

1. Chemical Product and Contact Information

Product Name: Red Bakelite	P/N:811-118
Preforms/Powders	811-292
LECO Corporation	811-293
3000 Lakeview	811-313
St. Joseph, MI, 49085	811-317
Information: 616-983-5531	811-321
Chemtrec: 800-424-9300	
(Chemtrec Int'l: 202-483-7616)	

2. Composition/Information on Ingredients

<u>Component</u>	<u>CAS No.</u>	<u>OSHA PEL (mg/m³)</u>	<u>ACGIH TLV.(mg/m³)</u>	<u>Other Limits</u>	<u>Typical % by Weight</u>
Resin/Hexa	9003-35-4/ 100-97-0	Not given Not given	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	Not given Not given		8 - 12
Pigment/ Lubricants	1103-39-5/ 12713-03-0/ 557-05-1 1592-23-0	Not given Not given Not given Not given	Not given Not given 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 briquet 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.

P/N: 811-118

9. Physical and Chemical Properties

APPEARANCE: Granular, nodular, pellet or briquet.
 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.

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.