

# MATERIAL SAFETY DATA SHEET

|                                                                 |                                         |
|-----------------------------------------------------------------|-----------------------------------------|
| Manufacturer's Name: Owens-Illinois, Inc.<br>Technical Products | Manufacturer's Chemical I.D.: SG-67     |
| Address: One Seagate<br>Toledo, Ohio 43666                      | Manufacturer's Contact: Perry P. Pirooz |
| Telephone: 419-247-5100                                         | Date Prepared: August 26, 1985          |
|                                                                 | Emergency Telephone: 419-247-5050       |

## SECTION 1 - IDENTITY

|                                   |                              |
|-----------------------------------|------------------------------|
| Common Name: SG-67 (Solder Glass) | C.A.S. No.: none (mixture)   |
| Chemical Name: Lead Borate        |                              |
| Formula: NA                       | Chemical Family: Lead Borate |

## SECTION 2 - HAZARDOUS INGREDIENTS

| Hazardous Components | %   | Threshold Limit Value (ACGIH)                            |
|----------------------|-----|----------------------------------------------------------|
| Barium Oxide         | >1% | 500 µg/m <sup>3</sup>                                    |
| Copper Oxide         | >1% | 200 µg/m <sup>3</sup> (fume), 1 mg/m <sup>3</sup> (dust) |
| Lead Oxide           | >1% | 150 µg/m <sup>3</sup>                                    |
| Silicon Dioxide      | >1% | 0.1 mg/m <sup>3</sup> (respirable)                       |

Note: The balance of this product is composed of materials classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as non-toxic, or nuisance dust.

## SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

|                                                             |                                                                                     |                                  |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------|
| Boiling Point: NA                                           | Vapor Density (Air=1): NA                                                           | Vapor Pressure (mm Hg): NA       |
| % Volatile by Volume: NA                                    | Evaporation Rate: NA                                                                | Specific Gravity (water=1): 5.38 |
| Solubility in Water: moderately soluble                     | Reactivity in Water: non-reactive                                                   |                                  |
| Appearance & Odor: Green powdered particulate with no odor. |                                                                                     |                                  |
| Flash Point: NA                                             | Flammability Limits (lower): NA                                                     | Flammability Limits (upper): NA  |
| Extinguisher Media: Select for surrounding materials        | Auto-ignition Temp.: NA                                                             |                                  |
| Special Fire Fighting Procedures:                           | Use self-contained breathing apparatus to prevent inhalation of lead dust and fume. |                                  |

Fire & Explosion Hazards: Lead oxide can be an oxidizing agent for combustible materials when hot.

Manufacturer's Chemical I.D.

SG-67

**SECTION 4 - PHYSICAL HAZARDS**

|                                        |                                                   |                      |    |
|----------------------------------------|---------------------------------------------------|----------------------|----|
| Stability: Unstable -                  | <input type="checkbox"/>                          | Conditions to Avoid: | NA |
| Stable -                               | <input checked="" type="checkbox"/>               |                      |    |
| Incompatibility (materials to avoid):  | Chlorinated rubber plus PbO will react if heated. |                      |    |
| Hazardous Decomposition Products:      | Lead, Barium, Silicon Dioxide, Copper.            |                      |    |
| [Hazardous Polymerization] May Occur - | <input type="checkbox"/>                          | Conditions to Avoid: | NA |
| Will Not Occur -                       | <input checked="" type="checkbox"/>               |                      |    |

**SECTION 5 - HEALTH HAZARDS**

|                                                         |                                                                                                                                                                         |                                                                               |                                                                        |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Threshold Limit Value:                                  | Lead, 150 µg/m <sup>3</sup> ; Barium, 50 µg/m <sup>3</sup> ; Silicon Dioxide, 100 µg/m <sup>3</sup> ; Copper, 200 µg/m <sup>3</sup> (fume), 1 mg/m <sup>3</sup> (dust). |                                                                               |                                                                        |
| [Signs & Symptoms of Exposure]                          | 1. Acute Overexposure:                                                                                                                                                  | Stupor, coma, death.                                                          |                                                                        |
|                                                         | 2. Chronic Overexposure:                                                                                                                                                | Headache, nausea, cramps, dizziness, weakness, diarrhea and loss of appetite. |                                                                        |
| Medical Conditions Generally Aggravated by Exposure:    | Respiratory system and circulatory system disorders.                                                                                                                    |                                                                               |                                                                        |
| [Chemical listed as Carcinogen or Potential Carcinogen] | National Toxicology Program                                                                                                                                             | YES <input type="checkbox"/><br>NO <input checked="" type="checkbox"/>        | I.A.R.C. Monographs                                                    |
|                                                         |                                                                                                                                                                         |                                                                               | YES <input type="checkbox"/><br>NO <input checked="" type="checkbox"/> |
|                                                         |                                                                                                                                                                         |                                                                               | OSHA                                                                   |
|                                                         |                                                                                                                                                                         |                                                                               | YES <input type="checkbox"/><br>NO <input checked="" type="checkbox"/> |
| Permissible Exposure Limit:                             | Ba, 500 µg/m <sup>3</sup> ; Pb, 50 µg/m <sup>3</sup> ; Si (var.), use (10mg/m <sup>3</sup> ÷ % SiO <sub>2</sub> + 2); Cu, 200 µg/m <sup>3</sup> (fume).                 |                                                                               |                                                                        |
| CGH Threshold Limit Value:                              | Pb, 150 µg/m <sup>3</sup> ; Ba, 500 µg/m <sup>3</sup> ; Si, 100 mg/m <sup>3</sup> (respirable); Cu, 100 µg/m <sup>3</sup> (fume), 1mg/m <sup>3</sup> (dust)             |                                                                               |                                                                        |

Emergency & First Aid Procedures:

- Inhalation: Remove to fresh air, consult physician.
- Eyes: Flush with water, consult physician.
- Skin: Clean with water.
- Ingestion: Contact physician promptly. Gastric lavage may be required.

**SECTION 6 - SPECIAL PROTECTION INFORMATION**

|                                |                                                                                                                      |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Respiratory Protection:        | Half face/ H.E.P.A. @ <500 µg/m <sup>3</sup> ; self-contained breathing apparatus @ >500 µg/m <sup>3</sup> .         |
| Ventilation:                   | Local exhaust recommended.                                                                                           |
| Personal Protective Equipment: | Gloves, eye protection and full body clothing is recommended. Special handling of contaminated articles is required. |

**SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES**

|                                                            |                                                                                                                    |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Precautions to be Taken in Handling and Storage:           | Store in closed container away from food. Prevent dusting and practice good housekeeping and hygiene.              |
| Other Precautions:                                         | Do not allow eating, smoking or drinking in storage area.                                                          |
| Steps to be Taken in Case Material is Released or Spilled: | Clean up immediately. Use vacuum or wet method. Do not dry broom or blow with air which would suspend dust in air. |
| Safe Disposal Methods:                                     | Refer to local & federal EPA regulations.                                                                          |