

**PRODUCT NAME(S): Acrylic Urethane Resin (Part A)**

**SECTION 1 – IDENTIFICATION**

**Manufacturer's Info:**  
Rhino Linings Corporation  
9747 Businesspark Avenue  
San Diego, CA, 92131

**Product name:** Acrylic Urethane Resin (Part A)

**Information phone:** (858) 450 0441  
**Emergency contact:** CHEMTREC (800) 424 9300

**SECTION 2 – HAZARD(S) IDENTIFICATION**

**OSHA Hazard Communication Standard:**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**GHS-Label Elements:** **Signal Word:**  
DANGER

**Pictogram(s):**



GHS 08



GHS 07



GHS 02

**Classification of the substance or mixture:**

Hazard Class	Category	Hazard Statement Codes	Hazard Statements
Acute Toxicity, Oral	5	H303	May be harmful if swallowed
Acute Toxicity, Dermal	4	H312	Harmful in contact with skin
Acute Toxicity, Inhalation	4	H332	Harmful if inhaled
Skin corrosion / Irritation	2	H315	Causes skin irritation
Serious eye damage / Eye irritation	2A	H319	Causes serious eye irritation
Carcinogenicity	2	H351	Suspected of causing cancer
Reproductive Toxicity	2	H361	Suspected of damaging fertility or the unborn child
Specific target organ toxicity, single exposure	3	H335 H336	May cause respiratory irritation May cause drowsiness and dizziness
Specific target organ toxicity, repeated exposure	2	H373	May cause damage to central and peripheral nervous system, liver, kidney, cardiovascular system (blood, veins and arteries), respiratory system/lungs, skin, eyes and hearing organs through prolonged or repeated exposure
Aquatic Hazard, Acute	2	H401	Toxic to aquatic life
Flammable Liquids	2	H225	Highly flammable liquid and vapor

**Precautionary Statements:**

<b>Prevention:</b>	P201 P202 P281 P260 P271 P264 P273 P210 P240 P241 P242 P243	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe mist/ vapors/ spray. Use only outdoors or in a well-ventilated area. Wash exposed area with plenty of water and soap thoroughly after handling. Avoid release to the environment. Keep away from flames and hot surfaces. No smoking. Ground container and receiving equipment. Use explosion proof electrical, ventilating, lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
<b>Response:</b>	P303 + P361 + P353  P332 + P313 P363 P305 + P351 + P338  P337 + P313 P304 + P340 + P312	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/ attention. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

**Released: February 19, 2016**

	P308 + P313 P370 + P378	breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF exposed or concerned: Get medical advice/attention. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:	P403 + P233 + P235 P405	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal:	P501	Dispose of contents/container to hazardous or special waste collection point in accordance with local/regional/national/international regulations.
<b>Hazards not otherwise classified:</b>		No specific dangers known.

**SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Components	CAS #	EC #	Concentration, %
Xylene, mixed isomers	1330-20-7	215-535-7	15 – 40
Acetone	67-64-1	200-662-2	5 – 15
Ethylbenzene	100-41-4	202-849-4	0.1 – 1

**SECTION 4 – FIRST-AID MEASURES**
**Description of First Aid measures:**

<b>Inhalation:</b>	Move to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory problems, seek medical attention.
<b>Skin:</b>	Immediately wash material off of the skin with plenty of soap and water. Remove contaminated clothing and shoes and wash them before reuse. Get medical advice/attention if irritation develops or persists.
<b>Eye:</b>	Immediately rinse with water for several minutes, especially under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Do not rub eyes in order to prevent corneal injury. Get medical advice/attention if eye irritation develop or persists.
<b>Ingestion:</b>	Move to fresh air and keep at rest in a position comfortable for breathing. Remove dentures if any. Rinse mouth thoroughly with water and then drink 60 to 240 mL (2 to 8 oz). Get medical advice/attention if symptoms occur.

**Most important symptoms/effects, acute and delayed:** See Section 11 for more details.

**General advice for First Aid responders:** Show this SDS to physician.

**Note to physician:** Specific antidotes or neutralizers do not exist. Treatment should be supportive and based on the judgment of the physician in response to the reaction of the patient. Recommended medical monitoring for at least 48 hours.

**SECTION 5 – FIRE-FIGHTING MEASURES**
**Suitable extinguishing media:** Those recommended for Class B fuels: Alcohol-resistant foam, dry chemical, carbon dioxide fire extinguishers.

**Unsuitable extinguishing media:** Direct water stream may cause frothing, splattering of burning material, violent steam generation and spreading of fire.

**Specific hazards arising from the chemical:** Flammable Liquid, Category 2 per GHS. Keep away from extreme heat or open flame. If heated above its flash point, product will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to ignition source. Vapors may be heavier than air and travel considerable distance to a source of ignition and flash back. Mists or sprays may be flammable below regular flash points. Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. If released, product may float and ignite on surface of water.

Component, CAS #	Flash Point, °C (°F)	GHS	OSHA 29 CFR 1910.106
Xylene, CAS #: 1330-20-7	25 (77)	Flammable Liquid, Category 3	Flammable Liquid, Class IC
Acetone, CAS #: 67-64-1	-20 (-4)	Flammable Liquid, Category 2	Flammable Liquid, Class IB
Ethylbenzene, CAS #: 100-41-4	15 (59)	Flammable Liquid, Category 2	Flammable Liquid, Class IB

Hazardous combustion products: carbon and nitrogen oxides, amines, hydrogen cyanide, formaldehyde, acids aldehydes, lower molecular weight organic molecules. Creates dense black smoke when burned without sufficient oxygen.

**Special Protective Equipment and Precautions for fire-fighters:** Wear NIOSH or OSHA approved self-contained breathing apparatus in positive pressure mode with full face piece and full protective gear. Isolate the scene by removing all persons from the incident area. Prevent static discharge. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration

Released: February 19, 2016

of the container. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. No action should be taken involving any personal risk or without suitable training.

Water contaminated with this material must be contained and prevented being discharged to any waterway, sewer or drain. Fire water run-off, if not contained, may cause environmental damage. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Keep unnecessary and unprotected personnel from entering. Ensure adequate ventilation/exhaust extraction. Avoid breathing vapors or mist during clean up. Eliminate all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Use protective equipment as described in Section 8. Do not touch or walk through spilled material; spilled material may cause a slipping hazard.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Inform the relevant authorities if the product has caused environmental pollution. Water polluting material. See Section 12 for more details.

**Methods and materials for containment and cleaning up:** Product is flammable. Eliminate all sources of ignition. Use clean non-sparking tools to collect absorbed material. All equipment used when handling this product must be grounded. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Remove mechanically; cover the remainder with non-combustible absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth). Following absorption, transfer into properly labeled chemical waste containers. If necessary, repeat application of absorbent material until all liquid has been removed from the surface. Remove residual with warm, soapy water. After cleaning, remove waste container and keep in a well ventilated area. Properly dispose of the waste material and any contaminated equipment (i.e., broom or brush) in accordance with existing federal, state and local regulations.

For major spills: Stop leak if without risk. Approach release from upwind. Remove all ignition sources. Use spark-proof tools and explosion-proof equipment. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or contain and collect with an absorbent material as described in the previous paragraph.

For minor spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly with soap and water to remove residual contamination.

Never return spills to original containers for re-use.

Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, see Section 1 for the Emergency contact; for further disposal measures, see Section 13.

### SECTION 7 – HANDLING AND STORAGE

**Precautions for safe handling:** Product is flammable. Check atmosphere for explosiveness and oxygen deficiencies. Eliminate all sources of ignition. Ground and bond containers and equipment before transferring to avoid static sparks. All equipment must conform to applicable electrical code. Use clean non-sparking tools. Carefully vent any internal pressure before removing closure. Handle empty containers with care; vapor/residue may be ignited and explode.

Use adequate ventilation to keep airborne levels below the exposure limits. Do not inhale vapors and mists. Wear respiratory protection if material is heated, mixed, sprayed or used in a confined space. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash hands thoroughly after handling. Hands and/or face should be washed before eating, drinking and smoking and at the end of the shift. Remove contaminated clothing and protective equipment before entering eating areas. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

**Conditions for safe storage, including any incompatibilities:** Store in original or approved alternative container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Protect it against physical damage and moisture. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Flammable mixtures may exist within the vapor space of containers at room temperature. Keep liquid away from heat, sparks and flame. Do not cut, drill, grind, weld or perform similar operations on or near containers. Ground and bond containers and equipment. Use appropriate containment to avoid environmental contamination.

**Storage stability:** Stable under normal conditions.

**Storage temperature:** 65 - 80°F (18 - 27°C)

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. Employees and consumers should be warned of health risks associated with product use. See Section 8 for additional information on hygiene measures.

### SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control Parameters/Occupational exposure limit values:** Not available for mixture. Results for components are listed in Section 15.

**Appropriate engineering controls:** Use only with adequate ventilation. Provide process enclosures, local exhaust ventilation or other engineering controls to maintain recommended PEL. All equipment must conform to applicable electrical code. Use clean non-sparking tools. Exhaust air may require cleaning by scrubbers or filters to reduce environmental contamination.

Released: February 19, 2016

**Personal protective equipment:**
**Eye/face protection:**

When directly handling liquid product, eye protection is required. Examples of eye protection include safety glasses and goggles or full face shield when there is a greater risk of splash. Contact lenses should not be worn when working with chemicals.

**Skin/body protection:**

Product easily penetrates the skin and may carry other dissolved chemicals into the body; therefore glove selection is very important. Butyl rubber, fluoroelastomer, neoprene, or thick (15 mil) latex gloves are recommended. Commonly used nitrile gloves may protect from brief contact, but have been found to degrade rapidly with exposure to the product. Body should be covered with appropriate clothing (apron, arm covers or full body suit) depending on the task being performed and the risks involved. Appropriate footwear should be also selected based on the task being performed and the risks involved.

**Respiratory protection:**

Use local or general ventilation to control exposures below applicable exposure limits. When ventilation is inadequate, use either an atmosphere supplying respirator or NIOSH or OSHA approved air-purifying respirator that is recommended for use in solvent-containing areas. Respirator must be properly fitted and its selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Additional Protective Measures:** Educate and train employees in safe handling of this product. Follow all label instructions. As a general hygiene practice, wash hands and face after use. Clean water should always be readily available for emergency skin and eye washing. Emergency eyewash fountains and safety shower should be in close proximity.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear to hazy liquid
<b>Odor:</b>	Solvent-like
<b>Odor threshold:</b>	Not available for mixture; A: ~60ppm
<b>pH:</b>	Not applicable
<b>Melting point/ freezing point:</b>	Not available for mixture; X: <0°C (<32°F); A: -94°C (-137°F)
<b>Initial boiling point and boiling range:</b>	Not available for mixture; X: 137-140°C (279-284°F); A: 56°C (133°F)
<b>Flash point:</b>	Not available for mixture; X: 25°C (77°F); A: -20°C (-4°F)
<b>Evaporation rate:</b>	Not available for mixture; A: 5.6-6 (n-Butyl Acetate)
<b>Flammability (solid, gas):</b>	Not applicable
<b>Upper/ lower flammability or explosive limits:</b>	Not available for mixture; X: 7%(V) / 1.1%(V); A: 13% (V) / 2.1% (V)
<b>Vapor pressure:</b>	Not available for mixture; X: 24 hPa (18 mmHg) at 38°C (100°F); A: 181 mmHg @ 20°C
<b>Vapor density:</b>	Not available
<b>Relative density:</b>	0.95-1.05
<b>Solubility (water):</b>	Insoluble
<b>Partition coefficient n-octanol/water:</b>	Not available
<b>Auto-ignition temperature:</b>	Not available for mixture; X: 463°C (867°F); A: 540°C
<b>Decomposition temperature:</b>	Not available
<b>Viscosity:</b>	Not available
<b>Volatiles by volume</b>	62%
<b>Solids by weight</b>	46%

X-Xylene; A-Acetone

**SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:** Product will not undergo hazardous polymerization. Corrosive effects to metal are not anticipated. Based on its structural properties the product is not classified as oxidizing. Does not form flammable gases in the presence of water. Attacks rubber and certain plastics. Vapors may form explosive mixture with air.

**Chemical stability:** Stable under recommended storage conditions. Due to flammability, product requires special attention during handling and storing.

Component, CAS #	Flash Point, °C (°F)	GHS	OSHA 29 CFR 1910.106
Xylene, CAS #: 1330-20-7	25 (77)	Flammable Liquid, Category 3	Flammable Liquid, Class IC
Acetone, CAS #: 67-64-1	-20 (-4)	Flammable Liquid, Category 2	Flammable Liquid, Class IB
Ethylbenzene, CAS #: 100-41-4	15 (59)	Flammable Liquid, Category 2	Flammable Liquid, Class IB

**Conditions to avoid:** Excessive heat (temperatures exciding the flash point), open flame and sparks, pressure and mist formation.

**Incompatible materials:** Strong oxidizing agents. Strong acids and bases, peroxides, hypochlorites, perchlorates, nitrates, etc.

**Hazardous decomposition products:** Depend upon temperature, air supply and presence of other materials. Can include, but are not limited to carbon and nitrogen oxides, amines, hydrogen cyanide, formaldehyde, acids aldehydes, lower molecular weight organic molecules. Creates dense black smoke when burned without sufficient oxygen.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**Likely Routes of Exposure:** Inhalation, Skin and Eye Contact, Ingestion.

**Symptoms of exposure:**

**Acute toxicity:**

**Oral:** May be harmful if swallowed. Adverse symptoms may include sore throat, abdominal pain, nausea, vomiting and diarrhea. Vomiting may cause aspiration of solvent resulting in chemical pneumonitis.

**Dermal:** Harmful in contact with skin. Adverse symptoms may include irritation, redness and swelling.

**Inhalation:** Harmful if inhaled. Solvent vapors are irritating to the eyes, nose and throat. Adverse symptoms may include red, itchy eyes, dryness of the throat, tightness in the chest, headache, dizziness, nausea, narcosis, fatigue and loss of appetite. Persons exposed to 200 ppm of Xylene experienced eye, nose and throat irritation. Concentrations of 10,000 ppm of xylene can be immediately dangerous to life and health.

**Skin corrosion / irritation:**

Irritating to skin. Skin contact may result in dermatitis, either irritative or allergic with symptoms of reddening, itching, and swelling and those similar to acute inhalation symptoms.

**Serious eye damage / eye irritation:**

Liquid, aerosols or vapors may cause serious eye irritation. Adverse symptoms may include pain, tearing, redness, itching and swelling. If left untreated, may result in corneal damage and injury is slow to heal. However, damage is usually reversible. Prolonged vapor contact may cause conjunctivitis.

**Specific target organ toxicity, single exposure:**

Product contains components that may affect respiratory and central nervous system after single exposure.

- o Xylene, CAS #: 1330-20-7: May cause respiratory irritation. May cause drowsiness and dizziness.
- o Acetone, CAS #: 67-64-1: May cause respiratory irritation. May cause drowsiness and dizziness
- o Ethylbenzene, CAS #: 100-41-4: May cause drowsiness or dizziness.

**Aspiration hazard:** Not an aspiration hazard.

**Chronic toxicity:**

**Respiratory and Skin Sensitizer:**

This product does not contain component(s) that are reported to be a skin or respiratory sensitizer.

**Germ cell mutagenicity:**

This product contains component which cause concern due to possible mutagenic effects, but for which the available information is not adequate for making a satisfactory assessment.

**Carcinogenicity:**

This product contains components that are suspected carcinogens:

- o Ethylbenzene, CAS #: 100-41-4: IARC: Group 2B (Possibly carcinogenic to humans)
- o Xylene, CAS #: 1330-20-7 IARC: Group 3 (Not classifiable as to its carcinogenicity to humans)

**Reproductive toxicity:**

This product contains components that are suspected of damaging fertility or the unborn child:

- o Xylenes, CAS #: 1330-20-7: May damage the developing fetus.
- o Ethylbenzene, CAS #: 100-41-4

**Specific target organ toxicity, repeated exposure:**

Central and peripheral nervous system, liver, kidney, cardiovascular (blood, veins and arteries) and respiratory system/lungs, skin, eyes, hearing organs.

Chronic exposure to organic solvents by inhalation and skin absorption may lead to various neurotoxic effects including permanent brain and nervous system damage. Symptoms include loss of memory, intellectual ability and coordination.

Repeated or prolonged skin contact can result in dry, defatted and cracked skin causing increased susceptibility to infection. Irritation may develop to dermatitis.

**Medical conditions aggravated by overexposure:**

Central and peripheral nervous system, liver, kidney, cardiovascular (blood, veins and arteries) and respiratory system/lungs, skin, eyes, hearing organs disorders if product is handled without adequate protection.

**Toxicity test results:** Not available for mixture. Results for components:

Components	Test Results
Xylene, CAS #: 1330-20-7	Can affect by inhalation and skin absorption. <u>Acute Toxicity</u> Oral LD50 (Rat): 3,523 mg/kg Dermal LD50 (Rabbit): 12,126 mg/kg Inhalation LC50 (Rat, gas), 4hrs: 5,000 ppm; Can irritate the nose and throat causing coughing and wheezing. Skin corrosion/irritation (Rabbit), 24hrs: irritating. Serious eye damage/eye irritation (Rabbit): Moderate eye irritation STOT, SE: May cause respiratory irritation. May cause drowsiness and dizziness. Aspiration hazard: May be fatal if swallowed and enters airways. <u>Chronic toxicity</u> Sensitization, skin and respiratory: No data available Germ cell mutagenicity: No data available. Carcinogenicity: IARC: Group 3 (Not classifiable as to its carcinogenicity to humans). Reproductive toxicity: May damage the developing fetus. STOT, RE: Prolonged inhalation may result in headache, dizziness, nausea, loss of concentration, memory and muscle coordination, tremors, irritability and blurred vision, irritation of mucous membrane pneumonitis and pulmonary edema. May cause mild changes in liver function, kidney impairment,

**Released: February 19, 2016**

	hyperplasia and blood abnormalities. Effects on skin: defatting and dermatitis. Odor is not an adequate warning for overexposure to xylene. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Acetone, CAS #: 67-64-1	<p><b>Acute Toxicity:</b>  Oral LD50 (Rat): 5,800 mg/kg; Behavioral: Altered sleep time (including change in righting reflex), Tremor, Headache.  Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.  Dermal LD50 (Guinea pig): 7,426  Inhalation LC50 (Rat), 4hrs: 32,000 ppm; 76mg/L; (Rat), 8hrs: 50,100 mg/m<sup>3</sup>; Drowsiness Dizziness Unconsciousness  Skin corrosion/irritation (Rabbit), 24hrs: Mild skin irritation. Solvents may degrease the skin.  Serious eye damage/eye irritation (Rabbit), 24hrs: irritating. (Draize Test)  STOT, SE: Central nervous system. May cause drowsiness or dizziness. Category 3 with narcotic effects. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects.</p> <p><b>Chronic toxicity:</b>  Sensitization, skin and respiratory (Guinea pig): Not skin sensitizer (OECD 429, GPMT)  Germ cell mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  in vitro: Mammalian cell gene mutation assay-Mouse lymphoma cells, Without metabolic activation: negative (OECD Test Guideline 476); Ames test-with and without metabolic activation: negative (OECD Test Guideline 471); Chromosome aberration test-Chinese hamster ovary (CHO)-with and without metabolic activation: negative (OECD Test Guideline 473)  in vivo: Micronucleus test-Oral (mouse), 13weeks at doses 5,000, 10,000, 20,000 ppm: negative  Carcinogenicity: Dermal (mouse, female), 365days (90%) or 424days (100%) / 3 times per week: at dose: 0.1ml 90(71mg) or 100% (79mg): NOAEL: 79 mg: did not display carcinogenic properties.  Reproductive toxicity: No impairment of fertility, embryotoxic or teratogenic effects have been observed in animal experiments.  Effects on Fertility: Oral (rat, male), 7 days/week: at doses 0, 5000, 10000 mg/L; General Toxicity: Parent: LOAEL: 10,000; Fertility: 10,000; Effects on Fetal development: Inhalation (Rat), 7 days/week: at doses 0, 440, 2200, 11000 ppm; General Toxicity: Maternal: NOAEC: 2,200 ppm, Teratogenicity: NOAEC: 11,000 ppm, Embryo-fetal toxicity: NOAEC: 2,200 ppm (OECD Test Guideline 414)  STOT, RE: Inhalation (Rat), 8weeks /5days a week: NOEL: 19,000 ppm-slightly reduced weight gain compared to controls; Oral (Rat), 90days: NOEL: 100 mg/kg; LOEL: 500 mg/kg - increased liver and kidney weights  Oral (mouse, male), 13weeks, daily at doses 1250, 2500, 5000, 10000, 20000: NOAEL: 20000 (OECD Test Guideline 408)  Oral (mouse, female), 13weeks, daily at doses 2500, 5000, 10000, 20000, 50000: NOAEL: 20000, LOAEL: 50000 (OECD Test Guideline 408)  Based on Human Evidence: Kidney disorders, Skin disorders (Dermatitis)</p>
Ethylbenzene, CAS #: 100-41-4	<p><b>Acute toxicity:</b> low.  Oral (Rat): LD50: 3,500 mg/kg;  Dermal (Rabbit): LD50: 15,433 mg/kg.  Inhalation (guinea pig), 8hrs: LPTC: 2,500 ppm: coma; (Human), 8hrs: LPTC: at 100 ppm: eye effects, sleep; (Human), 4hrs: at 10 ppm: decreased pulse.  Skin corrosion/irritation (Rabbit), 24hrs: Moderate skin irritation.  Serious eye damage/eye irritation (Rabbit), 24hrs: Mild eye irritation.  STOT, SE: may cause drowsiness and dizziness.  Aspiration hazard: May be fatal if swallowed and enters airways.</p> <p><b>Chronic toxicity:</b>  Respiratory or skin sensitization (guinea pig): No data available.  Germ cell mutagenicity: Hamster ovary: negative; (Mouse, male/female): negative. In vivo genotoxicity studies are all negative and in vitro genotoxicity studies are predominantly negative.  Carcinogenicity: IARC: Group 2B: Possibly carcinogenic to humans; EPA has not determined ethylbenzene to be a carcinogen; NTP: inhalation study in rats and mice. Exposure resulted in an increased incidence of kidney and testicular tumors in male rats, and trends of increased kidney tumors in female rats, lung tumors in male mice, and liver tumors in female mice. ACGIH: Confirmed animal carcinogen.  Reproductive toxicity: Inhalation (Rat): LPTC: 97 ppm/7 hour (15 day prior to copulation): Effects on fertility: Female fertility index;  LPTC: 985 ppm/7 hour (1-19 day pregnant): Reproductive: Effects on embryo or fetus: Fetotoxicity (except death, e.g., stunted fetus);  LPTC: 96 ppm/7 hour (1-19 day pregnant): Reproductive: Specific developmental abnormalities: Musculoskeletal system;  LPTC: 600 mg/m<sup>3</sup>/24 hour (7-15 day pregnant): Reproductive: Effects on fertility: Post-implantation mortality (e.g., dead and/or resorbed implants; per total number of implants), Effects on embryo or fetus: Fetal death, Specific developmental abnormalities: Musculoskeletal system;  Inhalation (Rabbit): LPTC: 99 ppm/7 hour (1-18 day pregnant): Reproductive: Effects on fertility: Litter size;  LPTC: 500 mg/m<sup>3</sup>/24 hour (7-20 day pregnant): Reproductive: Effects on embryo or fetus: Fetotoxicity (except death, e.g., stunted fetus);  LPTC: 1 gm/m<sup>3</sup>/24 hour (7-20 day pregnant): Reproductive: Effects on fertility: Abortion;  STOT, RE: Central nervous system depression (Nausea, Headache, Vomiting, Ataxia, Tremors); hearing organs; Stomach Irregularities (Based on Human Evidence); (male mice): NOAEL: 250 ppm. (female mice): NOAEL: 75ppm.  Hearing loss has been reported in rats (but not guinea pigs) exposed to relatively high exposures (400 ppm and greater).  Oral (Rat), 2 week- intermittent: LPTC: 8,993 mg/kg; hearing  Oral (Rabbit), 24 week- continuous: LPTC: 1,386 mg/kg; Brain and Coverings: Recordings from specific areas of CNS; Weight loss or decreased weight gain  Inhalation (Human), 7 year- intermittent: LPTC: 30 mg/m<sup>3</sup>; Headache, Irritability  Inhalation (Rat), 6 hour/4 week- intermittent: LPTC: 782 ppm; Changes in liver weight, Changes in leukocyte and platelet count.  Inhalation (Mouse), 6 hour/97 day- intermittent: LPTC: 975 ppm; Changes in liver weight, Changes in bladder weight; (Mouse), 6 hour/4 week- intermittent: LPTC: 782 ppm; Changes in liver weight.  Inhalation (Rabbit), 4 hour/30 week- intermittent: LPTC: 100 mg/m<sup>3</sup>; Changes in blood composition (e.g. TP, bilirubin, cholesterol) and leukocyte (WBC) count</p>

**SECTION 12 – ECOLOGICAL INFORMATION**
**Ecotoxicity:** Acutely hazardous for aquatic organisms. Do not allow product to reach ground water, water course or sewage system.

**Persistence and degradability:** Readily biodegradable.

**Bioaccumulative potential:** Not expected.

**Mobility in soil:** Not known.

**Other adverse effects:** Not known.

**Ecotoxicity test results:** Not available for the mixture. Results for components:

Components	Test Results
Xylene, CAS #: 1330-20-7	<p><b>Acute toxicity:</b> Toxic to aquatic life.  Fish: LC50 (rainbow trout), 96hrs: 3.3 mg/L  Aquatic invertebrates: EC50 (Daphnia magna), 24hrs: 75.49 mg/L</p>

	<p>Aquatic plants: EC50 (green algae), 14days: 72 mg/L (Growth inhibition)  <u>Chronic toxicity:</u> No sufficient data available for classification.  <u>Ecological Data:</u>            Biodegradation: Readily biodegradable. In air, xylenes degrade by reacting with photochemically produced hydroxyl radicals. In soil it will volatilize and leach into groundwater. Little bioconcentration is expected. Atmospheric fate: According to a model of gas/particle partitioning of semivolatile organic compounds in the atmosphere, xylene, which has an experimental vapor pressure of 7.99 mm Hg at 25 deg C, will exist solely as a vapor in the ambient atmosphere. Vapor-phase xylene is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the atmospheric lifetime of xylene is about 14-26 hours. Ambient levels of xylene are detected in the atmosphere due to large emissions of this compound.            Bioaccumulation: Not significant; BCF values: freshwater fish: 1-15 and saltwater fish and invertebrates: 1-24 in, and uptake and depuration both occurring rapidly.            Results of PBT and vPvB assessment: No data available</p>
Acetone, CAS #: 67-64-1	<p><u>Acute Toxicity:</u>            Fish (rainbow trout), 96hrs: LC50: 5,540 mg/L (static)            Fish (Bluegill sunfish), 48hrs: LC50: 8,800 mg/L (static)            Aquatic Invertebrates (Daphnia magna), 48hrs: EC50: 12,600 - 12,700 mg/L            Aquatic Plants (algae), 14days: EC50: 3,020 mg/L            Microorganisms (Bacteria), 15min: EC50: 14,500 mg/L  <u>Chronic toxicity:</u>            Persistence and biodegradability: Readily biodegradable. 91% (OECD 301B)            Bioaccumulative potential: Partition Coefficient: n-octanol/water: log Pow: -0.24            PBT and vPvB assessment: No data available.            Mobility in soil: No data available.</p>
Ethylbenzene, CAS #: 100-41-4	<p><u>Acute toxicity:</u> Toxic to aquatic life. Category 2.            Fish (Atlantic silverside), 96hrs: LC50: 5.1 mg/L            Aquatic invertebrates (Daphnia magna), 48hrs: EC50: 1.8- 2.4 mg/L            Aquatic plants (algae), 72hrs: EC50: 4.9 mg/L (OECD Test Guideline 201)  <u>Chronic toxicity:</u> Harmful to aquatic life with long lasting effects. Category 3.            Aquatic invertebrates (water flea), 7days: LC50=3.6 mg/L (static EPA Whole Effluent Testing Program method); (repro), 7days: IC50: 3.3 mg/L; (repro), 7days: LOEL: 1.7 mg/L; (repro), 7days: NOEL:1.0 mg/lb            Terrestrial Plants (scarlet bean leaf), 1hr/vapor in air: EC50: ~27 mg/L.  <u>Ecological Data:</u>            Persistence and degradability: Readily biodegradable. Biodegradability aerobic: 70-80% in 28 days. Inherently biodegradable in water and in soil under aerobic conditions, and not rapidly biodegradable in anaerobic conditions. Photodegradation is the primary route of removal in the environment.            Ethylbenzene partitions to air from water and soil, and is degraded in air.            Bioaccumulative potential: not expected to bioaccumulate (BCF 1.1 – 15).            Mobility in soil: moderately adsorbed to soil.            PBT/vPvB assessment: No data available.</p>

**SECTION 13 – DISPOSAL CONSIDERATIONS**




**Product Disposal:** The generation of waste should be avoided or minimized wherever possible. If product becomes a waste, it meets criteria of hazardous waste as defined in 40 CFR 261, Subpart C and D. Do not discharge into sewer system. Spill cleanup residues are subject to RCRA storage and disposal requirements.

Dispose waste in compliance with local, state and federal regulations via licensed waste disposal contractor. Preferred disposal method is burning in a chemical incinerator equipped with an afterburner and scrubber; extra care should be taken in igniting as this material is highly flammable.

**EPA Hazardous Waste Code:** D001 (Ignitable waste), RQ: 100 lbs

**Container disposal:** Even after emptying, container may retain residues. Do not heat or cut empty container with electric or gas torch since highly toxic vapors and gases can be formed. Empty containers should be completely drained and safely stored until appropriately reconditioned or disposed through licensed contractor in accordance with government regulations. This material and its container must be disposed of in a safe way.

**SECTION 14 – TRANSPORT INFORMATION**

	Land transport, U.S. DOT	Sea transport, IMDG:	Air transport, IATA/ICAO:
<b>UN number:</b>	UN 1866	UN 1866	UN 1866
<b>UN proper shipping name:</b>	Resin solution, flammable	Resin solution, flammable	Resin solution, flammable
<b>Transport hazard class(es):</b>	3	3	3
<b>Packing group:</b>	II	II	II
<b>Hazard Label</b>			
<b>Special precautions:</b>	Shipping descriptions are provided for informational purposes and do not consider container sizes and packaging. Certain exceptions may be applied as outlined in 49 CFR 173.150. Special Provisions: 149, B52, IB2, T4, TP1, TP8 Exceptions: 150; Non bulk: 173 / Bulk: 242 Passenger aircraft rail: 5L / Cargo aircraft only: 60L / Location: B		

**SECTION 15 – REGULATORY INFORMATION**

**U.S. Regulations:**

**OSHA HCS:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29CFR 1910.1200.

**TSCA Regulations:**

All components of this product are listed or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

**EPCRA Section 302 (40 CFR Part 355)** (Emergency Response Planning, Extremely Hazardous Substance):

No components are subject to the reporting.

**EPCRA Section 304 (40 CFR Part 355)** (Emergency Release Notification Requirements):

No components are subject to the reporting.

**EPCRA Sections 311 & 312** (Hazardous Chemical Inventory Reporting, Hazard Categories):

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**EPCRA Section 313 (40 CFR Part 372)** (Toxic Chemical Release Inventory Reporting):

The following component of this product is present above De Minimis level and therefore requires reporting.

- o Xylene, mixed isomers, CAS #: 1330-20-7: in product: 15-40%; De Minimis: 1.0%
- o Ethylbenzene, CAS #: 100-41-4: in product: 0.1-1%; De Minimis: 0.1%

**CERCLA Sections 102-103 (40 CFR Part 302)** (Hazardous Substances Release Notification):

The following components are subject to the reporting if a criterion of reportable quantity is fulfilled:

- o Xylene, mixed isomers, CAS #: 1330-20-7: RQ: 100 lbs
- o Acetone, CAS #: 67-64-1: RQ: 5,000 lbs
- o Ethylbenzene, CAS #: 100-41-4: RQ: 1,000 lbs

**Clean Air Act:**

- Ozone Depleting Substances (ODS): This product does not contain and is not manufactured with ozone depleting substances.
- Hazardous Air Pollutants, OSHA, Section 112(b), Table Z-1: The following components are listed:

Substance	Regulatory Limits			Recommended Limits	
	OSHA PEL		Cal/OSHA PEL (as of 4/26/13)	NIOSH REL (as of 4/26/13)	ACGIH® 2015 TLV®
	ppm	mg/m <sup>3</sup>	8-hour TWA, mg/m <sup>3</sup>	Up to 10-hour TWA, mg/m <sup>3</sup>	8-hour TWA, mg/m <sup>3</sup>
Xylene, mixed isomers, CAS #: 1330-20-7	100	435	100 ppm (ST) 150 ppm; (C) 300 ppm	100 ppm (ST) 150 ppm	100 ppm (ST) 150 ppm
Acetone, CAS #: 67-64-1	1,000	2,400	500 ppm; (ST) 750 ppm; (C) 3,000 ppm	250 ppm	250 ppm; (ST) 500 ppm;
Ethylbenzene, CAS #: 100-41-4	100	435	100 ppm (ST) 125 ppm	100 ppm (ST) 125 ppm	20 ppm

ppm-parts per million; (C)-Ceiling, (ST)-Short Term Exposure Limit; Appendix A, C and D refers to Appendixes of Hazardous Air Pollutants List, Section 112(b) of Clean Air Act

**Clean Water Act:**

- Section 307(a) (Toxic pollutants):
  - o Ethylbenzene, CAS #: 100-41-4
- Section 311(b)(2): Table 116.4A (Hazardous chemicals) / Table 117.3 (RQ):
  - o Xylene, CAS #: 1330-20-7
  - o Ethylbenzene, CAS #: 100-41-4

**NFPA rating:** Health: 2 Fire: 3 Reactivity: 1 Special: 0

**HMIS rating:** Health: 2 Flammability: 3 Physical hazard: 1

**State Regulations:**

California Prop. 65 Components:

This product contains chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Ethylbenzene, CAS #: 100-41-4

- causes cancer; Date listed: June 11, 2004

Instruction: for regulatory information on components of this mixture, check the appropriate state websites.

**International Regulations/Inventories:**

Canadian Regulations: All ingredients of this product are listed or are exempt from the DSL.

WHMIS Classification (Controlled Products Regulations):

Class D2B: Material causing other toxic effects (Toxic)

WHMIS Label Information:

Class B2: Flammable Liquid



**SECTION 16 – OTHER INFORMATION**

**LEGEND**

GHS	Globally Harmonized System
CAS	Chemical Abstracts Services
EC	European Community
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
ACGIH	American Conference of Governmental Industrial Hygienists
NIOSH	National Institute of Occupational Safety and Health



PEL	Permissible Exposure Limits
TLV	Threshold Limit Value
REL	Recommended Exposure Limit
TWA	Time-Weighted Average
STEL	Short-term exposure limit
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
STOT, SE	Specific Target Organ Toxicity following Single Exposure
STOT, RE	Specific Target Organ Toxicity following Repeated Exposure
DOT	Department of Transportation
IMDG	International maritime dangerous goods code
IATA, ICAO	International Air Transport Association, International Civil Aviation Organization
TSCA	Toxic Substances Control Act
EPCRA	Emergency Planning and Community Right-to-Know Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
RQ	Reportable Quantity
TQ	Threshold Quantity
TPQ	Threshold Planning Quantity
EHS	Extremely Hazardous Substances
DSL	Domestic Substance List
WHMIS	Workplace Hazardous Materials Information System

**Latest revision date:** February 19, 2016 – Preparation of SDS in accordance to the GHS requirements

**Date of the previous revision:** July 16, 2013

**Disclaimer:** The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings Corporation makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.