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 # : P-70004

Replenisher - Cyan, Magenta, Yellow, Black

Issuing Date 21-Aug-2014 **Revision date** 08-Dec-2025 **Revision Number** 2

1. Identification

Product identifier

Product Name

Replenisher for Xerox® Versant™ 80 Press, Xerox® Versant™180 Press, Xerox® Versant™280 Press

Part no. 006R01638, 006R01639, 006R01640, 006R01641, 006R01642, 006R01643, 006R01644, 006R01645, 006R01646, 006R01647, 006R01648, 006R01649, 006R01845, 006R01846, 006R01847, 006R01848, 006R01849, 006R01850, 006R01851, 006R01852, 006R01853, 006R01854, 006R01855, 006R01856

Other means of identification

Color Cyan, Magenta, Yellow, Black
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
5650 Yonge Street
North York
Ontario M2M 4G7

Emergency telephone number

Initial supplier phone number 1-800-275-9376 (U.S. & 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://safetysheets.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	50-75	-
Paraffin Wax	8002-74-2	5-10	-
Yellow Pigment	6358-31-2	0-10	-
Carbon black	1333-86-4	0-10	-
Cyan Pigment	147-14-8	0-10	-
Amorphous silica	67762-90-7	<2	-
Magenta pigment	Trade secret	0-10	-
Titanium dioxide	13463-67-7	<1	--
Strontium titanate	12060-59-2	<0.5	-
Zinc stearate	557-05-1	<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

ACGIH TLV TWA 10 mg/m³ (inhalable particles)
ACGIH TLV TWA 3 mg/m³ (respirable dust)
OSHA PEL TWA 15 mg/m³ (total dust)
OSHA PEL TWA 5 mg/m³ (respirable dust)
Xerox Exposure Limit 2.5 mg/m³ (total dust)
Xerox Exposure Limit 0.4 mg/m³ (respirable dust)

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Paraffin Wax	TWA: 2 mg/m³ fume	(vacated) TWA: 2 mg/m³	TWA: 2 mg/m³; fume
Carbon black	TWA: 3 mg/m³ inhalable particulate matter	TWA: 3.5 mg/m³ (vacated) TWA: 3.5 mg/m³	TWA: 3.5 mg/m³; TWA: 0.1 mg/m³; Carbon black in presence of Polycyclic aromatic hydrocarbons PAH IDLH: 1750 mg/m³
Cyan Pigment	TWA: 1 mg/m³ Cu dust and mist	-	TWA: 1 mg/m³; Cu dust and mist IDLH: 100 mg/m³ Cu dust and mist
Titanium dioxide	TWA: 0.2 mg/m³ nanoscale respirable particulate matter TWA: 2.5 mg/m³ finescale respirable particulate matter	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	TWA: 2.4 mg/m³; CIB 63 fine TWA: 0.3 mg/m³; CIB 63 ultrafine, including engineered nanoscale IDLH: 5000 mg/m³
Zinc stearate	TWA: 10 mg/m³ inhalable particulate matter TWA: 3 mg/m³ respirable particulate matter	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³; total dust TWA: 5 mg/m³; respirable dust

Chemical name	Alberta	British Columbia	Ontario	Quebec
Paraffin Wax	TWA: 2 mg/m³; fume	TWA: 2 mg/m³; fume	TWA: 2 mg/m³; fume	TWAEV: 2 mg/m³; fume
Carbon black	TWA: 3.5 mg/m³;	TWA: 3 mg/m³;	TWA: 3 mg/m³;	TWAEV: 3 mg/m³;

		inhalable	inhalable particulate matter	inhalable dust
Titanium dioxide	TWA: 10 mg/m³;	TWA: 10 mg/m³; total dust TWA: 3 mg/m³; respirable fraction	TWA: 10 mg/m³;	TWAEV: 10 mg/m³; total dust
Zinc stearate	TWA: 10 mg/m³;	TWA: 10 mg/m³; inhalable TWA: 3 mg/m³; respirable	TWA: 10 mg/m³; inhalable particulate matter TWA: 3 mg/m³; respirable particulate matter	TWAEV: 10 mg/m³; inhalable aerosol fraction TWAEV: 3 mg/m³; respirable aerosol fraction

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Paraffin Wax	TWA: 2 mg/m³; fume	TWA: 2 mg/m³; fume	TWA: 2 mg/m³; fume	TWA: 2 mg/m³; fume
Carbon black	TWA: 3 mg/m³; inhalable particulate matter	TWA: 3 mg/m³; inhalable fraction	TWA: 3 mg/m³; inhalable particulate matter	TWA: 3 mg/m³; inhalable particulate matter
Cyan Pigment	TWA: 1 mg/m³; dust and mist	TWA: 1 mg/m³; dust and mist	TWA: 1 mg/m³; dust and mist	TWA: 1 mg/m³; dust and mist
Titanium dioxide	TWA: 0.2 mg/m³; nanoscale respirable particulate matter TWA: 2.5 mg/m³; finescale respirable particulate matter	TWA: 10 mg/m³;	TWA: 0.2 mg/m³; nanoscale respirable particulate matter TWA: 2.5 mg/m³; finescale respirable particulate matter	TWA: 0.2 mg/m³; nanoscale respirable particulate matter TWA: 2.5 mg/m³; finescale respirable particulate matter
Zinc stearate	TWA: 10 mg/m³; inhalable particulate matter TWA: 3 mg/m³; respirable particulate matter	TWA: 10 mg/m³;	TWA: 10 mg/m³; inhalable particulate matter TWA: 3 mg/m³; respirable particulate matter	TWA: 10 mg/m³; inhalable particulate matter TWA: 3 mg/m³; respirable particulate matter

