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MATERIAL SAFETY DATA SHEET

Product Name: ICYNENE Classic Max Resin

Section 1: Chemical, Product and Company Information

Product Name: ICYNENE Classic Max Resin

Also known as **Component B** and **LD-C-50v2**

ICYNENE Classic Max and LD-C-50v2 are trademarks of Icynene Inc.

Product Use: To be mixed with polymeric MDI at foam spray gun tip to create LD-C-50v2 foam, a semi-rigid open cell polyurethane foam.

Product Code: **LD-C-50v2 B-Side Resin**

Section 2: Composition and Ingredient Information

Ingredient	CAS #	Weight%
Polyether Polyol	Not Available, Not Hazardous	13 – 30
Tris (2-chloro isopropyl) phosphate	13674-84-5	30 – 60
2-(Dimethylamino)-ethanol	108-01-0	1 – 5
N,N-Bis[3-(dimethylamino)propylamine	6711-48-4	5 - 15

Section 3: Hazards Identification

Skin Contact: Irritant to the skin.

Eye Contact: Irritant to the eyes

Section 4: First Aid Measures

Eyes: Wash gently with flowing water for 20-30 minutes or until the chemical is removed. Eyelids should be held open while irrigating the eyes. Take care not to wash contaminated water into the unaffected eye or face. Consult medical personnel.

Skin: Wash with gently flowing water for 20-30 minutes or until the chemical is removed. Take care not to rinse contaminated water onto unaffected skin. Contaminated clothing should be removed under running water. Consult medical personnel.

Inhalation: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult then give oxygen. If the heart has stopped, trained personnel should immediately begin CPR. Consult a physician. There has been no clinical experience with overexposure via the respiratory route.

Ingestion:	Do not induce vomiting. Never give anything by mouth if the victim is rapidly losing consciousness, or is unconscious or convulsing. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. If breathing or the heart has stopped, trained personnel should immediately begin artificial respiration or CPR. Consult a physician immediately.

Section 5: Fire Fighting Measures

Flash Point:	Not Available
Method Used:	N.A.
Flammable Limits:	
LFL:	N.Av.
UFL:	N.Av.
Extinguishing Media:	Water, carbon dioxide, dry chemical or foam. Expended liquids upon the aftermath of fire should be contained for disposal. Prevent contamination of streams and drinking supplies.
Explosion Hazards:	Not sensitive to static or mechanical impact. Additional conditions that may lead to explosion are not available.
Fire Hazards:	Sudden reaction and fire may result when the product is mixed with an oxidizing agent. Sudden reaction and fire may result when the product is mixed with an isocyanate.
Hazardous Combustion Products	Hazardous combustion products would include oxides of carbon, nitrogen and phosphorous and acid halides.
Fire Fighting Equipment:	In confined areas, firefighters must wear a self-contained breathing apparatus to avoid breathing vapors, carbon monoxide and nitrogen oxide gases generated by combustion. Skin contact should be avoided.

Section 6: Accidental Release Measures

Action to Take for Spills/Leaks:	Dike spills to prevent spreading and contamination of surface waters, ground waters and drinking supplies. Notify local health authorities and other appropriate agencies if such contamination should occur.

Section 7: Handling and Storage

Must be protected from overheating and should ideally be stored at temperatures between 60°F-90°F (15°C-32°C). It should definitely be kept below 100°F (38°C) as exposure to temperatures above 100°F (38°C) accelerates material degradation, but does not create a hazardous decomposition product. It is advisable to keep the storage temperatures as low as possible within the above range, store the drums in a well ventilated area, and protect them from direct sunlight. Since component B can separate during storage, it should be mixed thoroughly prior to use, especially at higher temperature levels.

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Section 8: Exposure Controls/Personal Protection

Respiratory Protection:	Generally, respiratory protection is unnecessary provided there is adequate general ventilation. In poorly ventilated areas, a cartridge mask (National Institute for Occupational Safety and Health {NIOSH}) – approved for organic vapors is recommended. During emergencies, a self-contained breathing apparatus should be worn.
Skin Protection:	Avoid contact with the skin. Cuffed neoprene or butyl rubber gloves (or other impervious materials) are recommended. Wash hands thoroughly after handling or exposure. Launder or discard contaminated clothing. Discard contaminated leather articles.
Eye Protection:	Avoid contact with the eyes. Eye protection in the form of chemical safety goggles is recommended.

Section 9: Physical and Chemical Properties

Boiling Point:	Not Available
Vapour Pressure:	Not Available
Freezing Point:	Not Available
Vapour Density:	Not Available
Soluble in Water:	Miscible
Appearance:	Brown Liquid
Specific Gravity:	1.1 @ 25°C
Odour:	Amine Odour
pH:	11
Viscosity:	700 cps, 20 rpm, Brookfield S61 @ 25°C
Coefficient of Water/Oil Distribution	Not Available

Section 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Incompatibility:	(Specific materials to avoid) Reacts with strong acids, isocyanates and oxidizing agents.
Hazardous Decomposition Products:	Shelf-life of product is six months. High heat or fire: nitric acid, ammonia, nitrogen oxides (NOx), carbon monoxide, carbon dioxide.
Hazardous Polymerization:	May occur on contact with isocyanates.

