



## SAFETY DATA SHEET

According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 083749

### AZOLLA ZS 100

Date of the previous version: 2015-10-13

Revision Date: 2016-03-10

Version 2

#### 1. IDENTIFICATION

##### Product identifier

Product name AZOLLA ZS 100

##### Other means of identification

Product Code(s) 083749

Number 150  
Substance/mixture Mixture

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

Identified uses Antiwear. Hydraulic oil.

Uses advised against Do not use for any purpose other than the one for which it is intended

##### Details of the supplier of the safety data sheet

Supplier Address TOTAL Specialties USA Inc  
1201 Louisiana Street, Suite 1800  
Houston, TX 77002  
Phone: +1 800 323 3198

Contact Point Technical/ HSEQ

E-mail Address USRMLIN-info@total.com

##### Emergency telephone number

Company Phone Number +1 (908) 862-9300  
Emergency telephone +1 866 928 0789 (24h/24, 7d/7)  
+1 215 207 0061 (24h/24, 7d/7)

#### 2. HAZARDS IDENTIFICATION

##### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

##### Label elements

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**Unknown Acute Toxicity**

No information available

**Hazards not otherwise classified (HNOC)**

None known

**Other information****Physical-Chemical Properties** Contaminated surfaces will be extremely slippery.**Environmental properties** Should not be released into the environment.**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Chemical Name	CAS-No	Weight %
Zinc alkyldithiophosphate	68649-42-3	<1

**Additional information** Product containing mineral oil with less than 3% DMSO extract as measured by IP 346*\* The exact percentage (concentration) of composition has been withheld as a trade secret***4. FIRST AID MEASURES****First aid measures for different exposure routes**

<b>General advice</b>	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
<b>Eye contact</b>	Rinse immediately with plenty of water and seek medical advice.
<b>Skin contact</b>	Remove contaminated clothing and shoes. Wash off with soap and water. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Move to fresh air. Inhalation of high concentrations of vapor or aerosols may cause irritation of the upper respiratory tract.
<b>Ingestion</b>	If swallowed, do not induce vomiting - seek medical advice.

**Most important symptoms/effects, acute and delayed**

<b>Skin contact</b>	Not classified. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
<b>Eye contact</b>	Not classified. May cause eye irritation with susceptible persons.

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<b>Inhalation</b>	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
<b>Ingestion</b>	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>Symptoms</b>	Redness. Itching.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician**                      Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**                      Foam. Carbon dioxide (CO<sub>2</sub>). ABC powder. Water spray.

**Unsuitable Extinguishing Media**                      Do not use a solid water stream as it may scatter and spread fire.

**Special Hazard**    Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

**Explosion Data**

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

**Protective Equipment and Precautions for Firefighters**                      As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**General Information**    Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

**Other information**    See Section 12 for additional information.

**Environmental precautions**

**General Information**    Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up**

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**Methods for cleaning up** Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

### 7. HANDLING AND STORAGE

#### Precautions for safe handling

**Advice on safe handling** When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

**Prevention of fire and explosion** Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment.

**Hygiene measures** Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

#### Conditions for safe storage, including any incompatibilities

**Technical measures/Storage conditions** Keep away from food, drink and animal feedingstuffs. Keep in a banded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Protect from frost, heat and sunlight. Protect from moisture. Design equipment to avoid accidental product leakage (for example due to seal failure) onto hot casings or electrical contacts.

**Materials to Avoid** Strong oxidizing agents.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Exposure limits** Mineral oil mist:  
USA: OSHA (PEL) TWA 5 mg/m<sup>3</sup>, NIOSH (REL) TWA 5 mg/m<sup>3</sup>, STEL 10 mg/m<sup>3</sup>, ACGIH (TLV) TWA 5 mg/m<sup>3</sup> (highly refined).

#### Exposure controls

**Engineering Measures** Apply technical measures to comply with the occupational exposure limits.

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

<b>General Information</b>	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.
<b>Eye/Face Protection</b>	If splashes are likely to occur, wear: Safety glasses with side-shields.
<b>Skin and body protection</b>	Wear suitable protective clothing. Protective shoes or boots.
<b>Hand Protection</b>	Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
<b>Respiratory protection</b>	None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and chemical properties

Appearance	limpid
Color	amber
Physical State @20°C	liquid
Odor	Petroleum distillates
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Melting point/range		No information available	
Boiling point/boiling range		Not applicable	
Flash point	250 °C		Cleveland Open Cup (COC)
	482 °F		ASTM D 92 Cleveland Open Cup (COC). ASTM D 92.
Evaporation rate		No information available	

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<b>Flammability Limits in Air</b>		No information available	
<b>upper</b>	-	No information available	
<b>Lower</b>	-	No information available	
<b>Vapor Pressure</b>		No information available	
<b>Vapor density</b>		No information available	
<b>Relative density</b>	0.881	@ 15 °C	ASTM D 1298
<b>Density</b>	881 kg/m <sup>3</sup>	@ 15 °C	ASTM D 1298
<b>Water solubility</b>		Not applicable	
<b>Solubility in other solvents</b>		No information available	
<b>logPow</b>		No information available	
<b>Autoignition temperature</b>		Not applicable	
<b>Decomposition temperature</b>		No information available	
<b>Viscosity, kinematic</b>	100 mm <sup>2</sup> /s	@ 40 °C	ASTM D 445
<b>Explosive properties</b>	Not explosive		
<b>Oxidizing Properties</b>	Not applicable		
<b>Possibility of hazardous reactions</b>	Not applicable		
<b>Other information</b>			
<b>Freezing Point</b>		No information available	
<b>Pour point</b>	- 18 °C		ASTM D 97

**10. STABILITY AND REACTIVITY**

<b><u>Reactivity</u></b>	No information available.
<b><u>Chemical stability</u></b>	Stable under recommended storage conditions.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Conditions to Avoid</u></b>	Heat, flames and sparks. Take precautionary measures against static discharges. Heat (temperatures above flash point), sparks, ignition points, flames, static electricity. Strong oxidizing agents.
<b><u>Incompatible Materials</u></b>	Strong oxidizing agents.
<b><u>Hazardous Decomposition Products</u></b>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

<b>Principle Routes of Exposure</b>	Inhalation, Ingestion, Eye contact, Skin contact.
<b>Symptoms</b>	Redness. Itching.
<b>Skin contact</b>	Not classified. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
<b>Eye contact</b>	Not classified. May cause eye irritation with susceptible persons.

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**Inhalation** Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.

**Ingestion** Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Acute toxicity - Product Information**

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information.

**Oral**  
**ATEmix (oral)** 5057 mg/kg

**Dermal**  
**ATEmix (dermal)** 5057 mg/kg

**Inhalation**  
**ATEmix (inhalation-dust/mist)** 5.2 mg/l  
**ATEmix (inhalation-vapor)** 20.3 mg/l

**Acute toxicity - Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc alkyldithiophosphate 68649-42-3	LD50 2900 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	

**Sensitization** Not classified as a sensitizer.  
**Carcinogenicity** This product is not classified carcinogenic.

**Mutagenicity** This product is not classified as mutagenic.  
**Reproductive toxicity** This product does not present any known or suspected reproductive hazards.  
**Other adverse effects** Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).  
**Aspiration Hazard** Not classified.

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Acute aquatic toxicity - Product Information**

No experimental data available

**Acute aquatic toxicity - Component Information**

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms

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Zinc alkyldithiophosphate 68649-42-3	EC50 (72h) 2.2 mg/l	LC50 (96h) 4.5 mg/l	EC50 (48h) 1.2 mg/l (Daphnia magna)	
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**Chronic aquatic toxicity - Product Information**

No experimental data available

**Chronic aquatic toxicity - Component Information**

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Zinc alkyldithiophosphate 68649-42-3	NOEC 1.0 mg/l	NOEC (21d) 0.4 mg/l (Daphnia magna)	NOEC(28d) 1.8 mg/l	

**Effects on terrestrial organisms** No experimental data available .**Persistence and degradability****General Information** No information available.**Bioaccumulative potential****Product Information** No information available.**logPow** No information available**Component Information**

Chemical Name	log Pow
Zinc alkyldithiophosphate 68649-42-3	0.56

**Mobility****Soil** No information available**Other adverse effects****General Information** No information available**13. DISPOSAL CONSIDERATIONS****Waste treatment****Waste Disposal Methods** Dispose of in accordance with local regulations.**Contaminated packaging** Dispose of in accordance with local regulations.

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**14. TRANSPORT INFORMATION**

<b><u>DOT</u></b>	Not regulated
<b><u>TDG</u></b>	Not regulated
<b><u>MEX</u></b>	Not regulated
<b><u>ICAO/IATA</u></b>	Not regulated
<b><u>IMDG/IMO</u></b>	Not regulated
<b><u>ADR/RID</u></b>	Not regulated
<b><u>ADN</u></b>	Not regulated

**15. REGULATORY INFORMATION**

**International Inventories** All the substances contained in this product are listed or exempted from listing in the following inventories:  
U.S.A. (TSCA)

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	no
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

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**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.

**U.S. State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	Weight %	California Prop. 65
Toluene - 108-88-3	0.0025	Developmental Female Reproductive

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

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois
Paraffin oils (petroleum), catalytic dewaxed heavy 64742-70-7	X			
Distillates (petroleum), hydrotreated light paraffinic 64742-55-8	X			

**16. OTHER INFORMATION**

<b>NFPA</b>	Health Hazard 0	Flammability 1	Instability 0	Physical and chemical hazards -
<b>HMIS</b>	Health Hazard 0	Flammability 1	Physical Hazard 0	Personal protection X

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

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Revision Note: \*\*\* Indicates updated section

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**Abbreviations, acronyms**

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

**Legend**

Section 8

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH - National Institute for Occupational Safety and Health

TLV - Threshold Limit Values

PEL - Permissible Exposure Limits

IDHL - Immediately Dangerous to Life or Health concentrations

TWA - Time Weight Average

STEL - Short Term Exposure Limits

S\* - Skin notation

TSCA - Toxic Substance Control Act

**This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.**

End of the Safety Data Sheet

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