

## NEVADA COATINGS SYSTEM

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NEVADA COATINGS SYSTEM

## NCS Extra Tough Waterproof Membrane



## POINTS OF INTEREST:

- ◆ Completely Waterproof...
- ◆ Installs Quickly...
- ◆ Overlay in 30 minutes...
- ◆ 10 Year Warranty...

## INSTALLATION USES:

- ▶ Planter Boxes
- ▶ Waste Water Lagoons
- ▶ Shower Pans and Linings
- ▶ Petro Chemical Plants
- ▶ Retaining Wall Waterproofing
- ▶ Green Roof Systems
- ▶ Secondary Containment
- ▶ Pool Retaining Walls
- ▶ Cooling Towers Pans
- ▶ Pipeline Coatings
- ▶ Waterproofing Below Soil Line

## NCS EXTRA TOUGH WATERPROOFING MEMBRANE

NCS -Extra Tough Membrane is a uniquely blended polymer system designed to install quickly with rapid drying, thus allowing soil replacement (backfill) or concrete and tile or stone applications within 30 minutes. NCS Extra Tough is formulated in 100% solid solution and comprised of specially blended Polyurea Resins which result in substantial physical properties achieved in as little as 30 minutes from initial application.

Once NCS Extra Tough is dry to the touch, soil, concrete, tile and stone can be placed directly over the surface without negatively affecting the integrity of the membrane. NCS Extra Tough is installed by spray, roller or brushing.

NCS Extra Tough is installed in thicknesses of 40–45 mils to as much as 125 mils (please contact NCS for design specifications). NCS Extra Tough should incorporate traditional drainage mats and or drainage systems as deemed necessary.

NCS Extra Tough is warranted to be free from manufacturing defects for a period of 10 years. Project specific warranties can be obtained by contacting NCS representatives or approved applicators.

## Technical:

Tensile (PSI) ASTM D412	2720
Elongation (%) ASTM D412	>250
Tear (PLI) ASTM 2240	>330
Hardness Shore D	310
Taber Abrasion (mg loss)	
ASTM D4060	60
Adhesion ASTM D	4541
Concrete (unprimed)	> 250 psi
Concrete (primed)	> 400 psi
Wood (unprimed)	> 250 psi
Steel (unprimed)	> 400 psi
Steel (primed)	> 800 psi



## ADDITIONAL INFORMATION

Installation Instructions	2
Chemical Resistance	3
MSDS	4, 9
Sample Warranty	10

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# NEVADA COATINGS SYSTEM

## *NCS Extra Tough: Installation Instructions*

**SIMPLE SYSTEMS  
FOR COMPLICATED  
PROJECTS**

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**EASILY INSTALLED  
OVER ANY TYPE  
SURFACE**

**POWERED  
BY  
REACTAMINE TECHNOLOGY**



### Concrete:

1. Remove all laitance and debris from any area receiving the NCS Extra Tough Waterproofing System.
2. Install NCS Primer (refer to NCS Data Sheets).
3. As soon as NCS Primer is tacky, install the NCS Extra Tough Waterproofing to desired thickness.
4. Allow the NCS Extra Tough to dry until tack free (usually 30 minutes).
5. Open to foot traffic or backfill within 30 minutes or when tack free.

### Wood:

1. Prepare all joints using NCS Crack Fill (refer to NCS Crack Fill Data Sheets).
2. Install NCS Primer (refer to NCS Primer Data Sheets).
3. As soon as NCS Primer is tacky, install NCS Extra Tough Waterproof Membrane to desired thickness.
4. Allow the NCS Extra Tough to dry until dry to the touch and no tackiness is felt.
5. Allow to dry one hour before foot traffic.

Two Component 100 % Polyurea that achieves superior performance in industrial, commercial and residential environments.

NCS displays extremely fast cure times with incredible adhesion to a multitude of substrates.