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Section 11:	Toxicological Information

Skin Contact: Irritant to the skin.

Skin Absorption: The LD_{50} for skin absorption in rabbits is 2,111 mg/kg (calculated).

Eye: Irritant to the eyes.

Systemic & Other Effects: It is assumed by OSHA that an untested mixture presents the same health hazard as do the components that are present at one percent or a greater level.

Health hazard information for all components in their pure form is therefore included as part of the MSDS.

Contact with the eyes or skin may cause severe irritation and pain. Prolonged contact may result in chemical burns and permanent damage.

Material vapor in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye from the atmosphere. Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. The effect is temporary and has no known residual effect.

Inhalation of vapors may cause irritation of the respiratory tract. Coughing and chest pain may result.

Repeated and/or prolonged exposure to low concentrations of vapor may cause sore throat, eye irritation, nausea, faintness and/or headache that are temporary.

Repeated and/or prolonged exposure at low levels may result in adverse respiratory effects, adverse skin effects or adverse eye effects.

Medical conditions generally aggravated by exposure are:

- asthma
- skin disorders and allergies
- eye disease
- chronic respiratory disease (bronchitis, emphysema)

Ingestion: Single dose oral toxicity oral LD_{50} for rats is 1,984 mg/kg (calculated).

Inhalation: May cause respiratory sensitization in susceptible individuals. If heated or sprayed as an aerosol, excessive concentrations are attainable that could be hazardous. Excessive exposure may cause irritation of the eyes, upper respiratory tract and lungs.

Literature reports an inhalation LC_{50} value for alkanolamine as 1641 ppm (4-hour, rat).

Section 12:	Ecological Information/Environmental Fate

Not available.

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Section 13:	Spill, Leak and Disposal Procedures

Major Spill:	Call Icynene Inc. (800) 758-7325. If transportation spill involved call CANUTEC (613) 996-6666
Minor Spill:	Absorb the resin with sawdust or other absorbent. Scoop up solid absorbent for waste disposal. The area should then be washed down to dilute and remove the remaining traces of material. Alternatively, small surface spills of resin may be reacted with isocyanate. This is a non-hazardous, controlled, "neutralization" type reaction.
Disposal Method:	Follow all federal, provincial, state and local regulations.

Section 14:	Transport Information

Road:	
US DOT:	Not regulated.
CAN TDG:	Not regulated.
Rail or Vessel (ship):	Product in containers must be prevented from movement i.e. "blocked".
Air:	"Non-DG" (Dangerous Goods), however consult specific air carrier as special packaging instructions often apply.

Section 15:	Regulatory Information

CANADA:	
CPR	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
WHMIS:	Classification: Class D2A
USA:	
State Regulations:	California Prop. 65: No ingredients listed.

Toxic Substances Control Act (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

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Section 16:	Other Information

Manufacturer Disclaimer:

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

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PREPARATION INFORMATION:

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HEALTH AND SAFETY STATEMENT FOR CERTIFIED ICYNENE SPRAYERS

Icynene products have an excellent health and safety record spanning more than 350,000 insulation projects over more than 25 years. Nonetheless, safe handling practices during and immediately following installation are required to eliminate the possibility of health effects from exposure to isocyanates. Asthma, other lung problems, and irritation of the nose and throat can result from inhalation of isocyanates. Direct contact with the skin and eyes can result in irritation. Different individuals will react differently to the same exposures; some will be more sensitive than others. Severe asthma attacks have been reported in some sensitized workers exposed repeatedly to isocyanates while not wearing proper protective equipment. Some reports indicate a reaction and sensitization can occur following a single, sustained occupational exposure to isocyanates without proper protective equipment above the OSHA permissible exposure limit. But sensitization might not occur immediately in some individuals. Consistent use of personal proper protective equipment to prevent exposure during spraying and within the 24 hour-period after spraying is completed is critical to eliminating the health hazard. Once sensitization has occurred, a worker might not be able work safely with spray foam insulation again.

Sprayers, sprayer helpers, and anyone else present during spraying or within 24 hours after spraying is complete: You must wear proper Personal Protective Equipment (PPE) at all times during spray, including full-body-coverage, chemical-protective clothing and a NIOSH-certified respirator with fresh air supply. While spraying and for 24 hours after spraying is completed, no one must be allowed within 50 feet of the sprayed foam without wearing this type of PPE at all times. Adequate active, negative pressure ventilation (exhaust fans) of the job site must be in place during spray and for 24 hours after spray is complete.

Independent studies indicate that with 24 hours' active ventilation after spraying is completed, Icynene spray foam insulation is safely cured.