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Paraffin Wax	TWA: 2 mg/m³; STEL: 4 mg/m³;	TWA: 2 mg/m³; fume	TWA: 2 mg/m³; STEL: 4 mg/m³;	TWA: 2 mg/m³; fume STEL: 6 mg/m³; fume
Carbon black	TWA: 3.5 mg/m³; STEL: 7 mg/m³;	TWA: 3 mg/m³; inhalable particulate matter	TWA: 3.5 mg/m³; STEL: 7 mg/m³;	TWA: 3.5 mg/m³; STEL: 7 mg/m³;
Cyan Pigment		TWA: 1 mg/m³; dust and mist		
Titanium dioxide	TWA: 10 mg/m³; STEL: 20 mg/m³;	TWA: 0.2 mg/m³; nanoscale respirable particulate matter TWA: 2.5 mg/m³; finescale respirable particulate matter	TWA: 10 mg/m³; STEL: 20 mg/m³;	TWA: 30 mppcf; TWA: 10 mg/m³; STEL: 20 mg/m³;
Zinc stearate	TWA: 10 mg/m³; STEL: 20 mg/m³;	TWA: 10 mg/m³; inhalable particulate matter TWA: 3 mg/m³; respirable particulate	TWA: 10 mg/m³; STEL: 20 mg/m³;	TWA: 30 mppcf; TWA: 10 mg/m³; STEL: 20 mg/m³;

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
		matter		

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

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

Property	**Values**	**Remarks • Method**
Melting point / freezing point	Not applicable	None known
Boiling point (or initial boiling point or boiling range)	Not applicable	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	Not flammable	
Lower flammability or explosive limits	Not flammable	
Flash point	Not applicable	None known
Autoignition temperature	Not applicable	None known
Decomposition temperature	Not applicable	None known
SADT (°C)	No data available	None known
pH	Not applicable	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	Not applicable	None known
Dynamic viscosity	Not applicable	None known

Solubility	No data available	None known
Water solubility	Negligible negligible	None known
Partition coefficient n-octanol/water (log value)	Not applicable	None known
Vapor pressure (includes evaporation rate)	not applicable	None known
Evaporation rate	Not applicable	None known
Density and/or relative density	Not applicable	None known
Bulk density	Not applicable	
Liquid Density	Not applicable	
Relative vapor density	not applicable	None known
Particle characteristics		None known
Particle Size	No data available	
Particle Size Distribution	4 - 9 micron	

Other information

VOC content	None
Softening point	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

10. Stability and reactivity

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Generation/formation of dust.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None under normal use.

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 .

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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity .

Numerical measures of toxicity

Product Information > 5 g/kg; (rat) > 5 g/kg (rabbit) > 5 mg/L (4 hr) (rat)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Paraffin Wax	> 5000 mg/kg (Rat)	> 3600 mg/kg (Rabbit)	-
Carbon black	> 10000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 4.6 mg/m³ (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
Zinc stearate	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 200 mg/L (Rat) 1 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_2 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	Group 2B - Possibly carcinogenic to humans	-	Present

	humans)			
Titanium dioxide	A3 - Confirmed animal carcinogen (with unknown relevance to humans)	Group 2B - Possibly carcinogenic to humans	-	Present
Zinc stearate	A4 - Not classifiable as a human carcinogen	-	-	-

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.

Neurological effects No information available.

12. Ecological information

Ecotoxicity Not considered to be harmful to aquatic life.

Chronic Aquatic Toxicity On available data, substance is not 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	-	-
Zinc stearate	4.64	-	-

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

Other adverse effects No information available.

Endocrine disrupting properties This mixture does not contain any substance that has endocrine disrupting properties with respect to non-target organisms.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Can be landfilled or incinerated, when in compliance with local regulations.

Contaminated packaging Dispose of contents/containers in accordance with local regulations.

Other information 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

Note: This material is not subject to regulation as a hazardous material for shipping

DOT Not regulated

IATA Not regulated

IMDG 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 *
Paraffin Wax	8002-74-2	Present	Active
Yellow Pigment	6358-31-2	Present	Active
Carbon black	1333-86-4	Present	Active
Cyan Pigment	147-14-8	Present	Active
Amorphous silica	67762-90-7	Present	Active
Magenta pigment	-	Present	Active
Titanium dioxide	13463-67-7	Present	Active

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Strontium titanate	12060-59-2	Present	Active
Zinc stearate	557-05-1	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.

DSL/NDSL Complies.
EINECS/ELINCS Complies.
ENCS Complies.
IECSC Contact supplier for inventory compliance status.
KECL Contact supplier for inventory compliance status.
PICCS Contact supplier for inventory compliance status.
AIIC Contact supplier for inventory compliance status.
NZIoC Contact supplier for inventory compliance status.
TCSI 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
Paraffin Wax	X	X	X
Carbon black	X	X	X
Cyan Pigment	X	-	X
Titanium dioxide	X	X	X
Zinc stearate	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 0	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 0	**Flammability** 0	**Physical hazards** 0	**Personal protection** 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 08-Dec-2025

Revision Note SDS sections updated. 1. Address for some geographies updated.

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