

A. D. Rossi

A Registered Trade Name of Nicom Coatings Corporation

123 Red Barn Road

Danville, VT 05828

*Phone (802)751-8420 * Fax (802)751-8422*

February 24, 2014

Renaud Bros. Inc.
283 For Bridgeman Road #2
Vernon, VT 05354

RE: State of Vermont - Material Certifications

Project: **BRF 010-1 (43)**
Marlboro, VT

Please advise the resident engineer for this project that AD Rossi / Nicom will be using the following pre-certified products for these items and he/she needs to complete a TA-555.

Item No. 516.10 Bridge Expansion Joint, Asphaltic Plug
DSA – Thorma Joint System

Item No. 520.10 Membrane Waterproofing, Spray Applied
Stirling Lloyd Eliminator Liquid Membrane

Item No. 524.11 Joint Sealer, Hot Poured
Material used: binder from the DSA – Thorma Joint System

Thank you.

Katrina Carreau
Contract Administrator

primer par1**HIGH PERFORMANCE ACRYLIC PRIMER AND CRACK SEALER****PRODUCT DESCRIPTION**

Primer PAR1 is a two component, 100% solids, fast curing, high strength methyl methacrylate reactive resin. It is formulated to form a very strong cohesive bond to substrates and seal surfaces.

TYPICAL USES

Primer PAR1 is used to seal and prime concrete and wood substrates:

- prior to the application of Stirling Lloyd resin systems
- to seal and heal cracks in concrete decks
- to help consolidate weak surfaces

PRODUCT ADVANTAGES

- VOC compliant – 100% solid
- Excellent bond to substrate, typically stronger than the cohesive strength of concrete surface
- Bond test allows for on site quality assurance
- Low viscosity makes it suitable for application by brush, roller and - for priming and surface sealing - spray. Note: we do not recommend spray for crack penetration
- Low viscosity enables good penetration into cracks and voids without excessive material consumption
- Elastic property permits some structural movement
- Fast cure, typically 20 minutes for foot traffic and 40 minutes for overcoating
- Working temperature range can be extended by simple site addition of Retarder or Cold Temperature Additive as required
- Working time can be extended by site addition of Retarder
- Easy to apply to horizontal and vertical surfaces
- Can be overcoated at any time – no overcoating window limitations or repriming, abraiding
- Seamless, no cold joints, always bonds to itself
- Used over a wide temperature range, including below freezing. Note: when used for crack penetration, the product's higher viscosity at low temperatures may reduce its penetration into cracks
- USDA/FDA approved for Flooring applications

PHYSICAL CHARACTERISTICS

Percent Solid	100
Pot Life @ 68°F	10-20 minutes
Cure Rate @ 68°F	30-45 minutes
Overcoat Time	30-45 minutes
Tensile Strength	4,000 psi
Tensile Modulus	400,000 psi
Viscosity	50-80cps
Elongation	25-30%

SURFACE PREPARATION

The substrate must be dry and free from oil, grease, dirt, bituminous and other contaminants. Unsound concrete and laitance shall be removed by appropriate mechanical means or acid-etching. Cracks to be sealed must be cleaned of debris and moisture by vacuum or compressed air.

BOND TEST

Prior to full application of Primer PAR1, tensile adhesion tests shall be conducted to determine adequacy of substrate preparation and bond. The bond of the primer to the substrate should be greater than the tensile strength of the substrate. In the case of concrete, this should result in concrete and fractured aggregate being attached to the test dolly with failure at a 100psi or higher. If low values are obtained, and only laitance or a small amount of substrate is attached, further preparation is required.

APPLICATION**1. Surface Priming & Sealing**

When used as a surface primer/sealer, the product can be applied by brush, roller or spray. The appropriate amount of Hardener Powder is determined by the Stirling Lloyd Mixing Guide and is a function of the material and substrate temperature. The Hardener Powder is added to the resin and thoroughly dispersed.

2. Crack Sealing

When used as a crack sealer, Primer PAR1 is applied direct to the cracks via suitable dispensers as recommended by our Technical Services Department.

primer par1**HIGH PERFORMANCE ACRYLIC PRIMER AND CRACK SEALER**

The material is introduced directly to the crack aperture and allowed to pond, enabling the resin to penetrate into the crack. We do not recommend spray application for this purpose.

COVERAGE

For application as a full surface primer/sealer prior to application of a Stirling Lloyd resin system or for consolidating a surface Primer PAR1 is applied in one coat at a rate of 80-175 square feet per gallon, depending on the porosity of the concrete. Very porous substrates may require a second application.

Consumption rates for sealing cracks can vary considerably, and a test area should be installed before commencing work to help determine likely coverage rates.

CLEANING

Do not let the material harden on tools. Clean up may be done with a solvent such as acetone.

PRECAUTIONS

Primer PAR1 liquid resin components are classed as flammable liquid (flashpoint 52.7°F) and should be handled accordingly. Workers should wear protective

clothing. Adequate ventilation must be provided. Read and understand all Material Safety Data Sheets prior to commencing work.

The resin cannot be thinned with the additions of any solvents.

STORAGE CONDITIONS

Store in a cool, dry place, out of direct sunlight. Do not store near open flame or food. Primer PAR1 has a shelf life of 6 months in the original unopened container.

SUPPLY

Primer PAR1 is available ex-stock on East and West Coast USA. Please contact the Stirling Lloyd Products, Inc. Sales Office for further information.

TECHNICAL INFORMATION

Primer PAR1 is one of a wide range of specialist repair, waterproofing and wearing materials supplied by Stirling Lloyd. If you require further information on this or any other of our products please contact us at the address below.

The information contained in this literature is accurate to the best of the publisher's knowledge. We pursue a progressive research and development policy and reserve the right to alter any of the details contained herein without notice. The information given must not be taken in any way to form a specification and Stirling Lloyd Products, Inc. will not accept liability whatsoever arising out of the use of the information contained herein. This data sheet does not form part of the 'conditions of sale' of our products.

Stirling Lloyd Products, Inc.

152 Rockwell Road, Building A
Newington, CT 06111

Tel: (860) 666-5008 Fax: (860) 666-5106

Email: northamerica@stirlinglloyd.com

Website: www.stirlinglloyd.com

eliminator®**SPRAY APPLIED BRIDGE DECK WATERPROOFING****PRODUCT DESCRIPTION**

Eliminator® is a very high performance elastomeric waterproofing membrane, based on 100% solids, fast curing, cold liquid spray applied acrylic resin. Eliminator forms a tough, flexible, seamless membrane free of vulnerable joints, and is resistant to chemical attack by oil, fuels, salts, dilute mineral acids and water. The system's rapid application and fast-cure minimize site occupation times and allow earliest access back to the structure. Eliminator has been the waterproofing of choice for thousands of structures around the world and the USA, including some of the most prestigious long-span bridges and tunnels. A Project Reference list is supplied upon request.

