

**SAFETY DATA SHEET****Zerios® WES**

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

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

**Product name** Zerios® WES

**Product number** 350-X-00023

**Synonyms; trade names** Zerios® WES Water Reducible Temporary Coating

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

**Application** Corrosion inhibitor.

**Uses advised against** No specific uses advised against are identified.

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

**Manufacturer** Northern Technologies International Corporation  
4201 Woodland Rd  
Circle Pines, MN 55014 - United States  
1-763-225-6600  
sds@ntic.com

**Emergency telephone number**

**Emergency telephone** Carechem +1 202 464 2554; Outside US/Canada +44 1865 407333 (24 hours; 7 days/week)

**2. Hazard(s) identification****Classification of the substance or mixture**

**Physical hazards** Flam. Liq. 3 - H226

**Health hazards** Eye Irrit. 2A - H319 Skin Sens. 1 - H317 Carc. 2 - H351

**Environmental hazards** Not Classified

**Label elements****Hazard symbols****Signal word**

Warning

**Hazard statements**

H226 Flammable liquid and vapor.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.

## Zerios® WES

### Precautionary statements

P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/ bond container and receiving equipment.  
 P241 Use explosion-proof electrical equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P261 Avoid breathing vapor/ spray.  
 P264 Wash contaminated skin thoroughly after handling.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P302+P352 If on skin: Wash with plenty of water.  
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308+P313 If exposed or concerned: Get medical advice/ attention.  
 P321 Specific treatment (see medical advice on this label).  
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P337+P313 If eye irritation persists: Get medical advice/ attention.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.  
 P403+P235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.  
 P501 Dispose of contents/ container in accordance with national regulations.

### Contains

Titanium dioxide, 2-butanone oxime

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

### 3. Composition/information on ingredients

#### Mixtures

<b>Titanium dioxide</b> CAS number: 13463-67-7	<b>10-30%</b>
<b>Classification</b> Carc. 2 - H351	
<b>2-butoxyethanol</b> CAS number: 111-76-2	<b>5-10%</b>
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319	

## Zerios® WES

<b>butanol</b>	<b>5-10%</b>
CAS number: 78-92-2	
<b>Classification</b> Flam. Liq. 3 - H226 Eye Irrit. 2A - H319 STOT SE 3 - H335, H336	
<b>Ammonia</b>	<b>&lt;1%</b>
CAS number: 1336-21-6	
M factor (Acute) = 1	
<b>Classification</b> Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335 Aquatic Acute 1 - H400	
<b>2-butanone oxime</b>	<b>&lt;1%</b>
CAS number: 96-29-7	
<b>Classification</b> Acute Tox. 3 - H301 Acute Tox. 4 - H312 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Carc. 1B - H350 STOT SE 1 - H370 STOT SE 3 - H336 STOT RE 2 - H373	

The full text for all hazard statements is displayed in Section 16.

### 4. First-aid measures

#### Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
<b>Skin Contact</b>	Rinse with water.
<b>Eye contact</b>	Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

## Zerios® WES

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

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
<b>Ingestion</b>	Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
<b>Skin contact</b>	Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
<b>Eye contact</b>	Irritating to eyes.

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

<b>Notes for the doctor</b>	Treat symptomatically.
-----------------------------	------------------------

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

#### Extinguishing media

<b>Suitable extinguishing media</b>	The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

#### Special hazards arising from the substance or mixture

<b>Flammability Class</b>	6.0 Flammable Gas Liq/Gasous.
<b>Specific hazards</b>	Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapors may be ignited by a spark, a hot surface or an ember. Vapors may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.
<b>Hazardous combustion products</b>	Hydrocarbons. Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

#### Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

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

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

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated.
-----------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Zerios® WES

### Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

### Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Absorb small quantities with paper towels and evaporate in a safe place. Once evaporation is complete, place paper in a suitable waste disposal container and seal securely. Large Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. The contaminated absorbent may pose the same hazard as the spilled material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## 7. Handling and storage

### Precautions for safe handling

**Usage precautions** Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Suspected of causing cancer. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage precautions** Store away from incompatible materials (see Section 10). Store locked up. Keep away from oxidizing materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

**Storage class** Flammable liquid storage.

### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/Personal protection

### Control parameters

### Occupational exposure limits

#### **Titanium dioxide**

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m<sup>3</sup>

A4

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m<sup>3</sup> total dust

## Zerios® WES

### 2-butoxyethanol

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm

A3

Long-term exposure limit (8-hour TWA): OSHA 50 ppm 240 mg/m<sup>3</sup>

Sk

### butanol

Long-term exposure limit (8-hour TWA): OSHA 150 ppm 450 mg/m<sup>3</sup>

Long-term exposure limit (8-hour TWA): ACGIH 100 ppm

### Ammonia

Long-term exposure limit (8-hour TWA): OSHA 35 mg/m<sup>3</sup> 50 ppm

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

A4 = Not Classifiable as a Human Carcinogen.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

Sk = Danger of cutaneous absorption.

