Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

1. Product and Company Identification

Product Name	Dye-N-Seal Liquid Concentrate – OSHA Orange
Manufacturer's name	Horizons Incorporated
Address	18531 South Miles Road Cleveland, Ohio 44128
Emergency Telephone Number	(216) 475-0555
Information Telephone Number	(216) 475-0555

2. Hazards Identification

GHS Classification

H302	Acute toxicity, Oral – Category 4
H332	Acute toxicity, Inhalation – Category 4
H312	Acute toxicity, Dermal – Category 4
H316	Skin corrosion/irritation – Category 3
H320	Serious eye damage/eye irritation – Category 2B
H317	Skin sensitization – Category 1B
H350	Carcinogenicity – Category 1A
H335	Specific target organ toxicity – Single exposure – Category 3

GHS Label Elements

Hazard Pictogram	
Signal Word	Danger
Hazard Statements	
H350	May cause cancer
H302+H332	Harmful if swallowed or inhaled
H312	Harmful in contact with skin
H316	Causes mild skin irritation
H320	Causes eye irritation
H317	May cause an allergic skin reaction
H335	May cause respiratory irritation
Precautionary Statements	
P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P261	Avoid breathing mists, vapors, & spray
P264	Wash thoroughly after handling
P270	Do not eat, drink, or smoke when using this product
P271	Use only in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective gloves & clothing, and eye & face protection
P361+P364	Take off immediately all contaminated clothing and wash before reuse
P301+P330	IF SWALLOWED: Rinse mouth.
P312	Call a poison center/doctor if you feel unwell
P302+P352	IF ON SKIN, wash with plenty of water
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P333+P337+P313	If skin rash or eye irritation occurs or persists, get medical advice/attention
P308+P313	If exposed or concerned: Get medical advice/attention
P404	Store locked up
P403+P233	Store in a well-ventilated place. Keep container tightly closed

3. Composition/Information on Ingredients

Components/ Materials	CAS Number	%
Nickel Acetate	373-02-4	1.9 – 2.0
Nickel (as an integral part of the compound)	7440-02-0	0.61-0.66
Azo dye	Not available	<1
C.I. Acid Red 73	Not available	<1
Nickel Acetate is subject to the reporting requirements of section 313 of SARA 313 Title III (40CFR part 372)		

4. First Aid Measures

Inhalation	Promptly remove to fresh air. Give artificial respiration or oxygen if breathing has stopped. Get prompt medical attention. Never give anything by mouth to an unconscious person.
Skin Contact	Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention. Wash contaminated clothing before reuse.
Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If redness or irritation occurs, seek medical attention.
Ingestion	If ingested, do not induce vomiting. Do not give anything to drink. Contact physician immediately.

5. Fire Fighting Measures

Flammable Properties		Flash point – non-flammable
Flammable Limits		
	Lower Flammable Limit	Not applicable
	Upper Flammable Limit	Not applicable
Hazardous Combustion Products		Thermal decomposition may produce acrid smoke, sulfur dioxide, nitrogen & carbon oxides, and nickel oxides.
Unusual Fire/Explosion Hazards		None
Extinguishing Media		Use that of surrounding fire
Special Firefighting Procedures		Wear self-contained breathing apparatus & protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

Small Spill	Absorb spill with an inert material and place in a chemical waste container
Large Spill	Contain spilled liquid with sand or earth. Absorb spill with an inert material and shovel into a chemical waste container. Prevent runoff from entering into sewers and ditches which lead into natural waterways.

7. Handling and Storage

Handling	Avoid contact with eyes. Keep container closed. Use only in a well ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated breathing of mists and vapors. Avoid prolonged or repeated contact with skin.
Storage	Store between 65-85ºF. Keep containers sealed when not in use.

8. Exposure Control/Personal Protection

Exposure Limits

Chemical Name	CAS No.	OSHA	ACGIH	NIOSH
Nickel Acetate Tetrahydrate	6018-89-9	0.1mg/m^3 TWA	0.1 mg/m^3 TWA	0.015mg/m^3 TWA
Nickel, elemental	7440-02-0	ND	1.5 mg/m^3 TWA	ND
Azo dye	Not available	ND	ND	ND
C.I. Acid Red 73	Not available	ND	ND	ND

ND – Not Determined

Engineering Controls	Control airborne concentrations below the exposure limits. Use only with adequate ventilation. Local exhaust ventilation may be necessary. Keep sealing baths covered whenever possible.
Respiratory Protection	When respiratory protection is required, use a NIOSH approved air-purifying respirator equipped with a combination high efficiency filter and acid gas canister. For emergency and other conditions where exposure limits may be greatly exceeded, use an approved positive-pressure, self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply.
Skin Protection	For brief contact, no precautions other than clean body-covering clothing should be needed. Use chemical resistant gloves, such as nitrile or polychloroprene, when handling chemical products.
Eye Protection	Use safety glasses with side shields or, preferably, chemical goggles.