TYPICAL USES

Eliminator protects concrete and steel structures from the corrosive effects of water and chloride ions. The system is used for railroad, highway and pedestrian bridge decks, tunnels, containments, foundations and wherever long-term waterproofing is required. The Eliminator membrane is installed in conjunction with Stirling Lloyd proprietary primers, ensuring a high bond between substrate and membrane and, for highways, a compatible tack coat promoting high adhesion between membrane and surfacing.

PRODUCT ADVANTAGES

- ◆ **Long and effective life**
- ◆ **Rapid application and re-access**
- ◆ **Crack-bridges** across wide temperature range
- ◆ **Excellent abrasion resistance**
- ◆ **Excellent chemical resistance**
- ◆ **VOC compliant** – 100% solids
- ◆ **High bond** to substrate, preventing tracking of water under membrane.
- ◆ **High thixotropy** for application to vertical and horizontal surfaces
- ◆ **Seamless**, and always bonds to itself
- ◆ **Two color-coded** coats assure highest quality system and minimize pinholes
- ◆ **Unaffected** by 480°F surfacing
- ◆ **Tough** – can withstand direct ballast loading without protection board. Conforms to AREMA Specifications Chapter 29-2-6, 2.3.10
- ◆ **Quality Assured** – ISO9002 manufacture

APPROVALS/CLIENT LIST

Eliminator has been used by many owners and operators of critical infrastructure in North America, including:

◆ Highways

Port Authority of New York & New Jersey, New Hampshire DOT, NY State Thruway, NY City DOT, NJ Turnpike Authority, Triborough Bridge & Tunnel Authority, Massachusetts DOT, CalTrans, Illinois DOT, Municipality of Metropolitan Toronto, Halifax-Dartmouth Bridge Commission

◆ Railroads

Amtrak, CSX, Metro North, Union Pacific, Norfolk Southern, BNSF, Kansas City Southern, Kansas City Terminal, Massachusetts Bay Transit Authority, New Jersey Transit, Metro-Atlanta Regional Transit Authority, Canadian Pacific, BC Rail, Minneapolis Light Rail, Chicago Metra, MassPort

APPLICATION

Eliminator is typically spray applied. The amount of Hardener Powder is determined from the Mixing Guide, based on material and substrate temperatures. The Hardener Powder is added to the Eliminator Part B and thoroughly dispersed. Plural component spray equipment is used, which mixes the Parts A and B. Up to three sprayers can be used with each pump system. The membrane is applied when the primer has cured typically within 20 minutes. Two distinct color coats are used, to aid QA. Wet film thickness gauges are used to check thickness and overall consumption. Eliminator's speed of cure permits the second coat to be applied 45 minutes after the first coat.

Eliminator is normally applied in two coats for maximum security of protection to give a total thickness of 120 mils (3 mm), dependant on Client's Specification.

CLEANING

Material should not be allowed to harden on tools. Acetone should be used for clean-up.

PRECAUTIONS

Eliminator liquid resin components are classified as flammable liquid (flashpoint 52.7°F, 11.5°C) and must be handled accordingly. Workers should wear appropriate protective clothing. Adequate ventilation must be provided. The Material Safety Data Sheets (MSDS) must be read by all personnel involved with every stage of all the products' handling and use.

STORAGE

Store cool and dry, out of direct sunlight. Do not store near open flames or food. Eliminator has a shelf life of 6 months in the original unopened container.

eliminator®

SPRAY APPLIED BRIDGE DECK WATERPROOFING

PHYSICAL PROPERTIES

<u>Property</u>	<u>Test Method</u>	<u>Result</u>
♦ Solids Content		100 %
♦ Application Temperature		14°F to 120°F (-10°C to 50°C)*
♦ Gel Time	Stirling Lloyd 001	6-11 minutes @ 68°F (20°C)
♦ Overcoating Time	Stirling Lloyd 001	45 minutes @ 68°F (20°C)
♦ Water Absorption	ASTM D570-81	< 0.5%
♦ Water Vapor Transmission	ASTM E96-00	1.048 gm/m ² /day
♦ Chloride Transmission	BD 47	0.00% by sample weight
♦ Chemical Resistance	ASTM D543	
Antifreeze(Ethylene Glycol)		Resistant
Diesel Fuel		Resistant
Gasoline		Resistant
Motor Oil		Resistant
Sodium Chloride		Resistant
♦ Tensile Strength (typical)	ASTM D638-91	1,700 psi (11.8Mpa)
Heat Aging @ 160°F (70°C)	(4 weeks)	0% change
♦ Elongation At Break (typical)	ASTM D638-91	130%
Heat Aging @ 160°F (70°C)	(4 weeks)	0% change
♦ Low Temperature Flexibility	CAN CGSB	
@ -13°F (-25°C)	37.5 M89, ¼ inch Mandrel	Pass
♦ Dynamic Crack Bridging	ASTM C836-00	
@ 1/8 in (3.2 mm), -15°F (- 26°C)	(10 cycles)	Pass
♦ Effect Of Hot Asphalt	BAM ZTV-BEL-B	
@ 480°F (260°C)		0% change
♦ Resistance To Aggregate Indentation	BD 47	Recovered Thickness**
@ 104°F (40°C)		100%
@ 176°F (80°C)		100%
@ 257°F (125°C)		100%
♦ Dynamic Ballast Impact	SNCF 181kN/2x10 ⁶ cycles	No damage or leak
♦ Tensile Bond Strength (minimum)		
Concrete	ASTM D4541-89	100psi (0.7Mpa)
Steel	ASTM D4541-89	290 psi (2.0 MPa)
♦ Aging: 3 Years	TRRL Research Report	0% change
♦ Resistivity		
Volume		4.3 X 10 ¹² ohm inches
Surface		9.2 X 10 ¹³ ohms

* Temperature extremes require additional site dosing.

** Samples subsequently tested to resistance to chloride ion penetration. Result: 0% increase in chloride ion penetration.

Stirling Lloyd also provides a wide range of polymer concrete overlays, high friction surfacings and demarcation systems for highways and private lots. Please contact us for further information.

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tack coat SA1030 **BITUMEN RUBBER ADHESIVE FOR HOT SURFACING**

PRODUCT DESCRIPTION

Tack Coat SA1030 is a modified bitumen hot melt adhesive, applied over the Eliminator® waterproofing membrane to provide a very strong bond between the membrane and hot bituminous road surfacing.

SURFACE PREPARATION

Tack Coat SA1030 is applied direct to the cured Eliminator® membrane, which must be clean and free from loose debris, moisture and contaminants.

