

**1. Chemical Product and Contact Information**

Revised: 1/11/99

Product Name:	Red Bakelite	Part Numbers:
	Preforms/Powders	811-117
LECO Corporation		811-118
3000 Lakeview		811-313
St. Joseph, MI, 49085		811-317
Information:	616-983-5531	811-321
Chemtrec:	800-424-9300	
(Chemtrec Int'l:	703-527-3887)	

2. Composition/Information on Ingredients

<u>Component</u>	<u>CAS No.</u>	<u>OSHA</u> <u>PEL (mg/m³)</u>	<u>ACGIH</u> <u>TLV (mg/m³)</u>	<u>Typical %</u> <u>by Weight</u>
Resin/Hexa	9003-35-4/ 100-97-0	Not given	Not given	50 - 56
Cellulosic	Not avail.	Not given	Not given	36
Mineral/Lime	1332-58-7/ 1332-69-0	Not given	Not given	8 - 12
Pigment/ Lubricants	1103-39-5/ 12713-03-0	Not given	Not given	2 - 6

3. Hazard Identification**EMERGENCY OVERVIEW**

No unusual spill hazard, moderate fire hazard; moderate health risk by ingestion/inhalation. Granular, nodular, pellet or briquette form with a slight phenol odor.

Potential Health Effects

Vapors evolved during polymerization or decomposition may cause irritation to eyes, lungs and skin.

1. Phenol - CAS 108-95-2 - OSHA PEL 5 ppm - ACGIH TLV/TWA 5 ppm, TLV/STEL 10 ppm
Highly toxic - May cause kidney, liver or heart damage. Reported to be a tumor promoter.
2. Formaldehyde - CAS 50-00-0 - OSHA PEL 3 ppm - ACGIH TLV/TWA 1 ppm, TLV/STEL 2 ppm
Irritant - To eyes, lungs and skin. Has been shown to cause cancer in laboratory animals, listed as an IARC carcinogen. National Cancer Institute study finds little evidence to connect formaldehyde exposure with cancer in humans.
3. Ammonia - CAS 7664-41-7 - OSHA PEL 50 ppm - ACGIH TLV/TWA 25 ppm, TLV/STEL 35 ppm
Irritant - To eyes, mucous membrane and respiratory tract.

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4. First Aid Measures

EYES: Immediately flush with copious amounts of water for at least 15 minutes. Get medical attention.

SKIN: Wash thoroughly with soap and water.

INHALATION: Use with adequate ventilation. If breathing is affected, remove to fresh air. If breathing stops, apply mouth to mouth resuscitation. Get medical attention.

INGESTION: Do NOT induce vomiting. Dilute by drinking large quantities of water. If vomiting occurs, administer more water. Get medical attention.

5. Fire Fighting Measures

FLAMMABLE PROPERTIES: Non-flammable.

Flash Point: Not available.

Method Used: Not applicable.

Flammable Limits (% by Volume in Air):

Lower: None.

Upper: 0.030 oz/ft³

AUTO-IGNITION TEMPERATURE: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS: Not available.

EXTINGUISHING MEDIA: Water, foam, dry chemical, carbon dioxide.

FIREFIGHTING INSTRUCTIONS: MSHA/NIOSH approved self-contained breathing apparatus when fighting fires in an enclosed area are recommended. Avoid inhalation of gases. Organic dust/air mixtures are highly flammable (explosive). Avoid dust accumulations or dust-laden atmospheres and sources of ignition.

6. Accidental Release Measures

SMALL/LARGE SPILL: Vacuum or sweep with sweeping compound, sawdust or sand. Avoid generating dust. Vacuum with explosion-proof motors are recommended.

7. Handling and Storage

HANDLING: Observe good housekeeping practices. Prevent accumulations of dust raised during processing. Use adequate ventilation.

STORAGE: Keep container closed to avoid contamination. Store in cool, dry place.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use local exhaust to remove dust and vapors evolved during use.

Use general ventilation as a dust collection system. Point source exhaust recommended, and use explosion-proof motors.

RESPIRATORY PROTECTION: NIOSH approved respirators recommended if TLVs are exceeded.

SKIN AND HAND PROTECTION: Gloves recommended.

EYE AND FACE PROTECTION: Safety glasses with side shields.

OTHER PROTECTIVE EQUIPMENT: Eye wash facility should be available. Practice good hygiene and maintain a clean work environment.