9. Physical and Chemical Properties

Boiling Point	approx.100ºC
Specific Gravity	1.01 – 1.02
% Volatiles	96% (water)
Solubility in Water	Soluble in hot water
pH	5.3-5.6
Odor	Vinegar odor
Form	Liquid
Color	Orange
VOC	None

10. Stability and Reactivity

Chemical Stability	Stable under normal storage conditions
Conditions to Avoid	None
Incompatibility	Strong oxidizing agents, strong caustic agents
Hazardous Decomposition Products	Burning can produce carbon monoxide, carbon dioxide, nitrogen oxides, & sulfur dioxide when heated to decomposition.
Hazardous Polymerization	Will not occur

11. Toxicological Information

Results of component toxicity test performed:	
Data for Nickel Acetate Tetrahydrate (CAS 6018-89-9)	Acute Toxicity Data: Oral LD50: 350 mg/kg (rat). Oral LD50: 410 mg/kg (mouse). Chronic effects on humans: Causes damage to the following organ: lungs, skin, nose/sinuses. Carcinogenic effects: Classified 1 (proven for humans) by IARC, 1 (known to be human carcinogen) by NTP, + (proven) by NIOSH, classified A4 (not classifiable for humans or animals) by ACGIH. Other toxic effects on humans: Very hazardous in case of skin contact (sensitizer), of inhalation (lung irritant, lung sensitizer). Inhalation of this material may cause sensitive individuals to develop eczema and/or asthma.
Data for Azo dye	Acute Toxicity Data: Oral LD50: >5000 mg/kg (rat).
Data for C.I. Acid Red 73	Acute Toxicity Data: Oral LD50: 2500 mg/kg (rat). Skin Irritation: non-irritant (rabbit) Eye irritation: moderate irritant (rabbit)

12. Ecological Information

The following properties are ESTIMATED from the components of the preparations.		
Potential Toxicity:		
	Toxicity to scenedesmus subspicatus (EC50)	0.8 mg/l/48H
Persistence and degradability		ND
Chemical Oxygen Demand (COD)		ND
Biochemical Oxygen Demand (BOD)		ND
Chemical Fate Information		ND
Note: Inhibition of bacterial flora> 0,0025 mg/l		

13. Disposal Considerations

Small quantities may be treated in aerobic wastewater treatment systems.
Soluble nickel salts may be precipitated with caustic for reclamation or disposal. Note that Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.
Contact a licensed professional waste disposal service to dispose of large quantities of this material

14. Transport Information

Proper Shipping Name	Chemicals, N.O.S., Not D.O.T. Regulated
UN No.	None
IATA Class	Not Regulated
Packing Group	Not applicable

15. Regulatory Information

U.S. Federal Regulations	
TSCA Section 8 (b) Inventory	All components are listed on the TSCA Chemical Inventory
OSHA	Hazardous by definition of Hazard Communications Standard (29CFR1910.1200)
SARA Hazard Category	
SARA 302 Components	Nickel acetate
SARA 313 Components	Nickel acetate
SARA 311/312 Hazards	Acute health Hazard, Chronic Health Hazard
CERCLA	Nickel (RQ 100 lbs)
Clean Water Act (CWA) 307	Contains priority pollutant nickel at concentrations greater than 0.1%
State Regulations	
Massachusetts Right To Know Components	Nickel acetate
Pennsylvania Right To Know Components	Nickel acetate
New Jersey Right To Know Components	Nickel acetate
California Proposition 65 Components	This product contains a chemical known to the State of California to cause cancer.
NESHAP	Nickel acetate sealing baths are subject to the compliance requirements of NESHAP (National Emission Standard for Hazardous Air Pollutants). Sealing baths that contain nickels at concentrations greater than 0.1% are subject to the reporting requirements of NESHAP 6W.

16. Other Information

HMIS
H – 2*
F – 0
R – 0
PPE – H
The information in this material safety data sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations & management, and for persons working with or handling this product. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions but does not purport to be all inclusive. Horizons Incorporated shall not be held liable for any damage resulting from handling or from contact with the above product.