APPLICATION

Tack Coat SA1030 is pre-heated to 350°-375°F (175°-190°C) and immediately applied to the cured membrane. The tack coat must be allowed to cool to ambient for a minimum of 30 minutes prior to the commencement of hot surfacing.

PACKAGING

Tack Coat SA1030 is supplied in 50 lb packs.

STORAGE

Tack Coat SA1030 should be stored in cool conditions out of direct sunlight, and has a shelf life of 12 months.

APPLICATION

Tack Coat SA1030 is applied at a rate of 140 ft²/50lb box, equal to 25-35 ft²/gal (0.6-0.9 m²/l).

PRECAUTIONS

Please read the MSDS before commencing work.

IMPORTANT INFORMATION FOR GC'S AND SURFACING CONTRACTORS

General Contractors and Surfacing Contractors applying hot rolled asphalt over Stirling Lloyd's Tack Coat SA1030/Eliminator® Highway Bridge Deck waterproofing system must follow the information given below. It is important that this guidance is followed, to reduce to a minimum any risk of Tack Coat pick up on the wheels of vehicles involved in the paving, since the adhesive properties of Tack Coat SA1030 are formed by heat.

1. The applied Tack Coat SA1030 must be allowed to cool fully to ambient for a minimum of 30 minutes after application before surfacing can commence.
2. The rolling temperature of the surfacing must not fall below the minimum Tack Coat SA1030 reactivation temperature of 200°F.

3. The Tack Coat SA1030 must be clean and free from all contaminants and standing water during surfacing.

4. The mechanical action of the asphalt-paving machine on the Tack Coat SA1030 must be kept to a minimum. Wherever possible a paving machine with pneumatic or balloon tires should be used. Extra care must be taken if using a tracked paving vehicle, as this form of traction increases the possibility of pick-up of the Tack Coat.

5. The wheels or tracks of the paving machine must be kept clean and sprayed regularly with a detergent: water solution at a ratio of 1:100, to minimize the risk of their sticking to the Tack Coat.

6. The wheels of all asphalt delivery vehicles must also be inspected, cleaned and sprayed with the detergent/water solution at ratio of 1:100, before being allowed to drive on the Tack Coat.

7. Vehicles remaining stationary on the Tack Coat SA1030 should be avoided, particularly pavers with heat and vehicles that have traversed freshly-applied hot asphalt. If operations are stopped or delayed, all vehicles should be removed from the Tack Coat or their wheels isolated from the Tack Coat with protection boards.

TECHNICAL INFORMATION

Tack Coat SA1030 is one of a wide range of specialist repair, waterproofing and wearing materials supplied by Stirling Lloyd. Should you require further information on this or any other of our products please contact us at the address below.

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September 16, 2014

Mr. Eric Dezell
A.D. Rossi
123 Redbarn Road
Danville, VT 02858

Subject: Certified Applicator of Stirling Lloyd's Eliminator Membrane System

A.D. Rossi is a certified licensed applicator of Stirling Lloyd and is approved to install Stirling Lloyd's Eliminator Membrane System.

The names of individuals to install the Eliminator Membrane System are:

Eric Dezell- Pump and Spray Operation
Dave Tenney- Pump Operation
Dan Currier- Pump Operation
Steve Gingras- Spray Applicator
Ed Berry- Spray Applicator

If you need additional information, please advise.

Sincerely,

David Lite

David Lite
Stirling Lloyd Products

WATERPROOFING AND STRUCTURAL PROTECTION FOR CIVIL ENGINEERING AND CONSTRUCTION

Bridge Deck Waterproofing; Polymer Overlays, Anti-Skid Surfacing; MMA Industrial Flooring; Tunnel & Tank Lining Membranes;
Car Park Surfacing; Liquid Roofing; Rapid Set Concrete Repair; Masonry Coatings.

For further information contact our Technical Services Department or visit our website on www.northamerica.stirlinglloyd.com



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September 16, 2014

Mr. Eric Dezell
A.D. Rossi
123 Redbarn Road
Danville, VT 02858

Subject: Eliminator Membrane Application onto Concrete
Re: Moisture Content of Concrete

Dear Eric,

This letter is to advise you that the Eliminator System may be installed onto prepared concrete bridge decks, providing that the surface is completely dry and that the deck temperature exceeds the dew point by 5degF.

The Eliminator is comprised of a resin based on Methyl Methacrylate which is not moisture sensitive and not required for moisture testing within the concrete. The maximum moisture content listed in the specifications applies to polyurea based resins, which are extremely moisture sensitive.

If you have any further questions, please feel free to contact me.

Sincerely,

David Lite

David Lite
Stirling Lloyd Products

WATERPROOFING AND STRUCTURAL PROTECTION FOR CIVIL ENGINEERING AND CONSTRUCTION

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For further information contact our Technical Services Department or visit our website on www.northamerica.stirlinglloyd.com

MATERIAL SAFETY DATA SHEET

ACETONE/SW
16 00

DATE OF PREPARATION
Feb 8, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

ACETONE/SW

PRODUCT NAME

Acetone

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
100	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	1
Flammability	3
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT
1 °F PMCC

LEL
2.6

UEL
12.8

FLAMMABILITY CLASSIFICATION
RED LABEL -- Extremely Flammable, Flash below 21 °F (-6 °C)

ACETONE/SW

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are EXTREMELY FLAMMABLE. Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.59 lb/gal	789 g/l
SPECIFIC GRAVITY	0.79	
BOILING POINT	132 - 134 °F	55 - 56 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	100%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

ACETONE/SW

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.

INCOMPATIBILITY
None known.

HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name	LC50 RAT	4HR	Not Available
67-64-1	Acetone	LD50 RAT		5800 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS.

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

1 Liter (1.1 Quarts) and Less may be Classed as LTD. QTY. OR ORM-D

Larger Containers are Regulated as:

UN1090, ACETONE, 3, PG II, (ERG#127)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Acetone 5000 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1090, ACETONE, 3, PG II, (ERG#127)

Canada (TDG)

UN1090, ACETONE, CLASS 3, PG II, (ERG#127)

IMO

1 Liter (1.1 Quarts) and Less may be Shipped as Limited Quantity.

UN1090, ACETONE, CLASS 3, PG II, (-17 C c.c.), EmS F-E, S-D, ADR (D/E)

IATA/ICAO

UN1090, ACETONE, 3, PG II

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

ACETONE/SW

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

Manufacturer/Supplier: String Lloyd Products, Inc.
 Address: 152 Rockwell Road, Building A • Newington, CT 06111 USA
 Telephone: 860-666-5008
 Fax: 860-666-5106
 24-Hour Emergency Tel. No: (800)-424-9300

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

Trade Name: ELIMINATOR S/HM/UHM Component A
 Chemical Name: Methyl methacrylate - based dispersion
 Application: Waterproofing membrane for concrete and steel.