9. Physical and Chemical Properties

APPEARANCE: Granular, nodular, pellet or briquette.
 BOILING POINT: Not available.
 FREEZE-MELT POINT: Not available.
 VAPOR PRESSURE (mm): Not available.
 VAPOR DENSITY (air = 1): Not available.
 SOLUBILITY IN WATER: Negligible.
 SPECIFIC GRAVITY: 1.32 - 2.20
 pH: Not available.
 ODOR: Slight phenol odor.
 PERCENT VOLATILES: Not available.
 EVAPORATION RATE (Butyl Acetate = 1): Not available.

10. Stability and Reactivity

CHEMICAL STABILITY: Stable.
 INCOMPATIBILITY: Avoid dust buildup in storage and manufacturing areas.
 HAZARDOUS DECOMPOSITION PRODUCTS: Vapors evolved during polymerization may contain phenol, formaldehyde and ammonia.
 HAZARDOUS POLYMERIZATION: Should not occur.

11. Toxicological Information

None reported.

12. Ecological Information

Not available.

13. Disposal Consideration

Bury or incinerate in accordance with local, state and federal regulations.

14. Transportation Information

U.S.A. DOT: Not regulated.

15. Regulatory Information

U.S. FEDERAL REGULATIONS:

TSCA STATUS: On Toxic Substance Control Inventory.

CERCLA REPORTABLE QUANTITY: None.

SARA TITLE III:

Section 302 Extremely Hazardous Substances: None.

Section 311/312 Hazardous Categories: Fire.

Section 313 Toxic Chemicals: None.

RCRA STATUS: Not regulated

CANADIAN REGULATIONS:

WHMIS: D1B

16. Other Information

Hazard Index: (0 - 4, 4 = Extreme)

Health: 1

Fire: 1

Reactivity: 0

Prepared By:

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Information herein is given in good faith as authoritative and valid; however, no warranty, expressed or implied can be made.

**Addendum to Material Safety Data Sheets
Concerning Fumes and Gases Given Off During Processing of Product**

Reference: Subpart Z of the Occupational Safety and Health Standards, 29 CFR 1910.1000.

Paragraph 1910.1000 lists the currently acceptable concentrations for an 8-hour work shift as parts of vapor or gas per million parts of contaminated air, by volume at 25° C and 760 mm Hg pressure (ppm).

During processing of phenolics, melamine-phenolics and hexamethylenetetramine, small amounts of ammonia, phenol, and formaldehyde as well as water vapor, carbon monoxide and carbon dioxide are evolved. Breathing of the fumes can be harmful.

Table Z1 of Subpart Z, Paragraph 1910.1000, lists the allowable exposure for AMMONIA for an 8-hour period as **50 ppm**. The Merck Index, Ninth Edition, notes that the lower limit of detection for ammonia is about **53 ppm**.

Table Z2 of Subpart Z, Paragraph 1910.1000, lists the allowable exposure for FORMALDEHYDE for an 8-hour period as **3 ppm** with an acceptable ceiling concentration of 5 ppm, with an acceptable maximum peak above the acceptable ceiling concentration for an 8-hour shift of 10 ppm for a maximum time of 30 minutes. From the book "Formaldehyde" by J. Frederick Walker, we obtained the following: "The least detectable odor of formaldehyde is reported at **0.8 ppm** and the lowest concentration causing throat irritation at **5.0 ppm**."

Table Z1 of Subpart Z, Paragraph 1910.1000, lists the allowable exposure for PHENOL for an 8-hour day as **5 ppm** (skin). In processing, the phenol would be in the gaseous state and the criteria document of the National Institute for Occupational Safety and Health, on July 1, 1976, notes that the odor threshold for phenol is **1 ppm**.

In processing, then, if there is an odor of ammonia, the concentration is at or above **53 ppm** and the maximum allowable concentration is **50 ppm**. If there is an odor of formaldehyde, the concentration is at or above **0.8 ppm** and the allowable concentration is **3 ppm**. If there is an odor of phenol, the concentration is at or above **1 ppm** and the allowable concentration is **5 ppm**.

These simple guidelines may aid in your assessment of the adequacy of ventilation at your molding workstations; however, instrumental monitoring is preferable. Sampling instruments are available to accurately determine airborne concentrations of ammonia, formaldehyde and phenol.