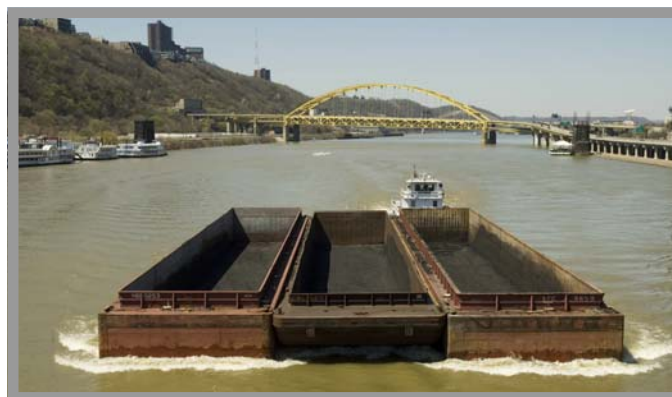
NCS Systems can be applied in conditions often seen as detrimental to traditional coatings, from temperatures as low as 20 degrees to over 120 degrees Fahrenheit.

Installation of NCS Extra Tough can be affected if water is present on or in the substrate. It's important to ensure all surfaces are completely dry. Contact NCS for information on Primers to displace moisture in the surface enhancing the overall adhesion NCS systems.

Typical tools for installation of NCS Extra Tough System.



## *Types of Construction:*



# NEVADA COATINGS SYSTEM

## *NCSS Extra Tough Waterproofing: Chemical Resistance:*

### **Chemical Resistance:**

#### **Chemical Result (25°C)**

Acetic Acid (100%)	C	Muriatic Acid (10%)	R	
Acetone	C	NaCl / H <sub>2</sub> O (10%)	R	
Ammonium Hydroxide (50%)	RC	Nitric Acid (50%)	R	R=Recommended Little or no visible damage
Benzene	C	Phosphoric Acid (10%)	R	
Brine-Saturated H <sub>2</sub> O (310g/l)	R	Phosphoric Acid (50%)	NR	
Chlorinated H <sub>2</sub> O	R	Potassium Hydroxide (10%)	R,DIS	RC=Recommended Conditional Some effect, swelling, discoloration
Clorox® (10%) H <sub>2</sub> O	R	Potassium Hydroxide (20%)	R	
Diesel Fuel	RC	Propylene Carbonate	RC	
Gasoline	RC	Skydrol®	C	C=Conditional Cracking-wash down within 1 hour of spillage to avoid effects
Gasoline / 5 % MTBE	RC	Sodium Hydroxide (25%)	R	
Gasoline / 5% Methanol	RC	Sodium Hydroxide (50%)	R,DIS	
Hydrochloric Acid (37%)	R	Sodium Hypochlorite (10%)	R	
Hydrofluoric Acid (10%)	NR	Sodium Bicarbonate	R	NR=Not Recommended
Hydraulic Fluid (oil)	RC	Stearic Acid	R	Dis=Discoloration
Isopropyl Alcohol	R	Sugar / H <sub>2</sub> O	R	
Lactic Acid	RC	Sulfuric Acid (10%)	R	
MEK	RC	Sulfuric Acid (50%)	R	
Methanol	R	Toluene	R	
Methylene Chloride C		1,1,1-Trichlorethane	C	
Mineral Spirits RC		Trisodium Phosphate	R	
Motor Oil	R	Vinegar / H <sub>2</sub> O (5%)	R	
MTBE	C	H <sub>2</sub> O	R	
		H <sub>2</sub> O (14 days @ 82°C)	RC	
		Xylene	RC	



## *NCS 6000-Extra Tough Waterproofing: Additional Information*

<u>Adhesion Results</u> ASTM D-4541 Elcometer		<u>Typical Processing Properties</u>	
Concrete (No Primer)	>250 psi Concrete Failure	Gel Time	20 Seconds
Concrete (Epoxy Primer)	>400 psi Concrete Failure	Tack Free	10 Minutes
Steel (No Primer)	>400 psi Substrate Failure	Back Fill over Covering	60 Minutes
Steel (Epoxy Primer)	>800 psi Primer Failure		
Wood (No Primer)	>250 psi Delamination	<u>Equipment</u>	
NCS Primer + 289		Plural Spray Ratio 1-1	
Shelf Life 6 Months (	60-100 Degree Fahrenheit	Temperature 125-150 Fahrenheit	
		Spray Pressure 2000 psi	



### *Coverage Guide*

Coating	S.F. /Gal
20 mils	70
30 mils	48
40 mils	36
50 mils	29
60 mils	24
80 mils	18
100 mils	14
250 mils	5.5

For information on solvents that can be used with NCS Extra Tough, contact: [info@NevadaCoatings.com](mailto:info@NevadaCoatings.com)

### *Disclaimer*

The technical data and any other printed information furnished by **Nevada Coatings Systems (NCS)** is true and accurate to the best of our knowledge. **NCS Extra Tough** conforms to in-house quality control procedures and should be considered free of defects. Due to the wide range of applications of this product, it is impossible to assume responsibility for any errors in regard to application, coverage, workmanship, over-spray or injuries resulting from the use of **NCS Extra Tough**. NCS makes no warranty, expressed or implied, of its products and shall not be liable for indirect or consequential damage in any event. For project specific warranties, refer to NCS warranty.