Components*	Trade Secret Registry Numbers**	CAS No.	Weight %	OSHA PEL	ACGIH TLV
Acrylic polymer (non-hazardous) ⁵	NJ 80100283-5013p	Not applicable	15-40	None	None
Calcium carbonate ^{2,4,5}		1317-65-3	10-30	15 mg/m ³ total	10 mg/m ³ total
Methyl methacrylate (MMA) ^{1,4}		80-62-6	10-30	100 ppm	100 ppm
n-Butyl methacrylate ^{4,6}		97-88-1	10-30	None	None
Silica, amorphous, fumed ^{2,5}		7631-86-9	1-5	20 mppcf total	0.1 mg/m ³ respirable

*These components are subject to the following reporting requirements as noted above:
¹ SARA Title III Section 304 ² SARA Title III Section 311-312 ³ SARA Title III Section 313
⁴ M.G.L. c.111F Section 5 ⁵ N.J.A.C. 8:59-2 ⁶ 34 P.C. Section 305

**Trade secret registry numbers for the product as a whole have been assigned as follows:
 Massachusetts TS-99-243-004

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance and Odor: Beige thixotropic liquid with characteristic methacrylate odor (sweet ester odor).
 Odor Threshold: MMA <0.34 ppm
 Specific Gravity (H₂O=1): 1.13 - 1.16
 Vapor Pressure: MMA 40 mm @ 77.9°F (25.5°C)
 Vapor Density (Air = 1): MMA 3.45
 Evaporation Rate (Butyl acetate =1): >1
 Boiling Point: MMA 214°F (101°C)
 Melting Point: MMA - 58°F (-50°C)
 pH: Not available
 Coefficient of Water/Oil: Not applicable
 Distribution: Not applicable
 Water Reactive: No

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 52.7°F (11.5°C) CC
 Auto-Ignition Temperature: MMA 790°F (421°C)
 Flammability Limits in Air
 % by Volume LEL: MMA 2.1%
 UEL: MMA 12.5%
 Extinguisher Media: Alcohol foam, carbon dioxide, dry chemical, water fog, cover with sand.
 Special Fire Fighting Procedures: Evacuate area. Wear self-contained breathing apparatus (NIOSH/MSHA -approved) and protective clothing. Use water spray to cool warm or bulging containers. Maintain safe distance or protected location. Carefully loosen bung valve to vent pressure. Reclose and dispose of container.
 Unusual Fire and Explosion Hazards: Vapor is heavier than air and forms explosive mixture @ 21000 ppm, 1 atm (760 mm Hg), 77°F (25°C). Vapor may travel to distant source of ignition and flash back. Heat, aging or contamination can lead to polymerization and/or violent rupture of sealed containers.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY Stable: X Unstable:
 Conditions to Avoid: Aging, electrostatic buildup, heat, ignition sources, sunlight. Maintain fresh air supply in storage area. Allow air space over liquid within containers.
 Incompatibility (Materials to Avoid): Radical sources (e.g. acids, alkalies, amines, azo compounds, heavy metal ions, peroxides, rust, sulfur compounds), other foreign matter. Paints and various plastics can be softened/dissolved by this material.
 Hazardous Decomposition/Combustion Products: Water, oxides of carbon.
 HAZARDOUS POLYMERIZATION May Occur: X Will Not Occur:
 Conditions to Avoid: Contamination with radical source or other foreign matter, heat, sunlight.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY Eye Contact: X Inhalation: X Ingestion: X Skin Absorption: X Skin Contact: X Not Hazardous:

TLV (ACGIH): See Section 1
 PEL (OSHA): See Section 1

TOXICOLOGICAL DATA

LC 50: MMA 3750 ppm rat inh, others not available
 LD 50: MMA 9400 mg/kg rat orl, n-BuMA 13500 mg/kg mus orl, others not available.

Carcinogen Listed In
NTP: No
OSHA: No
IARC Monograph: No
C.H.S.C. Section 25249.5: No
Mutagenicity: Not available
Reproductive Toxicity: Not available
Teratogenicity: Not available
Name of Toxicologically
Synergistic Products: Not available

HEALTH HAZARDS

Acute: Irritant to eyes, skin and respiratory system. Do not wear contact lenses when using this product.
Chronic: None known.
Signs/Symptoms of Exposure: Dermatitis, dizziness, drowsiness, headache, nausea, unconsciousness.
Medical Conditions
Generally Aggravated
by Exposure: Conjunctivitis of the eye, dermatitis, asthma, respiratory diseases.

EMERGENCY FIRST AID PROCEDURES:

Seek immediate medical assistance for further treatment, observation and support.

Eye Contact: Flush eyes with running cold water for several minutes.
Skin Contact: Wash skin thoroughly with soap and water. Remove contaminated clothing.
Inhalation: Move patient to fresh air; keep warm and at rest. Loosen clothing.
Ingestion: If conscious, dilute by giving two glasses of water to drink. Do not induce vomiting. If unconscious, transport to hospital.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection: NIOSH/MSHA-approved organic vapor respirator when exposure limits are exceeded; self-contained apparatus during emergencies.
Protective Gloves: Impervious, e.g. neoprene.
Eye Protection: Splash-proof goggles meeting ANSI Z87.1 - 1989.

VENTILATION TO BE USED

Local Exhaust: Cross-ventilation when within exposure limits.
Mechanical: Explosion-proof ventilation at point of operation when limits are exceeded.
Other Protective Clothing and Equipment: Clothing based on impervious, anti-static materials, eye baths, fire extinguishers, safety showers.
Hygienic Work Practices: Wash hands thoroughly after use. Dispose of contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Evacuate area. Eliminate ignition sources. Wear protective gear. Dike and absorb spill with inert material (e.g. sand, sawdust, vermiculite, etc.). Collect with non-sparking tools and place in leak-proof containers for disposal. Prevent spills from reaching sewers and open bodies of water. Report spills in excess of RQ to local authorities.
Waste Disposal Methods: Polymerization to solid with Component B and 50% benzoyl peroxide powder, or dispose of in accordance with current local, state and federal regulations.
Precautions to be Taken in Handling and Storage: Protect from sunlight and contamination. Indoor storage must be restricted to areas meeting NFPA/OSHA standards with overhead sprinklers. Avoid ignition sources; no smoking. Maintain fresh air supply in storage areas. Allow air space over liquid within containers. Ground all containers when transferring liquid; keep closed when not in use. Advisable to use within six (6) months. Maximum storage temperature 90°F (32°C).
Other Precautions and/or Special Hazards: Containers remain hazardous when empty. Product residue is hazardous and flammable. Do not cut, drill, torch, or weld on or near containers.
NFPA Rating: Health: 2 Flammability: 3 Reactivity: 2 Special: Not applicable

