**SAFETY DATA SHEET**
U.S. Department of Labor
Occupational Safety & Health Administration

# RoofdX SL - Part B

## SECTION 1 - IDENTIFICATION

| | |
|---|---|
| MANUFACTURER: | Andek Corporation |
| ADDRESS: | 850 Glen Avenue, Moorestown, NJ 08057 |
| TELEPHONE: | 1-856-786-6900 |
| | In an emergency, contact CHEMTREC 1-800- 424-9300; |
| | Outside the United States call +1-703-527-3887 |
| PRODUCT IDENTIFIER: | RoofdX SL - Part B |
| RECOMMENDED USE: | Industrial Maintenance Coating |

## SECTION 2 – HAZARD IDENTIFICATION

HAZARD CLASSIFICATION:
**Skin:** Irritant Category 1 / Sensitization Category 1
**Eye:** Irritation: Damage Category 2B
**Inhalation:** Acute Toxicity: Category 4
**Reproductive Toxicity:** Category 2

**SIGNAL WORD**: Warning

**HAZARD STATEMENTS**:

- Combustible liquid.
- Flammable liquid and vapor.
- Causes eye irritation.
- Toxic gases/fumes may be given off during burning or thermal decomposition.
- Closed container may forcibly rupture under extreme heat or when contents have been contaminated with water.
- Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.
- Causes skin irritation.

**PICTOGRAMS:**

**PRECAUTIONARY STATEMENTS:**
**Prevention:**

- **Do Not** handle until all safety precautions have been read and understood.
- **Do Not** allow contact with water.
- Protect from moisture. If moisture enters container, pressure can build up which can cause a sealed container to pressurize and burst.
- Keep container tightly closed.
- Keep only in original container.
- Avoid breathing mist or spray.
- **Do Not** get in eyes, on skin, or on clothing.
- Wash thoroughly after handling.
- **Do Not** eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.

- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed; immediately get medical attention.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Take precautionary measures against static discharge.

**Response:**

- **Skin**: Remove contaminated clothing. Wash affected areas thoroughly with soap and water.
- **Eyes**: Flush with clean lukewarm water (low pressure) for at least 15 minutes and obtain medical attention immediately.
- **Inhalation**: Remove victim to fresh air. Administer oxygen or artificial respiration as needed. Obtain medical attention.
  **Ingestion**: **Do Not** induce vomiting. Give 250 ml of milk or water to drink and get immediate medical attention.

**Storage:**

- Store in tightly closed containers.
- Protect from moisture and foreign materials.
- Ideal storage temperature range is 50-81°F.

**Disposal:**

- **Waste Disposal Method**:
  Waste disposal should be in accordance with existing federal, state and local environmental control laws.
  Incineration is the preferred method.
- **Empty Container Precautions**:
  Empty containers retain product residue.
  Observe all precautions for product.
  **Do Not** heat or cut empty container with electric or gas torch.
  **Do Not** reuse without thorough commercial cleaning and reconditioning.
  If container is to be disposed, ensure all product residues are removed prior to disposal.

## SECTION 3 – COMPOSITION

| CHEMICAL NAME | CAS # | APPROX % |
|---|---|---|
| Naphtha Light Aromatic Solvent | 64742-95-6 | 33.0 |
| Castor oil | 8001-79-4 | 6.0 |
| Silicon oxide (synthetic) | 31-86-9 | 3.0 |
| Aluminum oxide (non-fibrous) | 1344-28-1 | 3.0 |
| Nickel | 7440-02-0 | 2.0 |
| Chromium | 7440-47-3 | 2.0 |
| Micaceous Iron Oxides | 1309-37-1 | 28.0 |
| Aluminum Flake | 7429-90-5 | 13.0 |
| Iron | 7439-89-6 | 10.0 |

## SECTION 4 – FIRST AID MEASURES

**Eye contact**
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention.

**Skin contact**
Immediately remove contaminated clothing and shoes. Wash off with soap and water. Use lukewarm water if possible. Wash contaminated clothing before reuse. For severe exposures, immediately get under safety shower and begin rinsing. Get medical attention if irritation develops.

**Inhalation**
Move to an area free from further exposure. Get medical attention immediately. Administer oxygen or artificial respiration as needed.

**Ingestion**
**Do Not** induce vomiting. Wash mouth out with water. **Do Not** give anything by mouth to an unconscious person. Get medical attention.