### Titanium dioxide (CAS: 13463-67-7)

**Immediate danger to life  
and health** 5000 mg/m<sup>3</sup>

### 2-butoxyethanol (CAS: 111-76-2)

**Immediate danger to life  
and health** 700 ppm

### butanol (CAS: 78-92-2)

**Immediate danger to life  
and health** 2000 ppm

### Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

## Zerios® WES

<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Frequent changes are recommended.
<b>Other skin and body protection</b>	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
<b>Hygiene measures</b>	Provide eyewash station and safety shower. Wash contaminated clothing before reuse. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.
<b>Respiratory protection</b>	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use.

### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Color</b>	White.
<b>Odor</b>	Characteristic. Alcoholic.
<b>Odor threshold</b>	No data available.
<b>pH</b>	pH (concentrated solution): 8.4
<b>Melting point</b>	No data available.
<b>Initial boiling point and range</b>	No data available.
<b>Flash point</b>	43°C
<b>Evaporation rate</b>	No data available.
<b>Upper/lower flammability or explosive limits</b>	No data available.
<b>Vapor pressure</b>	23 hPa @ 20°C
<b>Vapor density</b>	No data available.
<b>Relative density</b>	1.204 @ g/cm <sup>3</sup> °C
<b>Solubility(ies)</b>	No data available.
<b>Partition coefficient</b>	No data available.
<b>Auto-ignition temperature</b>	240°C
<b>Decomposition Temperature</b>	No data available.
<b>Viscosity</b>	No data available.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidizing properties</b>	Not applicable.

## Zerios® WES

### 10. Stability and reactivity

<b>Reactivity</b>	See the other subsections of this section for further details.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	The following materials may react strongly with the product: Oxidizing agents.
<b>Conditions to avoid</b>	Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.
<b>Materials to avoid</b>	Strong acids. Strong alkalis. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

**Summary** Based on available data the classification criteria are not met.

**ATE oral (mg/kg)** 4,545.45

##### Acute toxicity - dermal

**Summary** Based on available data the classification criteria are not met.

**ATE dermal (mg/kg)** 12,222.22

##### Acute toxicity - inhalation

**Summary** Based on available data the classification criteria are not met.

**ATE inhalation (vapours mg/l)** 122.22

##### Skin corrosion/irritation

**Summary** Based on available data the classification criteria are not met.

##### Serious eye damage/irritation

**Summary** Causes serious eye irritation.

##### Respiratory sensitization

**Summary** Based on available data the classification criteria are not met.

##### Skin sensitization

**Summary** May cause an allergic skin reaction.

##### Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

##### Carcinogenicity

**Summary** Suspected of causing cancer.

##### IARC carcinogenicity

Contains a substance which may be potentially carcinogenic. IARC Group 2B Possibly carcinogenic to humans.

##### Reproductive toxicity



## Zerios® WES

**Summary** Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**Summary** Based on available data the classification criteria are not met.

**Target organs** Respiratory system, lungs Central nervous system

### Specific target organ toxicity - repeated exposure

**Summary** Based on available data the classification criteria are not met.

### Aspiration hazard

**Summary** Based on available data the classification criteria are not met.

**General information** May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation** A single exposure may cause the following adverse effects: Temporary irritation.

**Ingestion** May cause discomfort if swallowed.

**Skin Contact** May cause discomfort.

**Eye contact** Irritating to eyes.

**Route of exposure** Ingestion Inhalation Skin and/or eye contact

**Target Organs** No specific target organs known.

### Toxicological information on ingredients.

#### Titanium dioxide

##### Carcinogenicity

**IARC carcinogenicity** IARC Group 2B Possibly carcinogenic to humans.

#### 2-butoxyethanol

##### Acute toxicity - oral

**ATE oral (mg/kg)** 500.0

##### Acute toxicity - dermal

**ATE dermal (mg/kg)** 1,100.0

##### Acute toxicity - inhalation

**ATE inhalation (vapours mg/l)** 11.0

##### Carcinogenicity

**IARC carcinogenicity** IARC Group 3 Not classifiable as to its carcinogenicity to humans.

#### 2-butanone oxime

##### Acute toxicity - oral

**ATE oral (mg/kg)** 100.0

##### Acute toxicity - dermal

**ATE dermal (mg/kg)** 1,100.0

## Zerios® WES

### 12. Ecological information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

#### Acute aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

#### Chronic aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

#### Ecological information on ingredients.

##### Ammonia

#### Acute aquatic toxicity

**LE(C)<sub>50</sub>** 0.1 < L(E)C<sub>50</sub> ≤ 1

**M factor (Acute)** 1

#### Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

#### Bioaccumulative potential

**Bio-Accumulative Potential** No data available on bioaccumulation.

**Partition coefficient** No data available.

#### Mobility in soil

**Mobility** No data available.

#### Other adverse effects

**Other adverse effects** None known.

### 13. Disposal considerations

#### Waste treatment methods

**General information** The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods** Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### 14. Transport information

#### UN Number

**UN No. (TDG)** 1263

**UN No. (IMDG)** 1263

**UN No. (ICAO)** 1263

## Zerios® WES

UN No. (DOT) UN1263

**UN proper shipping name**

Proper shipping name (TDG) PAINT

Proper shipping name (IMDG) PAINT

Proper shipping name (ICAO) PAINT

Proper shipping name (DOT) PAINT

**Transport hazard class(es)**

DOT hazard class 3

DOT hazard label 3

TDG class 3

TDG label(s) 3

IMDG Class 3

ICAO class/division 3

**Transport labels**



**DOT transport labels**



**Packing group**

TDG Packing Group III

IMDG packing group III

ICAO packing group III

DOT packing group III

**Environmental hazards**

Environmentally Hazardous Substance

No.

**Special precautions for user**

EmS F-E, S-E

DOT reportable quantity RQ: Ammonium hydroxide (250000 lbs)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

### 15. Regulatory information

Regulatory References OSHA Hazard Communication Standard 29 CFR §1910.1200

## Zerios® WES

### US Federal Regulations

#### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed.

#### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

The following ingredients are listed:

*Ammonia*

Final CERCLA RQ: 1000(454) pounds (Kilograms)

#### **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are listed.

#### **SARA 313 Emission Reporting**

The following ingredients are listed:

*2-butoxyethanol*

1.0 %

*butanol*

1.0 %

*Ammonia*

1.0 %

#### **CAA Accidental Release Prevention**

None of the ingredients are listed.

#### **SARA (311/312) Hazard Categories**

Carcinogenicity

Flammable (gases, aerosols, liquids or solids)

Respiratory or skin sensitization

Serious eye damage or eye irritation

#### **OSHA Highly Hazardous Chemicals**

None of the ingredients are listed.

### US State Regulations

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed or exempt.

#### **California Air Toxics "Hot Spots" (A-I)**

The following ingredients are listed:

*2-butoxyethanol*

*butanol*

#### **California Air Toxics "Hot Spots" (A-II)**

None of the ingredients are listed.

#### **California Directors List of Hazardous Substances**

The following ingredients are listed:

*2-butoxyethanol*

*butanol*

*Ammonia*

#### **Massachusetts "Right To Know" List**

The following ingredients are listed:

## Zerios® WES

*Titanium dioxide*

*2-butoxyethanol*

*butanol*

*Ammonia*

### **Rhode Island "Right To Know" List**

The following ingredients are listed:

*Titanium dioxide*

*2-butoxyethanol*

*butanol*

### **Minnesota "Right To Know" List**

The following ingredients are listed:

*Titanium dioxide*

*2-butoxyethanol*

*butanol*

*2-butanone oxime*

### **New Jersey "Right To Know" List**

The following ingredients are listed:

*Titanium dioxide*

*2-butoxyethanol*

*butanol*

*Ammonia*

### **Pennsylvania "Right To Know" List**

The following ingredients are listed:

*Titanium dioxide*

*2-butoxyethanol*

*butanol*

*Ammonia*

### **Inventories**

#### **EU - EINECS/ELINCS**

All the ingredients are listed or exempt.

#### **Canada - DSL/NDSL**

All the ingredients are listed or exempt.

#### **US - TSCA**

All the ingredients are listed or exempt.

#### **Australia - AICS**

All the ingredients are listed or exempt.

#### **Japan - ENCS**

All the ingredients are listed or exempt.

## Zerios® WES

**Korea - KECI**

All the ingredients are listed or exempt.

**China - IECSC**

All the ingredients are listed or exempt.

**Philippines - PICCS**

All the ingredients are listed or exempt.

**New Zealand - NZIOC**

All the ingredients are listed or exempt.

**Taiwan - TCSI**

All the ingredients are listed or exempt.

### 16. Other information

**Abbreviations and acronyms  
used in the safety data sheet**

TDG: The transport of dangerous goods act

IATA: International air transport association.

ICAO: Technical instructions for the safe transport of dangerous goods by air.

IMDG: International maritime dangerous goods.

CAS: Chemical abstracts service.

ATE: Acute toxicity estimate.

LC<sub>50</sub>: Lethal concentration to 50 % of a test population.

LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).

EC<sub>50</sub>: 50% of maximal effective concentration.

PBT: Persistent, bioaccumulative and toxic substance.

vPvB: Very persistent and very bioaccumulative.

**Classification abbreviations  
and acronyms**

Flam. Liq. = Flammable liquid

Carc. = Carcinogenicity

Eye Irrit. = Eye irritation

**Training advice**

Only trained personnel should use this material.

**Issued by**

HS&E Manager.

**Revision date**

2/8/2021

**Revision**

1.1

**Supersedes date**

7/27/2018

**SDS No.**

434

## Zerios® WES

### Hazard statements in full

H226 Flammable liquid and vapor.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H350 May cause cancer.  
H351 Suspected of causing cancer.  
H370 Causes damage to organs .  
H373 May cause damage to organs (Blood system) through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.