SECTION 8 - SHIPPING INFORMATION

Proper DOT Shipping Name: Resin Solution
Hazard Class: Flammable Liquid
Reportable Quantity (RQ): MMA 1000 lbs (454 kg)
Label: Flammable Liquid
UN No: 1866
Class: 3
Packaging Group: II
NMFTA Item: 156240
Class: 60
Authorized Container: 55 lb (25 kg) pail or 440 lb (200 kg) drum meeting UN1A1, UN1A2, UN1H1, or UN1H2
Prepared by: Technical Director
Date: 06/03
Supersedes: 05/92

The information contained in this literature is accurate to the best of the publisher's knowledge. We pursue a progressive research and development policy and reserve the right to alter any of the details contained herein without notice. The information given must not be taken in any way to form a specification and Stirling Lloyd Products, Inc. will not accept any liability whatsoever arising out of the 6.5

MATERIAL SAFETY DATA SHEET

Manufacturer/Supplier: Stirling Lloyd Products, Inc.
 Address: 152 Rockwell Road, Building A • Newington, CT 06111 USA
 Telephone: 860-666-5008
 Fax: 860-666-5106
 24-Hour Emergency Tel. No: (800)-424-9300

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

Trade Name: ELIMINATOR S/HM/UHM Component B
 Chemical Name: Methyl methacrylate - based dispersion
 Application: Waterproofing membrane for concrete and steel.

Components*	Trade Secret Registry Numbers**	CAS No.	Weight %	OSHA PEL	ACGIH TLV
Acrylic polymer (non-hazardous) ⁵	NJ 80100283-5013p	Not applicable	15-40	None	None
Calcium carbonate ^{2,4,5}		1317-65-3	10-30	15 mg/m ³ total	10 mg/m ³ total
Methyl methacrylate (MMA) ^{1,6}		80-62-6	10-30	100 ppm	100 ppm
n-Butyl methacrylate ^{4,6}		97-88-1	10-30	None	None
Silica, amorphous, fumed ^{2,3}		7631-86-9	1-5	20 mppcf total	0.1 mg/m ³ respirable
Iron oxide ^{2,4,5}		1309-37-1	1-5	10 mg/m ³ total	5 mg/m ³ total
Titanium dioxide ^{2,3,5,6} **		13463-67-7	1-5	15 mg/m ³ total	10 mg/m ³ total

*These components are subject to the following reporting requirements as noted above:

¹ SARA Title III Section 304 ² SARA Title III Section 311-312 ³ SARA Title III Section 313
⁴ M.G.L. c.111F Section 5 ⁵ N.J.A.C. 8:59-2 ⁶ 34 P.C. Section 305

**Trade secret registry numbers for the product as a whole have been assigned as follows:
 Massachusetts TS-99-243-005

***Present in white or gray formulations only.

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance and Odor: Grey, white, or yellow thixotropic liquid with characteristic methacrylate odor (sweet ester odor).
 Odor Threshold: MMA <0.34 ppm
 Specific Gravity (H₂O=1): 1.13 - 1.16
 Vapor Pressure: MMA 40 mm @ 77.9°F (25.5°C)
 Vapor Density (Air = 1): MMA 3.45
 Evaporation Rate (Butyl acetate =1): >1
 Boiling Point: MMA 214°F (101°C)
 Melting Point: MMA - 58F (-50C)
 pH: Not available
 Coefficient of Water/Oil: Not applicable
 Distribution: Not applicable
 Water Reactive: No

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 52.7°F (11.5°C) CC
 Auto-Ignition Temperature: MMA 790°F (421°C)
 Flammability Limits in Air
 % by Volume LEL: MMA 2.1%
 UEL: MMA 12.5%
 Extinguisher Media: Alcohol foam, carbon dioxide, dry chemical, water fog, cover with sand.
 Special Fire Fighting Procedures: Evacuate area. Wear self-contained breathing apparatus (NIOSH/MSHA -approved) and protective clothing. Use water spray to cool warm or bulging containers. Maintain safe distance or protected location. Carefully loosen bung valve to vent pressure. Reclose and dispose of container.
 Unusual Fire and Explosion Hazards: Vapor is heavier than air and forms explosive mixture @ 21000 ppm, 1 atm (760 mm Hg), 77°F (25°C). Vapor may travel to distant source of ignition and flash back. Heat, aging or contamination can lead to polymerization and/or violent rupture of sealed containers.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY Stable: X Unstable:
 Conditions to Avoid: Aging, electrostatic buildup, heat, ignition sources, sunlight. Maintain fresh air supply in storage area. Allow air space over liquid within containers.
 Incompatibility (Materials to Avoid): Radical sources (e.g. acids, alkalies, amines, azo compounds, heavy metal ions, peroxides, rust, sulfur compounds), other foreign matter. Paints and various plastics can be softened/dissolved by this material.
 Hazardous Decomposition/Combustion Products: Water, oxides of carbon.
 HAZARDOUS POLYMERIZATION
 Conditions to Avoid: May Occur: X Will Not Occur:
 Contamination with radical source or other foreign matter, heat, sunlight.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY Eye Contact: X Inhalation: X Ingestion: X Skin Absorption: X Skin Contact: X Not Hazardous:
 TLV (ACGIH): See Section 1
 PEL (OSHA): See Section 1
 TOXICOLOGICAL DATA
 LC 50: MMA 3750 ppm rat inh, others not available

LD 50: MMA 9400 mg/kg rat orl, n-BuMA 13500 mg/kg mus orl, others not available
Carcinogen Listed In:
NTP: No
OSHA: No
IARC Monograph: No
C.H.S.C. Section 25249.5: No
Mutagenicity: Not available
Reproductive Toxicity: Not available
Teratogenicity: Not available
Name of Toxicologically Synergistic Products: Not available

HEALTH HAZARDS

Acute: Irritant to eyes, skin and respiratory system. Do not wear contact lenses when using this product.
Chronic: None known.
Signs/Symptoms of Exposure: Dermatitis, dizziness, drowsiness, headache, nausea, unconsciousness.
Medical Conditions Generally Aggravated by Exposure: Conjunctivitis of the eye, dermatitis, asthma, respiratory diseases.

EMERGENCY FIRST AID PROCEDURES:

Seek immediate medical assistance for further treatment, observation and support.

Eye Contact: Flush eyes with running cold water for several minutes.
Skin Contact: Wash skin thoroughly with soap and water. Remove contaminated clothing.
Inhalation: Move patient to fresh air; keep warm and at rest. Loosen clothing.
Ingestion: If conscious, dilute by giving two glasses of water to drink. Do not induce vomiting. If unconscious, transport to hospital.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection: NIOSH/MSHA-approved organic vapor respirator when exposure limits are exceeded; self-contained apparatus during emergencies.
Protective Gloves: Impervious, e.g. neoprene.
Eye Protection: Splash-proof goggles meeting ANSI Z87.1 - 1989.