**Notes to physician**
**Eyes:** Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision.
**Skin:** This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn.
**Ingestion:** Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound.
**Inhalation:** Treatment is essentially symptomatic.

## SECTION 5 – FIRE-FIGHTING MEASURES

**Flash Point (Method Used):** 108ºF Closed Cup

**Flammable limits:** Auto ignition temperature 880ºF

**Extinguishing Media:** Dry chemical, carbon dioxide ($CO^2$), foam, water spray for large fires

**Special Fire Fighting Procedures:** Firefighters should wear NFPA compliant structural firefighting protective equipment including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

**Unusual Fire & Explosion Hazards:** Closed container may forcibly rupture under extreme heat or when contents are contaminated with water ($CO^2$ formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture.

**Decomposition Products:** May be toxic and irritating

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Spill and Leak Procedures**

Evacuate non-emergency personnel. Isolate the area and prevent access. Remove ignition sources. Notify management. Put on protective equipment. Control source of the leak. Ventilate. Contain the spill to prevent spread into drains, sewers, water supplies, or soil. Call ChemTrec at 800-424-9300 or 703-527-3887 for assistance and advice. Major Spill or Leak (Standing liquid): Released material may be pumped into closed, but not sealed, metal container for disposal. Process can generate heat. Minor Spill or Leak (Wet surface): Cover spill area with suitable absorbent material (Kitty Litter, Oil-Dri®, etc). Saturate absorbent material with neutralization solution and mix. Wait 15 minutes. Collect material in open-head metal containers. Repeat applications of decontamination solution, with scrubbing, followed by absorbent until the surface is decontaminated. Check for residual surface contamination. Swype® test kits have been used for this purpose. Apply lid loosely and allow containers to vent for 72 hours to let carbon dioxide ($CO^2$) escape.

**Additional Spill Procedures/Neutralization**

Neutralization solutions:

(1) Colorimetric Laboratories Inc. (CLI) decontamination solution.
(2) A mixture of 75% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10) and 5% n- Propanol.
(3) A mixture of 80% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10).
(4) A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.

**Andek requires that CHEMTREC be immediately notified (800-424-9300) when this product is unintentionally released from its container during its course of distribution, regardless of the amount released. Distribution includes transportation, storage incidental to transportation, loading and unloading. Such notification must be immediate and made by the person having knowledge of the release.**

## SECTION 7 – HANDLING & STORAGE

**Storage temperature:**

| | |
|---|---|
| **Minimum:** | 18 °C (64.4 °F) |
| **Maximum:** | 40 °C (104 °F) |

**Storage period**

6 Months @ 25 °C (77 °F)**:** after receipt of material by customer.

**Handling/Storage Precautions**

Do not breathe vapors, mists, or dusts. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. **Do Not** breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. **Do Not** reseal if contamination is suspected.

**Further Info on Storage Conditions**

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure limits:**

| CHEMICAL NAME | PEL | TLV |
|---|---|---|
| Chromium | 1 mg/m³ | 0.5 mg/m³ |
| Nickel | 1 mg/m³ | 1 mg/m³ |
| Silicon | 10; 5 mg/m³ | 10 mg/m³ |
| *Cumene | | 50ppm |
| *Naphthalene | | 10ppm |

***Contains less than .01% of total volume**

**Engineering controls:**
Local exhaust should be used to maintain levels below the TLV.

**Respiratory protection**
The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134).

**Hand protection**
Gloves should be worn. Nitrile rubber showed excellent resistance. Butyl rubber, neoprene and PVC are also effective.

**Eye protection**
When directly handling liquid product, eye protection is required. Examples of eye protection include a chemical safety goggle or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.

**Skin and body protection**
Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact.

**Additional Protective Measures**
Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Heavy Paste
**Physical state:** Liquid
**Color:** Metallic Grey
**Odor:** Mild
**Odor Threshold:** None Established
**pH:** None Established
**Melting Point/freezing point:** None Established
**Initial boiling point/ boiling range:** 600ºF
**Flash point:** 108ºF
**Evaporation rate:** 0.2 (Butyl Acetate = 1)
**Flammability (solid, gas):** Flammable
**Upper/lower flammability or explosive limits:** 5.7% / 0.8%
**Vapor pressure:** 0.8kPa (6mmHg) at 20ºC (68ºF)
**Vapor density:** 4 (Air =1)
**Relative density:** 2.5 kg/Lt
**Solubility:** Insoluble reacts with water to evolve $H^2$ gas
**Partition coefficient: N-Octanol/water:** N/A
**Auto-ignition temperature:** 471ºC (880ºF)
**Decomposition temperature:** N/A
**Viscosity:** 20,000 centipoises @ 25ºC

## SECTION 10 – STABILITY AND REACTIVITY

**Hazardous Reactions**
Contact with moisture, other materials that react with aluminum, or temperatures above 350º F (177º C), may cause release of flammable gas.

**Materials to avoid**
Water, Amines, Strong bases, Alcohols

**Hazardous decomposition products**
**By Fire and High Heat**: Carbon dioxide ($CO^2$), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke and other undetermined compounds.

## SECTION 11 – TOXICOLOGICAL INFORMATION

**NUMERICAL MEASURES OF TOXICITY:**
**Acute Toxicity:**

| CHEMICAL NAME | Oral LD50 | Dermal LD50 Rat (mg/kg) | Inhalation LC Rat (mg/1/4 h) |
|---|---|---|---|
| Nickel Metal | Rat >9000 mg/kg | Unknown | Unknown |

**Inhalation:**
The National Toxicology Program has listed nickel as reasonably anticipated to be a carcinogen based on the production of injection site tumors. The International Agency for Research on Cancer (IARC) found there was inadequate evidence that metallic nickel is carcinogenic to humans but since there was sufficient evidence that it is carcinogenic to animals, IARC concluded that metallic nickel is possibly carcinogenic to humans. In 1997, the ACGIH categorized elemental nickel as: A5 "Not Suspected as a Human Carcinogen". Epidemiological studies of workers exposed to nickel powder and to dust and fume generated in the production of nickel alloys and of stainless steel have not indicated the presence of a significant respiratory cancer hazard.

Evidence for the association of nickel compound exposures and cancer risk comes mainly from workers in now obsolete nickel refining operations where very high concentrations of airborne nickel, mostly present as oxidic or sub-sulphidic species at up to 100mg/$m^3$ or more, were associated with excess nasal and lung cancers.

The inhalation of nickel powder has not resulted in an increased incidence of malignant lung tumors in rodents. Repeated intratracheal instillation of nickel powder produced an increased incidence of malignant lung tumors in rats. Repeated intratracheal instillation of nickel powder did not produce an increased incidence of malignant lung tumors in hamsters when administered at the maximum tolerated dose. Single intratracheal instillations of nickel powder in hamsters at doses near the LD50 produced an increased incidence of fibrosarcoma, mesothelioma and rhabdomyosarcoma.

Inhalation of nickel powder at concentrations 15 times the TLV irritated the respiratory tract in rodents.

Inhalation of nickel may induce asthma. This effect is rare. It has been reported in welders where exposures to nickel are often mixed with other chemical substances. Persons with a known history of nickel sensitive asthma should avoid such contact.

**Skin Contact:**
Prolonged and intimate contact with metallic nickel may cause irritation to the skin and nickel sensitivity, which may result in allergic skin rashes.

One case has been reported of asthma induced by external exposure to a nickel-containing skin clip and by skin contact with nickel.

**Wounds:**
Nickel metal powder has caused tumors at the site of injection in rodents. However, studies do not suggest a significant risk for humans from nickel containing prostheses.

**Ingestion:**

The U.S. National Institute for Occupational Safety and Health (NIOSH) concluded there is no evidence that nickel and its inorganic compounds are carcinogenic when ingested. The U.S. Food and Drug Administration has affirmed that nickel is generally recognized as safe (GRAS) as a direct human food ingredient.

**Preexisting Conditions:**
Prolonged and intimate skin contact can cause an allergic skin rash in previously sensitized individuals.

**Reproductive Toxicity:**
Animal experiments indicate that soluble nickel ingestion causes adverse effects on fetal development at a threshold oral exposure of 2.2 mg/ Ni/kg/day by pregnant rats. Data are insufficient to determine if this effect occurs in humans and no regulatory agency has classified soluble forms of nickel as reproductive risks for humans.

# SECTION 12 – ECOLOGICAL INFORMATION

**Intratracheal Instillation:**

| CHEMICAL NAME | Test Species | Total dose, mg/Ni | # of instillations or injections | # with tumors/ # examined |
|---|---|---|---|---|
| Dust from grinding 18 Cr/10 Ni Stainless Steel, 6.79 Ni, 13.9 Cr, 59.2 Fe | Hamster | 2.4<br>7.3 | 12<br>12 | 0/62<br>0/62 |
| 26.8 Ni, 16.2 Cr, 39.2 Fe | Hamster | 10 | 1 | 0/100 |
| | Hamster | 20 | 1 | 0/100 |
| | Hamster | 40 | 1 | 0/100 |
| | Hamster | 80 | 4 | 0/100 |
| 66.5 Ni, 12.8 Cr, 6.5 Fe | Hamster | 10 | 1 | 1/100 |
| | Hamster | 20 | 1 | 8/100 |
| | Hamster | 40 | 1 | 12/102 |
| | Hamster | 80 | 4 | 10/100 |
| Nickel Powder | Hamster | 9.6 | 12 | 1/56 |
| | Hamster | 10 | 1 | 3/100 |
| | Hamster | 20 | 1 | 3/100 |
| | Hamster | 40 | 1 | 10/100 |
| | Rat | 6 | 20 | 10/39 |
| | Rat | 9 | 10 | 8/32 |

**Intramuscular Injection:**

| CHEMICAL NAME | Test Species | Total dose, mg/Ni | # of instillations or injections | # with tumors/ # examined |
|---|---|---|---|---|
| Ferronickel (40% Ni) | Rat | 14 | 1 | 0/20 |
| Nickel Powder | Rat | 14 | 1 | 13/20 |

**Intraperitoneal Injection:**

| CHEMICAL NAME | Test Species | Total dose, mg/Ni | # of instillations or injections | # with tumors/ # examined |
|---|---|---|---|---|
| 32 Ni, 21 Cr, 45 Fe, 0.8 Mn | Rat | 50 | 1 | 2/33 |
| | Rat | 100 | 2 | 1/36 |
| 74 Ni, 16 Cr, 7 Fe | Rat | 50 | 1 | 12/35 |
| | Rat | 100 | 2 | 22/33 |
| Nickel Powder | Rat | 6 | 1 | 4/34 |
| | Rat | 12 | 2 | 5/34 |
| | Rat | 25 | 25 | 25/35 |
| | Rat | 75 | 10 | 46/48 |

# SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste Disposal Method**
Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

**Empty Container Precautions**
Empty containers retain product residue; observe all precautions for product. **Do Not** heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. **Do Not** reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal.

## SECTION 14 – TRANSPORT INFORMATION

| | |
|---|---|
| UN # | 1263 |
| UN PROPER SHIPPING NAME: | Paint |
| HAZARD CLASS: | 3 |
| PACKING GROUP: | III |
| ENVIRONMENTAL HAZARDS: | N/A |
| GUIDANCE ON TRANSPORT IN BULK: | N/A |
| TRANSPORT LABELS REQUIRED: | Class 3 |

**Transport labels required**: Flammable liquid. (In the U.S., this material may be re-classified as a combustible liquid and is not regulated in containers less than 119 gallons via surface transportation.)

## SECTION 15 – REGULATORY INFORMATION

**US Federal Regulation:**
**SARA 311/312 Hazard Categories**

| CHEMICAL NAME | CWA reportable quantities | CWA Toxic Pollutants | CWA Priority Pollutants | CWA Hazardous Substances | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity RQ |
|---|---|---|---|---|---|---|---|
| *1,2,4−Trimethylbenzene | N/A | Listed | N/A | Chronic Health Hazard | Acute | N/A | N/A |
| *Xylene | N/A | Listed | N/A | Chronic Health Hazard | Acute | N/A | N/A |
| *Cumene | 5000 lbs | Listed | N/A | Chronic Health Hazard | Acute | Required | 5000 lbs |

***Contains less than .01% of total volume**

**US State Right to Know Regulations:** New Jersey, Massachusetts or Pennsylvania substance lists

| CHEMICAL NAME | CAS # |
|---|---|
| *1,2,4−Trimethylbenzene | 95-63-6 |
| *Cumene | 98-82-8 |

***Contains less than .01% of total volume**

**California Prop 65:**
**Warning: This product contains chemicals(s) known to the State of California to be Carcinogenic.**

| CHEMICAL NAME | CAS # |
|---|---|
| Cumene | 98-82-8 |

***Contains less than .01% of total volume**

## SECTION 16 – OTHER INFORMATION (HMIS RATING)

| | |
|---|---|
| Health | 2 |
| Flammability | 2 |
| Physical Hazard | 1 |
| Personal Protection | H |

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

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