

**SAFETY DATA SHEET****Zerios® SE-10**

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

1. Identification**Product identifier****Product name** Zerios® SE-10**Product number** 350-F-00013**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
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** Muta. 1B - H340 Carc. 1B - H350 STOT RE 1 - H372 Asp. Tox. 1 - H304**Environmental hazards** Not Classified**Label elements****Hazard symbols****Signal word** Danger**Hazard statements**
H226 Flammable liquid and vapor.
H340 May cause genetic defects.
H350 May cause cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

Zerios® SE-10

Precautionary statements

P201 Obtain special instructions before use.
 P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
 P260 Do not breathe vapor/ spray.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P308+P313 If exposed or concerned: Get medical advice/ attention.
 P331 Do NOT induce vomiting.
 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.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

Aliphatic petroleum distillate, Solvent naphtha, petroleum, light aromatic

Other hazards

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

3. Composition/information on ingredients

Mixtures

Asphalt CAS number: 8052-42-4	60-100%
Classification Not Classified	
Aliphatic petroleum distillate CAS number: 64742-88-7	10-30%
Classification STOT RE 1 - H372 Asp. Tox. 1 - H304	
Solvent naphtha, petroleum, light aromatic CAS number: 64742-95-6	10-30%
Classification Muta. 1B - H340 Carc. 1B - H350 Asp. Tox. 1 - H304	

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

4. First-aid measures

Description of first aid measures

General information

Get medical advice/attention if you feel unwell. Show this Safety Data Sheet to the medical personnel.

Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Ingestion

Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

Zerios® SE-10

Skin Contact Rinse with water. Remove contaminated clothing. Wash contaminated clothing before reuse. Get medical attention if symptoms are severe or persist after washing.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Get medical attention if irritation persists after washing.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards. 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 May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Flammability Class 3.0 Combustible Liquid II

Specific hazards None known.

Hazardous combustion products Hydrocarbons. Carbon monoxide (CO). Carbon dioxide (CO₂).

Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapors. Evacuate area. 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.

Special protective equipment for firefighters 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

Personal precautions Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material.

Environmental precautions

Zerios® SE-10

Environmental precautions Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

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. Approach the spillage from upwind. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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 Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. 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

Asphalt

Long-term exposure limit (8-hour TWA): ACGIH 0.5 mg/m³ fume, inhalable fraction as benzene-soluble aerosol

A4

ACGIH = American Conference of Governmental Industrial Hygienists.

A4 = Not Classifiable as a Human Carcinogen.

Ingredient comments Any relevant occupational exposure limits for ingredients are listed.

Exposure controls

Protective equipment



Zerios® SE-10

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.
Hand protection	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.
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	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.
Respiratory protection	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.
Environmental exposure controls	Keep container tightly sealed when not in use.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Black.
Odor	Petroleum.
Odor threshold	No data available.
pH	No data available.
Melting point	No data available.
Initial boiling point and range	148°C
Flash point	38°C
Evaporation rate	No data available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No data available.
Vapor pressure	No data available.

Zerios® SE-10

Vapor density	No data available.
Relative density	0.9 g/cm ³ @ °C
Solubility(ies)	Hydrocarbons. Insoluble in water.
Partition coefficient	No data available.
Auto-ignition temperature	245°C
Decomposition Temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	Not applicable.
VOC	7.5 lb/gal

10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	Avoid heat, flames and other sources of ignition.
Materials to avoid	Strong acids. Strong alkalis. Strong oxidizing agents.
Hazardous decomposition products	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.

Acute toxicity - dermal

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

Acute toxicity - inhalation

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

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory sensitization

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

Skin sensitization

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

Zerios® SE-10

Germ cell mutagenicity

Summary May cause genetic defects.

Carcinogenicity

Summary May cause cancer.

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

Reproductive toxicity

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.

Specific target organ toxicity - repeated exposure

Summary Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

Summary May be fatal if swallowed and enters airways. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

General information

May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. May cause genetic defects. 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

Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Skin Contact

May cause discomfort.

Eye contact

May be slightly irritating to eyes.

Route of exposure

Ingestion Inhalation Skin and/or eye contact

Target Organs

No specific target organs known.

Toxicological information on ingredients.

Asphalt

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

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.

Persistence and degradability

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

Zerios® SE-10

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. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered.

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. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information

UN Number

UN No. (TDG)	1999
UN No. (IMDG)	1999
UN No. (ICAO)	1999
UN No. (DOT)	UN1999

UN proper shipping name

Proper shipping name (TDG)	TARS, LIQUID
Proper shipping name (IMDG)	TARS, LIQUID
Proper shipping name (ICAO)	TARS, LIQUID
Proper shipping name (DOT)	TARS, LIQUID

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

Zerios® SE-10

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

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

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)

None of the ingredients are listed.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

SARA 313 Emission Reporting

None of the ingredients are listed.

CAA Accidental Release Prevention

None of the ingredients are listed.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

FDA - Precursor Chemical

None of the ingredients are listed or exempt.

Zerios® SE-10

SARA (311/312) Hazard Categories

Aspiration hazard
Carcinogenicity
Germ cell mutagenicity
Specific target organ toxicity (single or repeated exposure)

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)

None of the ingredients are listed.

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

None of the ingredients are listed.

California Directors List of Hazardous Substances

The following ingredients are listed:

Asphalt

Massachusetts "Right To Know" List

The following ingredients are listed:

Asphalt

Rhode Island "Right To Know" List

The following ingredients are listed:

Asphalt

Minnesota "Right To Know" List

The following ingredients are listed:

Asphalt

New Jersey "Right To Know" List

The following ingredients are listed:

Asphalt

Pennsylvania "Right To Know" List

The following ingredients are listed:

Asphalt

Inventories

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

16. Other information

Zerios® SE-10

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.

LC₅₀: Lethal concentration to 50 % of a test population.

LD₅₀: Lethal dose to 50% of a test population (median lethal dose).

EC₅₀: 50% of maximal effective concentration.

PBT: Persistent, bioaccumulative and toxic substance.

vPvB: Very persistent and very bioaccumulative.

Classification abbreviations and acronyms

Asp. Tox. = Aspiration hazard

Carc. = Carcinogenicity

Muta. = Germ cell mutagenicity

STOT RE = Specific target organ toxicity-repeated exposure

Training advice

Only trained personnel should use this material.

Issued by

HS&E Manager.

Revision date

3/5/2020

Revision

1.1

Supersedes date

11/8/2016

SDS No.

148

Hazard statements in full

H226 Flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H340 May cause genetic defects.

H350 May cause cancer.

H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure.

H372 Causes damage to organs through prolonged or repeated exposure.

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.