VENTILATION TO BE USED

Local Exhaust: Cross-ventilation when within exposure limits.
Mechanical: Explosion-proof ventilation at point of operation when limits are exceeded.
Other Protective Clothing and Equipment: Clothing based on impervious, anti-static materials, eye baths, fire extinguishers, safety showers.
Hygienic Work Practices: Wash hands thoroughly after use. Dispose of contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Evacuate area. Eliminate ignition sources. Wear protective gear. Dike and absorb spill with inert material (e.g. sand, sawdust, vermiculite, etc.). Collect with non-sparking tools and place in leak-proof containers for disposal. Prevent spills from reaching sewers and open bodies of water. Report spills in excess of RQ to local authorities.
Waste Disposal Methods: Polymerization to solid with Component A and 50% benzoyl peroxide powder, or dispose of in accordance with current local, state and federal regulations.
Precautions to be Taken in Handling and Storage: Protect from sunlight and contamination. Indoor storage must be restricted to areas meeting NFPA/OSHA standards with overhead sprinklers. Avoid ignition sources; no smoking. Maintain fresh air supply in storage areas. Allow air space over liquid within containers. Ground all containers when transferring liquid; keep closed when not in use. Advisable to use within six (6) months. Maximum storage temperature 90°F (32°C).
Other Precautions and/or Special Hazards: Containers remain hazardous when empty. Product residue is hazardous and flammable. Do not cut, drill, torch, or weld on or near containers. Do not reuse.
NFPA Rating: Health: 2 Flammability: 3 Reactivity: 2 Special: Not applicable

SECTION 8 - SHIPPING INFORMATION

Proper DOT Shipping Name: Resin Solution
Hazard Class: Flammable Liquid
Reportable Quantity (RQ): MMA 1000 lbs (454 kg)
Label: Flammable Liquid
UN No: 1866
Class: 3
Packaging Group: II
NMFTA Item: 156240
Class: 60
Authorized Container: 55 lb (25 kg) pail or 418 lb (190 kg) drum meeting UN1A1, UN1A2, UN1H1, or UN1H2
Prepared by: Technical Director
Date: 06/03
Supersedes: 08/92

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MATERIAL SAFETY DATA SHEET

Manufacturer/Supplier: Stirling Lloyd Products, Inc.
Address: 152 Rockwell Road, Building A • Newington, CT 06111 USA
Telephone: 860-666-5008
Fax: 860-666-5106
24 Hour Emergency Tel. No: (800)-424-9300

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

Trade Name: Stirling Lloyd's Hardener Powder
Chemical Name: Benzoyl Peroxide
Application: Initiator for Stirling Lloyd's Resin systems

Components*	Weight %	ACGIH TLV
Benzoyl Peroxide	50	5 mg/m ³
Phthalate Plasticizer	50	

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance and Odor: Fine white granules. Slight odor.
Odor Threshold: Not applicable
Bulk Density: 36 lb/ft³
Vapor Pressure: Not Applicable
Vapor Density (Air = 1): Not Applicable
Evaporation Rate (Butyl acetate =1): Not Applicable
Boiling Point: Not Applicable
Melting Point: Not Applicable
Water Soluble: Insoluble

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable
Auto-Ignition Temperature: Not Applicable
Flammability Limits in Air
% by Volume LEL: Not Applicable
UEL: Not Applicable

Extinguishing Media: Water is the preferred media though for small fires dry chemical, foam or carbon dioxide extinguishers can be used.
Special Fire Fighting Procedures:

For large fires evacuate the area and apply water from a safe distance to cool down the surrounding area. If fire occurs near the peroxide, spray water on peroxide containers to avoid overheating. Small fires are best fought using large amounts of water. Precautions must be taken to avoid disturbing the burning material over a large area by suitably directing the water spray or preferably using a water fog. For small fires dry chemical, foam or carbon dioxide extinguishers can be used.

Unusual Fire and Explosion Hazards:

In addition to ignition by heat and flame, this material can also be ignited by contamination with strong oxidizing or reducing agents, including accelerators for polymerization reactions. (See Section 4 - Materials to avoid.) The decomposition of this material without flame may generate toxic flammable fumes (biphenyl). Confinement and ignition of these fumes constitutes an explosion hazard. Decomposition with flame generates large amounts of smoke. Extremely Reactive Material!

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY Stable: Unstable: **X**
Conditions to Avoid: This product must be kept away from all sources of heat and ignition such as radiators, steam pipes, direct rays of the sun, open flames and sparks. Also contamination.

Incompatibility (Materials to Avoid): Special care must be taken to avoid contamination with combustible materials, strong oxidizing or reducing agents including accelerators for polymerization reactions. Do not add accelerators such as dimethylaniline directly to this material as a vigorous decomposition may result.

Hazardous Decomposition/Combustion Products: When exposed to high temperatures the material can decompose to form biphenyl, a toxic flammable material. (TLV 2ppm) decomposition of Oxides of carbon, aldehydes

HAZARDOUS POLYMERIZATION May Occur: Will Not Occur: **X**

SECTION 5 - HEALTH HAZARD DATA

TWA (OSHA): 5 mg M³
Effects Of Overexposure: Contact will cause eye inflammation and may cause skin irritation.

EMERGENCY FIRST AID

PROCEDURES:

Seek immediate medical assistance for further treatment, observation and support.
Eye Contact: Flush eyes thoroughly with large amounts of water for at least 15 minutes. Consult a physician.
Skin Contact: Wash skin thoroughly with soap and water.
Ingestion: If conscious administer an emetic to induce vomiting and call a physician.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection: Normally not required for normal operation.
Protective Gloves: Impervious, e.g. neoprene.
Eye Protection: Splash-proof goggles meeting ANSI Z87.1 - 1989.

VENTILATION TO BE USED Normal room ventilation

Other Protective Clothing and Equipment: Eye baths
Hygienic Work Practices: Wash hands thoroughly after use.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Any spilled powder should be swept up and burned immediately. Use a non-sparking shovel, deposit the solid in small shallow piles on several sheets of newspaper (outdoors in a safe place) and ignite with a torch having a six foot handle and back away. No more than one (1) lb of hardener powder should be burned at a time.

Waste Disposal Methods: See Spill procedure.

Precautions to be Taken in Handling and Storage: Store in original containers. Do not store near sources of heat or ignition such as radiators, steam pipes or open flames. Protect from direct sunlight. Special care must be taken to avoid contamination with combustible materials which could induce decomposition. Keep container closed when not in use. Maximum storage temperature 80°F.

Other Precautions and/or Special Hazards: Only inert non contaminating materials should be used with peroxides.
NFPA Rating: Health: 2 Flammability: 2 Reactivity: 4 Special: Oxy

SECTION 8 - SHIPPING INFORMATION

DOT Hazard Class: Organic Peroxide, Type D Solid, (Benzoyl Peroxide) NOIBN 2089
Reportable Quantity (RQ): None
Label: Organic Peroxide
UN No: 3106
UN Class: 5.2
Freight Class: Benzoyl Peroxide, Organic Peroxide
Packing Group: II

Prepared by: Technical Director
Date: 06/03
Supersedes: 01/00

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MATERIAL SAFETY DATA SHEET

Manufacturer/Supplier: Stirling Lloyd Products, Inc.
Address: 152 Rockwell Road, Building A, • Newington, CT 06111 USA
Telephone: 860-666-5008
Fax: 860-666-5106
24-Hour Emergency No: 800-424-9300

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

Trade Name:	PAR 1				
Chemical Name:	Methyl methacrylate - based dispersion				
Application:	Concrete primer for Eliminator system and related products.				
Components*	Trade Secret Registry Numbers**	CAS No.	Weight %	OSHA PEL	ACGIH TLV
Methyl methacrylate (MMA) ^{1,6}		80-62-6	60-100	100 ppm	100 ppm
Acrylic polymer (non-hazardous) ⁶	NJ 80100283-5013p	Not applicable	30-60	None	None
2-Ethylhexyl acrylate ^{4,6}		103-11-7	10-30	None	None

*These components are subject to the following reporting requirements as noted above:
¹ SARA Title III Section 304 ² SARA Title III Section 311-312 ³ SARA Title III Section 313
⁴ M.G.L. c.111F Section 5 ⁵ N.J.A.C. 8:59-2 ⁶ 34 P.C. Section 305
 **Trade secret registry numbers for the product as a whole have been assigned as follows:
 Massachusetts TS-99-243-013

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance and Odor: Colorless mobile liquid with characteristic methacrylate odor (sweet ester odor).
 Odor Threshold: MMA < 0.34 ppm
 Specific Gravity (H₂O=1): 1.03
 Vapor Pressure: MMA 40 mm @ 77.9°F (25.5°C)
 Vapor Density (Air = 1): MMA 3.45
 Evaporation Rate (Butyl acetate =1): >1
 Boiling Point: MMA 214°F (101°C)
 Melting Point: MMA - 58°F (-50°C)
 pH: Not available
 Coefficient of Water/Oil: Not applicable
 Distribution: Not applicable
 Water Reactive: No

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 52.7°F (11.5°C) CC
 Auto-Ignition Temperature: MMA 790°F (421°C)
 Flammability Limits in Air
 % by Volume LEL: MMA 2.1%
 UEL: MMA 12.5%
 Extinguisher Media: Alcohol foam, carbon dioxide, dry chemical, water fog, cover with sand.
 Special Fire Fighting Procedures: Evacuate area. Wear self-contained breathing apparatus (NIOSH/MSHA -approved) and protective clothing. Use water spray to cool warm or bulging containers. Maintain safe distance or protected location. Carefully loosen bung valve to vent pressure. Reclose and dispose of container.
 Unusual Fire and Explosion Hazards: Vapor is heavier than air and forms explosive mixture @ 21000 ppm, 1 atm (760 mm Hg), 77°F (25°C). Vapor may travel to distant source of ignition and flash back. Heat, aging or contamination can lead to polymerization and/or violent rupture of sealed containers.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY Stable: X Unstable:
 Conditions to Avoid: Aging, electrostatic buildup, heat, ignition sources, sunlight. Maintain fresh air supply in storage area. Allow air space over liquid within containers.
 Incompatibility (Materials to Avoid): Radical sources (e.g. acids, alkalis, amines, azo compounds, heavy metal ions, peroxides, rust, sulfur compounds), other foreign matter. Paints and various plastics can be softened/dissolved by this material.
 Hazardous Decomposition/Combustion Products: Water, oxides of carbon.
 HAZARDOUS POLYMERIZATION: May Occur: X Will Not Occur:
 Conditions to Avoid: Contamination with radical source or other foreign matter, heat, sunlight.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Eye Contact: X Inhalation: X Ingestion: Skin Absorption: X Skin Contact: X Not Hazardous:
 TLV (ACGIH): See Section 1
 PEL (OSHA): See Section 1

TOXICOLOGICAL DATA -

LC 50: MMA 3750 ppm rat inh, others not available.
LD 50: MMA 9400 mg/kg rat orl, 2-EHA 6500 mg/kg rat orl, others not available.
Carcinogen Listed In
NTP: No
OSHA: No
IARC Monograph: No
C.H.S.C. Section 25249.5: No
Mutagenicity: Not available
Reproductive Toxicity: Not available
Teratogenicity: Not available
Name of Toxicologically Synergistic Products: Not available

HEALTH HAZARDS -

Acute: Irritant to eyes, skin and respiratory system. Do not wear contact lenses when using this product.
Chronic: None known.
Signs/Symptoms of Exposure: Dermatitis, dizziness, drowsiness, headache, nausea, unconsciousness.
Medical Conditions Generally Aggravated by Exposure: Conjunctivitis of the eye, dermatitis, asthma, respiratory diseases.

EMERGENCY FIRST AID PROCEDURES:

Seek immediate medical assistance for further treatment, observation and support.
Eye Contact: Flush eyes with running cold water for several minutes.
Skin Contact: Wash skin thoroughly with soap and water. Remove contaminated clothing.
Inhalation: Move patient to fresh air; keep warm and at rest. Loosen clothing.
Ingestion: If conscious, dilute by giving two glasses of water to drink. Do not induce vomiting. If unconscious, transport to hospital.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection: NIOSH/MSHA-approved organic vapor respirator when exposure limits are exceeded; self-contained apparatus during emergencies.
Protective Gloves: Impervious, e.g. neoprene.
Eye Protection: Splash-proof goggles meeting ANSI Z87.1 - 1989.

VENTILATION TO BE USED:

Local Exhaust: Cross-ventilation when within exposure limits.
Mechanical: Explosion-proof ventilation at point of operation when limits are exceeded.
Other Protective Clothing and Equipment: Clothing based on impervious, anti-static materials, eye baths, fire extinguishers, safety showers.
Hygienic Work Practices: Wash hands thoroughly after use. Dispose of contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE / LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Evacuate area. Eliminate ignition sources. Wear protective gear. Dike and absorb spill with inert material (e.g. sand, sawdust, vermiculite, etc.). Collect with non-sparking tools and place in leak-proof containers for disposal. Prevent spills from reaching sewers and open bodies of water. Report spills in excess of RQ to local authorities.
Waste Disposal Methods: Polymerization to solid with 50% benzoyl peroxide powder, or dispose of in accordance with current local, state and federal regulations.
Precautions to be Taken in Handling and Storage: Protect from sunlight and contamination. Indoor storage must be restricted to areas meeting NFPA/OSHA standards with overhead sprinklers. Avoid ignition sources; no smoking. Maintain fresh air supply in storage areas. Allow air space over liquid within containers. Ground all containers when transferring liquid; keep closed when not in use. Advisable to use within six (6) months. Maximum storage temperature 90°F (32°C).
Other Precautions and/or Special Hazards: Containers remain hazardous when empty. Product residue is hazardous and flammable. Do not cut, drill, torch, or weld on or near containers. Do not reuse.
NFPA Rating: Health: 2 Flammability: 3 Reactivity: 2 Special: Not applicable

SECTION 8 - SHIPPING INFORMATION

Proper DOT Shipping Name: Resin Solution
Hazard Class: Flammable Liquid
Reportable Quantity (RQ): MMA 1000 lbs (454 kg)
Label: Flammable Liquid
UN No: 1866
UN Class: 3
Packaging Group: II
NMFTA Item: 156240
Class: 60
Authorized Container: 55 lb (25 kg) pail or 440 lb (200 kg) drum meeting UN1A1, UN1A2, UN1H1, or UN1H2.
Prepared by: Technical Director
Date: 06/03
Supersedes: 12/96

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MATERIAL SAFETY DATA SHEET

Manufacturer/Supplier: Stirling Lloyd Products, Inc.
 Address: 152 Rockwell Road, Building A • Newington, CT 06111 USA
 Telephone: 860-666-5008
 Fax: 860-666-5106
 24-Hour Emergency No: (800)-424-9300

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

Trade Name: Tack Coat SA 1030
 Chemical Name: Modified Bitumen in hydrocarbon resin
 Application: Hot melt adhesive for the bonding of hot applied bituminous materials to Eliminator waterproofing membrane.

Components*	Trade Secret	Registry Numbers	CAS No.	Weight %	OSHA PEL	ACGIH TLV
Bitumen ^{2,5,6}			SEQ-65-3	60-100	None	None
Hydrocarbon resin (non-hazardous) ⁵	NJ 80100283-5020p		Not applicable	10-30	None	None
Tail oil resin ester ⁵			8050-31-5	10-30	None	None

* These components are subject to the following reporting requirements as noted above:
¹ SARA Title III Section 304 ² SARA Title III Section 311-312 ³ SARA Title III Section 313
⁴ M.G.L. c.111F Section 5 ⁵ N.J.A.C. 8:59-2 ⁶ 34 P.C. Section 305

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance and Odor: Black solid with characteristic bituminous odor.
 Odor Threshold: Not available
 Specific Gravity (H₂O=1): 1.0
 Vapor Pressure: Not Applicable
 Vapor Density (Air = 1): Not Applicable
 Evaporation Rate (Butyl acetate =1): Not Applicable
 Boiling Point: Not Available
 Melting Point: 167°-212°F (75°-100°C)
 pH: Not Available
 Coefficient of Water/Oil Distribution: Not Applicable
 Water Reactive: No

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: >380°F (200°C) COC
 Auto-Ignition Temperature: Not Available
 Flammability Limits in Air:
 % by Volume LEL: Not Available
 UEL: Not Available
 Extinguishing Media: Alcohol foam, carbon dioxide
 Special Fire Fighting Procedures: Evacuate area. Wear self-contained breathing apparatus (NIOSH/MSHA approved) and protective clothing. Maintain safe distance or protected location.
 Unusual Fire and Explosion Hazards: None

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY Stable: X Unstable:
 Conditions to Avoid: None
 Incompatibility (Materials to Avoid): None
 Hazardous Decomposition/Combustion Products: None
 HAZARDOUS POLYMERIZATION May Occur: Will Not Occur: X
 Conditions to Avoid: None

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY Eye contact: X Inhalation: X Ingestion: Skin Absorption: X Skin Contact: X Not Hazardous:
 TLV (ACGIH): See Section 1
 PEL (OSHA): See Section 1
 TOXICOLOGICAL DATA-
 LC 50: Not Available
 LD 50: Not Available
 Carcinogen Listed in
 NTP: No
 OSHA: No
 IARC Monograph: No
 C.H.S.C. Section 25249.5: Yes (Bitumen)
 Mutagenicity: Not Available
 Reproductive Toxicity : Not Available

Teratogenicity: Not Available
Name of Toxicologically Synergistic Products: Not Available

HEALTH HAZARDS -

Acute: Irritant to eyes, skin and respiratory system. The material is used at high temperature and the immediate hazard is one of burns from hot material.
Chronic: None known
Signs and Symptoms of Exposure: Burns, dermatitis, headache, nausea.
Medical Conditions Generally Aggravated by exposure: Asthma, dermatitis, respiratory diseases.

EMERGENCY FIRST AID PROCEDURES:

Seek immediate medical assistance for further treatment, observation and support.

Eye Contact: Flush eyes with running cold water for several minutes.
Skin Contact: Wash skin thoroughly with soap and water. Remove contaminated clothing. Burns caused by contact with hot material should be cooled immediately by drenching with cold water. The material may then be removed under medical supervision.
Inhalation: Move patient to fresh air; keep warm and at rest. Loosen clothing.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection: Normally not required at ambient temperature. Self-contained apparatus during emergencies
Protective Gloves: Impervious, heat resistant.
Eye Protection: Splash-proof goggles meeting ANSI Z87.1 - 1989.

VENTILATION TO BE USED

Mechanical: Cross ventilation
Other Protective Clothing and Equipment: Clothing based on Impervious, anti-static materials, eye baths, fire extinguishers, safety showers.
Hygienic Work Practices: Wash hands thoroughly after use. Dispose of contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Wear protective gear. Collect with non-sparking tools and place in leak-proof containers for disposal. Prevent spills from reaching sewers and open bodies of water.
Waste Disposal Methods: Dispose of in accordance with current local, state and federal regulations.
Precautions to be Taken in Handling and Storage: Storage must be restricted to cool, dry areas meeting OSHA standards. Maximum storage temperature 77°F (25°C)
Other Precautions and/or Special Hazards: None
NFPA Rating: Health: 2 Flammability: 0 Reactivity: 0 Special: Not Applicable

SECTION 8 - SHIPPING INFORMATION

Proper DOT Shipping Name: Not Regulated
DOT Hazard Class: Not Regulated
Reportable Quantity (RQ): None
Label: None required
UN No: Not Applicable
UN Class: Not Applicable
Packaging Group: Not Applicable
NMFTA Item: 4620
Class: 55
Authorized Container: 27.5 lb. (12.5 kg) fiberboard box

Prepared by: Technical Director
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