# NEVADA COATINGS SYSTEM

## MATERIAL SAFETY DATA SHEET

### NCS Extra Tough Membrane

#### **1. Product and Company Identification**

**Product Name:** NCS (NexAmine) Extra Tough Membrane

**Chemical Family:** Aspartic Ester

#### **2. Hazards Identification**

##### **Emergency Overview**

CAUTION! Color: Yellow Form: liquid Odor: Slight.

Toxic gases/fumes are given off during burning or thermal decomposition and may cause allergic skin and respiratory reaction. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. May cause respiratory tract irritation.

##### **Potential Health Effects**

**Primary Routes of Entry:** Skin Contact, Eye Contact, Ingestion, Inhalation

##### **Medical Conditions Aggravated by Exposure:**

Skin disorders, Respiratory disorders, Eye disorders

#### **HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE**

##### **Inhalation-Acute Inhalation**

Inhalation is unlikely due to the low vapor pressure. If misted or handled at elevated temperatures, high concentrations may cause respiratory tract irritation.

##### **Skin-Acute Skin**

Based on materials with similar chemical structures Not expected to be irritating. Not expected to be a skin sensitizer.

##### **Eye-Acute Eye**

Based on materials with similar chemical structures Not expected to be irritating.

##### **Ingestion-Acute Ingestion**

**For Component:** Aliphatic Carboxylic Ester

May be harmful if swallowed.

##### **General Effects of Exposure-Chronic Effects of Exposure**

No applicable information was found concerning any adverse chronic health effects from overexposure to this product. Repeated or prolonged overexposure may cause effects as noted under acute health effects.

##### **Carcinogenicity:**

No Carcinogenic substances as defined by IARC, NTP and/or OSHA

#### **3. Composition/Information on Ingredients**

Hazardous Components

##### **Weight % Components CAS-No.**

1 - 5% Aliphatic Carboxylic Ester 623-91-6

# NEVADA COATINGS SYSTEM

## **4. First Aid Measures**

### **Eye Contact**

In case of contact, flush eyes with plenty of lukewarm water. Get medical attention if irritation develops.

### **Skin Contact**

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops.

### **Inhalation**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if irritation develops.

### **Ingestion**

Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.

## **5. Fire-Fighting Measures**

**Suitable Extinguishing Media:** All extinguishing media are suitable.

**Special Fire Fighting Procedures:** Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize risk of rupture.

**Unusual Fire/Explosion Hazards:** Toxic and irritating gases/fumes may be given off during burning or thermal composition.

## **6. Accidental release measures**

**Spill and Leak Procedures:** Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e.g., dry sand or earth) and collect for proper disposal. Prevent from entering open drains and waterways.

Evacuate and keep unnecessary people out of spill area. Ventilate area to remove vapors or dust.

## **7. Handling and Storage**

### **Storage Temperature:**

minimum: 0 °C (32 °F)

maximum: 50 °C (122 °F)

### **Storage Period:**

6 Months @ 25 °C (77 °F)

**Handling/Storage Precautions:** Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use. Do not breathe vapors or spray mist. Store in a dry place away from excessive heat. Material is hygroscopic and may absorb small amounts of atmospheric moisture.

**Further Info on Storage Conditions:** Avoid contact with moisture/water. Material can be stored safely at am-

# NEVADA COATINGS SYSTEM

## **8. Exposure Controls / Personal Protection**

Country specific exposure limits have not been established or are not applicable.

### **Industrial Hygiene/Ventilation Measures**

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Curing ovens must be ventilated to prevent the build up of explosive atmospheres and to prevent off gases from entering the work place.

### **Respiratory Protection**

In spray applications, an organic vapor/particulate respirator or air supplied unit is necessary., The use of a positive pressure supplied air respirator is recommended if the airborne concentration is unknown or if spraying is performed in a confined space or area with limited ventilation.

### **Hand Protection**

Permeation resistant gloves.

