

# **SAFETY DATA SHEET**

Issue Date 03-Dec-2019	Revision Date 26-Jan-2024	Version 8.5	Page 1 / 14
	1. IDENTIFICATI	ON	
<u>Product identifier</u> Product Name	Zinc		
Other means of identification Product Code(s)	79501		
Safety data sheet number	M01157		
UN/ID no	UN3077		
Recommended use of the che Recommended Use Uses advised against Restrictions on use	mical and restrictions on use Laboratory reagent. Consumer use. For Laboratory Use Only.		
Details of the supplier of the s	afety data sheet		
<b>Manufacturer Address</b> Hach Company, P.O.Box 389, L	oveland, CO 80539, USA, +1(970) 669-30	50	

#### Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

# 2. HAZARDS IDENTIFICATION

## Classification

## **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Aquatic Acute Toxicity	Category 1
Chronic aquatic toxicity	Category 1

## Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements

Signal word Warning



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#### Hazard statements

H410 - Very toxic to aquatic life with long lasting effects

#### **Precautionary statements**

P273 - Avoid release to the environment P391 - Collect spillage P501 - Dispose of contents/ container to an approved waste disposal plant

## Other Hazards Known

None

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance	
Chemical Name	Zinc
Chemical Family	Element.
Formula	Zn
CAS No	7440-66-6
Chemical nature	Element.

## Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Zinc	7440-66-6	100%	-

# 4. FIRST AID MEASURES

## Description of first aid measures

General advice	No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.
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	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms and effe	cts, both acute and delayed
Symptoms	See Section 11 for additional Toxicological Information.
Indication of any immediate medica	al attention and special treatment needed
Note to physicians	Treat symptomatically.
	5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the	No information available.

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chemical	
Hazardous combustion products	zinc oxide.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
	6. ACCIDENTAL RELEASE MEASURES
U.S. Notice	Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
Personal precautions, protective eq	uipment and emergency procedures
Personal precautions	Ensure adequate ventilation.
Environmental precautions	
Environmental precautions	See Section 12 for additional ecological information.
Methods and material for containme	ent and cleaning up
Methods for containment	Prevent further leakage or spillage if safe to do so.
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 13 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, includi	ng any incompatibilities
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Flammability class	Not applicable

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Control parameters

Exposure Guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies
Appropriate engineering controls Engineering Controls	Showers Eyewash stations Ventilation systems.

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Individual protection measures, su Respiratory protection	<u>ch as personal protective equipment</u> No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hand Protection	Wear suitable gloves.
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	No special protective equipment required.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.
Thermal hazards	None under normal processing.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

Physical state Appearance Odor	powder Odorless	Solid		Color Odor threshold	Blue to gray Not applicable	
Property			Values		Remarks • Method	
Molecular weigh	i i		65.40 g/mole			
рН			No data availal	ble		
Melting point / fro	ezing point		419 °C / 78	6.2 °F		
Initial boiling poi	nt and boiling rang	je	907 °C / 16	64.6 °F		
Evaporation rate			Not applicable			
Vapor pressure			Not applicable			
Relative vapor de	ensity		No data availa	able		
Specific gravity -	VALUE 1		7.14			
Partition coeffici	ent		No data availal	ble		
Soil Organic Car Coefficient	bon-Water Partitio	n	No data availal	ble		
Autoignition tem	perature		500 °C / 93	2 °F		
Decomposition t	emperature		907.2 °C / 16	65 °F		
Dynamic viscosi	ty		Not applicable			
Kinematic viscos	sity		Not applicable			
Solubility(ies)						

# Water solubility

Insoluble < 0.1 mg/L	25 °C / 77 °F

#### Solubility in other solvents

Chemical Name	Solubility classification	<u>Solubility</u>	Solubility Temperature
Acids	Soluble	> 1000 mg/L	25 °C / 77 °F
Aqueous alkaline solutions	Soluble	> 1000 mg/L	25 °C / 77 °F

#### **Other information**

#### **Metal Corrosivity**

Steel Corrosion Rate	Not applicable
Aluminum Corrosion Rate	Not applicable

## Volatile Organic Compounds (VOC) Content

This Product is by Weight 100% an Individual Pure Chemical Substance

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Zinc	7440-66-6	Not applicable	-

**Explosive properties** 

Upper explosion limit Lower explosion limit	No data available No data available
Flammable properties	
Flash point	Not applicable
Flammability Limit in Air Upper flammability limit: Lower flammability limit:	No data available No data available
Oxidizing properties	No data available.
Bulk density	No data available

# **10. STABILITY AND REACTIVITY**

#### Reactivity Not applicable.

## Chemical stability

Stable under normal conditions.

# Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

## Possibility of hazardous reactions

None under normal processing.

#### Hazardous polymerization

Hazardous polymerization does not occur.

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#### Conditions to avoid

None known based on information supplied.

#### Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

#### Hazardous decomposition products

zinc oxide.

## **11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

#### **Product Information**

Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.
Symptoms	No information available.

#### Acute toxicity

Based on available data, the classification criteria are not met

#### Mixture

If available, see ingredient data below.

#### **Ingredient Acute Toxicity Data**

No data available.

#### Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

## Acute Toxicity Estimations (ATE)

Not applicable	
ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

#### Skin corrosion/irritation

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

#### Mixture

If available, see ingredient data below.

## Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Zinc (100%) CAS#: 7440-66-6	Standard Draize Test	Human	0.300 mg	72 hours	Mild skin irritant	RTECS

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## Serious eye damage/irritation

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

#### Mixture

If available, see ingredient data below.

#### Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Zinc (100%) CAS#: 7440-66-6	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	100 mg	24 hours	Mild eye irritant	ECHA

## Respiratory or skin sensitization

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

#### **Mixture**

If available, see ingredient data below.

#### **Ingredient Sensitization Data**

Test data reported below.

## **Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Zinc (100%) CAS#: 7440-66-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	ECHA

#### STOT - single exposure

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

#### Mixture

If available, see ingredient data below.

## Ingredient Specific Target Organ Toxicity Single Exposure Data

Test data reported below.

#### Oral Exposure Route

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
Zinc	Mouse	5000 mg/kg	None reported	Kidney, Ureter, or Bladder	RTECS
(100%)	TDLo			Liver	
CAS#: 7440-66-6				Hepatitis (hepatocellular	
				necrosis), diffuse	
				Lungs, Thorax, or	
				Respiration	
				Respiratory depression	

#### Inhalation (Dust/Mist) Exposure Route

Chemical nan	ne Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (100%)	Human TC⊾₀	0.59 mg/L	4 hours	Skin and Appendages Sweating	RTECS

CA3#. 7440-00-0
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#### STOT - repeated exposure

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

#### Mixture

If available, see ingredient data below.

#### Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Test data reported below.

#### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (100%) CAS#: 7440-66-6	Human TC∟₀	70 mg/kg	70 days	Biochemical Other changes	RTECS

#### Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc	Human	0.0024 mg/L	1825 days	Blood	RTECS
(100%)	TCLO	_		Normocytic anemia, Changes in	
CAS#: 7440-66-6				serum composition (e.g. TP,	
				bilirubin, cholesterol)	

## **Carcinogenicity**

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

#### Mixture

If available, see ingredient data below.

## Ingredient Carcinogenicity Data

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Zinc	7440-66-6	-	-	-	-

#### Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

#### **Oral Exposure Route**

Ch	nemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
СА	Zinc (100%) \S#: 7440-66-6	Mouse	12.6 mg/kg	46 weeks	Gastrointestinal Tumors	ERMA

## Germ cell mutagenicity

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

#### Mixture invitro Data

If available, see ingredient data below.

## Substance invitro Data

Test data reported below.

Chemical na	me Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Zinc (100%) CAS#: 7440-6	Mammalian gene cell mutation 6-6	e Mouse lymphoma	12.13 mg/L	3 hours	Negative	ECHA

## Mixture invivo Data

If available, see ingredient data below.

Substance invivo Data

No data available.

#### **Reproductive toxicity**

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

#### Mixture

No data available.

#### Ingredient Reproductive Toxicity Data

Test data reported below.

#### **Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (100%)	Rat NOAEL	15 mg/kg	7 days	No reproductive or developmental toxic effects	ECHA
CAS#: 7440-66-6	NOALE			observed	

#### Aspiration hazard

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

## **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

#### **Mixture**

## **Aquatic Acute Toxicity**

If available, see ingredient data below.

#### **Aquatic Chronic Toxicity**

If available, see ingredient data below.

#### **Substance**

#### **Aquatic Acute Toxicity** Test data reported below.

## Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Zinc	96 hours	Oncorhynchus mykiss	LC50	0.14 mg/L	GESTIS

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(100%)			
CAS#: 7440-66-6			

#### Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Zinc (100%) CAS#: 7440-66-6	48 Hours	Daphnia magna	EC50	0.07 mg/L	GESTIS

#### Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Zinc (100%) CAS#: 7440-66-6	96 hours	Pseudokirchneriella subcapitata	EC50	0.03 mg/L	GESTIS

## Aquatic Chronic Toxicity

No data available.

## Persistence and degradability

Mixture No data available.

Mixture No data available.

## Partition coefficient

Mobility

Soil Organic Carbon-Water Partition Coefficient

No data available

No data available

## Other adverse effects

## No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods	
Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
US EPA Waste Number	D001, D003
Special instructions for disposal	Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

## **14. TRANSPORT INFORMATION**

|--|

UN/ID no	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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Zinc 9 III 171
UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. Zinc 9 III
UN3077 Environmentally hazardous substance, solid, n.o.s. Zinc 9 III 9L A3, A803 UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III
Not regulated UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. Zinc 9 III F-A, S-F 274, 335, 966, 967, 969 UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, Marine pollutant

## Note:

No special precautions necessary.

#### Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies. If the item is part of a reagent set or kit the classification would change to the following: UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

## **15. REGULATORY INFORMATION**

National Inventories	
TSCA	Complies
DSL/NDSL	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

## International Inventories

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

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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 and Evaluated Chemical Substances

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

**TCSI** - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

#### **US Federal Regulations**

## <u>SARA 313</u>

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 %
Zinc (CAS #: 7440-66-6)	1.0

## SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

#### 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
Zinc 7440-66-6	-	Х	Х	-

#### **CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Zinc	1000 lb	-	RQ 454 kg final RQ
7440-66-6			RQ 1000 lb final RQ

## US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals

**IMERC:** Not applicable

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

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Zinc	X	Х	Х
7440-66-6			

#### U.S. EPA Label Information

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments None

## Additional information

#### Global Automotive Declarable Substance List (GADSL) Not applicable NFPA and HMIS Classifications

NFPA	Health hazards - 0	Flammability - 1	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 0	Flammability - 1	Physical hazards - 0	Personal protection -
				Х
				-

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

ACGIH ATSDR CCRIS CDC CEPA CICAD ECHA EEA EPA	ACGIH (American Conference of Governmental Industrial Hygienists) ATSDR (Agency for Toxic Substances and Disease Registry) CCRIS (Chemical Carcinogenesis Research Information System) CDC (Center for Disease Control) CEPA (Canadian Environmental Protection Agency) CICAD (Concise International Chemical Assessment Documents) ECHA (The European Chemicals Agency) EEA (European Environment Agency) EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealands Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA GESTIS	FDA (Food & Drug Administration) GESTIS (Information System on Hazardous Substances of the German Social Accident
020110	Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)
Legend - Section 8: EXPOSURE	CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
Х	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed

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> in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN* RSP+ C M	Skin designation Respiratory sensitization Carcinogen mutagen	SKN+ ** R	Skin sensitization Hazard Designation Reproductive toxicant	
Prepared By	Hach Product Co	Hach Product Compliance Department		
Issue Date	03-Dec-2019			
<b>Revision Date</b>	26-Jan-2024			
<b>Revision Note</b>	None			

**Disclaimer** 

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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End of Safety Data Sheet