematic viscosity</b>	Not applicable	None known
<b>Dynamic viscosity</b>	Not applicable	None known
<b>Solubility</b>	No data available	None known
<b>Water solubility</b>	Negligible	None known
<b>Partition coefficient n-octanol/water (log value)</b>	Not applicable	None known
<b>Vapor pressure (includes evaporation rate)</b>	not applicable	None known
<b>Evaporation rate</b>	Not applicable	None known
<b>Density and/or relative density</b>	1 - 2	None known
<b>Bulk density</b>	Not applicable	
<b>Liquid Density</b>	Not applicable	
<b>Relative vapor density</b>	not applicable	None known
<b>Particle characteristics</b>		None known
<b>Particle Size</b>	No data available	
<b>Particle Size Distribution</b>	4 - 9 micron	

**Other information**

<b>VOC content</b>	None
<b>Softening point</b>	49 - 60 °C / 120 - 140 °F

**Information with regard to physical hazard classes**

Explosive properties	Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard
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**10. Stability and reactivity**

<b>Reactivity</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Generation/formation of dust.
<b>Incompatible materials</b>	None known based on information supplied.

**Hazardous decomposition products** None under normal use conditions.

## 11. Toxicological information

**Note:** The toxicity data noted below is based on the test results of similar reprographic materials.

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	No known effects under normal use conditions.
<b>Eye contact</b>	No hazard from product as supplied.
<b>Skin contact</b>	No known effects under normal use conditions.
<b>Ingestion</b>	No hazard from product as supplied.

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

**Symptoms** None known.

**Acute toxicity** .

### Numerical measures of toxicity

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Carbon black	> 10000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 4.6 mg/m <sup>3</sup> ( Rat ) 4 h
Cyan Pigment	> 6400 mg/kg ( Rat )	> 5000 mg/kg ( Rat )	-
Magenta pigment	> 23 g/kg ( Rat )	> 3000 mg/kg ( Rabbit )	> 3.055 mg/L ( Rat ) 4 h
Titanium dioxide	> 2000 mg/kg ( Rat )	-	> 5.09 mg/L ( Rat ) 4 h

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitization** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Not mutagenic in AMES Test.

**Carcinogenicity** The IARC (International Agency for Research on Cancer) has listed carbon black as "possibly carcinogenic to humans". However, We have concluded that the presence of carbon black in this mixture does not present a health hazard. The IARC classification is based on studies evaluating pure, "free" carbon black. In contrast, toner is a formulation composed of specially prepared polymer and a small amount of carbon black (or other pigment). In the process of making toner, the small amount of carbon black becomes encapsulated within a matrix. We have performed extensive testing of toner, including a

chronic bioassay (test for potential carcinogenicity). Exposure to toner did not produce evidence of cancer in exposed animals. The results were submitted to regulatory agencies and published extensively.

The IARC (International Agency for Research on Cancer) has listed titanium dioxide as "possibly carcinogenic to humans". However, we have concluded that the presence of titanium dioxide in this mixture does not present a health hazard. The IARC classification is based on studies in rats using high concentrations of pure, unbound TiO<sub>2</sub> particles of respirable size. Epidemiological studies do not suggest a carcinogenic effect in humans. In addition, the titanium dioxide in this mixture is encapsulated in a matrix or bound to the surface of the toner.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Carbon black	A3 - Confirmed animal carcinogen (with unknown relevance to humans)	Group 2B - Possibly carcinogenic to humans	-	Present
Titanium dioxide	A3 - Confirmed animal carcinogen (with unknown relevance to humans)	Group 2B - Possibly carcinogenic to humans	-	Present

**Reproductive toxicity** This product does not contain any known or suspected reproductive hazards.

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**Other adverse effects** None known.

## 12. Ecological information

**Ecotoxicity** Not considered to be harmful to aquatic life.

**Terrestrial ecotoxicity** Based on available data, the classification criteria are not met.

**Persistence and degradability** Not readily biodegradable.

### **Bioaccumulative potential**

Chemical name	Partition coefficient	Bioconcentration factor (BCF)	Trophic magnification factor (TMF)
Cyan Pigment	6.6	11	-
Magenta pigment	2.2	-	-

**Mobility in soil** The product is insoluble and floats on water.

<b><u>Other adverse effects</u></b>	No information available.
<b>Endocrine disrupting properties</b>	This mixture does not contain any substance that has endocrine disrupting properties with respect to non-target organisms.

### 13. Disposal considerations

#### **Disposal methods**

<b>Waste from residues/unused products</b>	Can be landfilled or incinerated, when in compliance with local regulations.
<b>Contaminated packaging</b>	Dispose of contents/containers in accordance with local regulations.
<b>California waste information</b>	This product contains one or more substances that are listed with the State of California as a hazardous waste.
<b>Other information</b>	Although toner is not an aquatic toxin, microplastics may be a physical hazard to aquatic life and should not be allowed to enter drains, sewers, or waterways. Do Not Pour Product Down the Drain; Do Not Rinse the Container Before Disposal.

### 14. Transport information

<b>Note:</b>	This material is not subject to regulation as a hazardous material for shipping
<b><u>DOT</u></b>	Not regulated
<b><u>IATA</u></b>	Not regulated
<b><u>IMDG</u></b>	Not regulated

### 15. Regulatory information

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

#### **International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

#### **International Inventories**

**TSCA** Listed / Active or Exempt.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Polyester resin	-	-	Unknown *
Carbon black	1333-86-4	Present	Active
Yellow Pigment	-	Present	Active
Cyan Pigment	-	Present	Active
Magenta pigment	-	Present	Active
Titanium dioxide	13463-67-7	Present	Active

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements.

<b>DSL/NDSL</b>	Complies.
<b>EINECS/ELINCS</b>	Complies.
<b>ENCS</b>	Complies.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AIIC</b>	Contact supplier for inventory compliance status.
<b>NZIoC</b>	Contact supplier for inventory compliance status.
<b>TCSI</b>	Contact supplier for inventory compliance status.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

**NZIoC** - New Zealand Inventory of Chemicals

**TCSI** - Taiwan Chemical Substance Inventory

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Cyan Pigment	1.0

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Cyan Pigment	-	X	-	-

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Carbon black is regulated under California Proposition 65 only if in the form of "airborne, unbound particles of respirable size". Toner products do not contain carbon black in the form of "airborne, unbound particles of respirable size". Therefore, the requirements of Proposition 65 do not apply to this product.

Titanium dioxide is regulated under California Proposition 65 only if a product results in exposure in the form of "airborne, unbound particles of respirable size". Toner products do not result in exposure to titanium dioxide in the form of "airborne, unbound particles of respirable size". Therefore, the requirements of Proposition 65 do not apply to this product.

Chemical name	California Proposition 65
Carbon black	Carcinogen
Titanium dioxide	Carcinogen

**U.S. State Right-to-Know Regulations**

Although this product contains substances included in some U.S. State Right-to-Know regulations, the particles are bound in a unique matrix and, therefore, the product does not pose any specific hazard.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Carbon black	X	X	X
Cyan Pigment	X	-	X
Titanium dioxide	X	X	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 0	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 0	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X

**Key or legend to abbreviations and acronyms used in the safety data sheet**

List may include phrases which are not applicable to this product

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits

bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
GHS	Globally Harmonized System
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
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean 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
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program (United States)
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative

vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

**Key literature references and sources for data used to compile the SDS**

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 U.S. Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 U.S. National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
 International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
 International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
 United Nations World Health Organization (WHO)

**Revision date** 17-Apr-2026

**Revision Note** Part number 006R05212 added.

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**