### **Eye Protection**

Chemical safety goggles or safety glasses with side-shields.

### **Skin and body protection**

Wear cloth work clothing including long pants and long-sleeved shirts.

### **Additional Protective Measures**

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

## **9. Physical and chemical properties**

**Form:** liquid **Color:** Yellow

**Odor:** Slight **pH:** Not Established

**Freezing Point:** Not Established **Boiling Point/Range:** Not Established

**Flash Point:** > 93.33 °C (> 200 °F) (Pensky-Martens Closed Cup (ASTM D-93))

**Lower Explosion Limit:** Not Established **Upper Explosion Limit:** Not Established

**Vapor Pressure:** < 0.000007 mmHg @ 25 °C (77 °F) **Density:** 1.07 g/cm<sup>3</sup>

**Solubility in Water:** Insoluble **Autoignition Temperature:** Not Established

**VOC Content:** Not Established **Viscosity, Dynamic:** no data available

**Bulk Density:** 8.89 lb/gal **Hygroscopicity:** hygroscopic

## **10. Stability and Reactivity**

**Hazardous Reactions:** Hazardous polymerization does not occur.

**Stability:** Stable

**Materials to avoid:** Oxidizing agents

**Conditions to avoid:** Avoid extreme heat.

**Hazardous decomposition products:** By Fire and Thermal Decomposition: Carbon oxides, nitrogen oxides

# NEVADA COATINGS SYSTEM

## 11. Toxicological Information

### Toxicity Data for Aspartic Ester

**Acute Oral Toxicity:** LD50: > 2,000 mg/kg (Rat)

**Acute Inhalation Toxicity:** LC50: 4923 mg/m<sup>3</sup>, aerosol, 4 h (Rat)

**Skin Irritation:** rabbit, Non-irritating

**Eye Irritation:** rabbit, Non-irritating

**Sensitization:** Maximisation Test (GPMT): non-sensitizer (Guinea pig) Mutagenicity

**Genetic Toxicity in Vitro:** Ames: negative (Salmonella typhimurium)

### Toxicity Data for Aliphatic Carboxylic Ester

**Acute Oral Toxicity:** LD50: 1,780 mg/kg (Rat)

## 12. Ecological Information

### Ecological Data for Aspartic Ester

**Biodegradation:** 30 %, Exposure time: 28 d, Not readily biodegradable.

**Acute and Prolonged Toxicity to Fish:** LC0: > 87 mg/l (Zebra fish (Brachydanio rerio), 96 h)

**Acute Toxicity to Aquatic Invertebrates:** EC0: 96.8 mg/l (Water flea (Daphnia magna), 48 h)

**Toxicity to Aquatic Plants:** EC50: > 41.2 - < 84.2 mg/l, (Green algae (Scenedesmus subspicatus), 72 h)

**Toxicity to Microorganisms:** EC50: > 10,000 mg/l, (Other bacteria)

### Ecological Data for Aliphatic Carboxylic Ester

**Acute and Prolonged Toxicity to Fish:** 38 mg/l (Fathead minnow (Pimephales promelas), 96 h)

## 13. Disposal considerations

**Waste Disposal Method:** Waste disposal should be in accordance with existing federal, state and local environmental control laws.

**Empty Container Precautions:** Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

## 14. Transportation information

### **Land transport (DOT)**

Non-Regulated

### **Sea transport (IMDG)**

Non-Regulated

### **Air transport (ICAO/IATA)**

Non-Regulated

## CONTACT

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Info@NevadaCoatings.com 760-898-5408

# NEVADA COATINGS SYSTEM

## **15. Regulatory Information**

### **United States Federal Regulations**

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):

**Components-None**

SARA Section 311/312 Hazard Categories:

### **Acute Health Hazard**

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):

**Components-None**

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:

**Components-None**

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

### **State Right-To-Know Information**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

### **Weight % Components CAS-No.**

>=1% Aspartic Ester CAS# is a trade secret

1 - 5% Aliphatic Carboxylic Ester 623-91-6

### **California Prop. 65:**

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.



# NEVADA COATINGS SYSTEM



**16. Other Information**

NFPA 704M Rating

**HMIS RATINGS:**

**HEALTH**

**FLAMMABILITY**

**REACTIVITY**

**2**

**1**

**1**

0 =Minimal

1=Slight

2=Moderate

3=Serious

4=Severe

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NOTES: