

1. IDENTIFICATION

Product Identifier: UL-94 Plastic

Relevant Uses: Mixture used for the production of molded plastic articles

Manufacturer:

Hohmann & Barnard, Inc.
30 Rasons Court
Hauppauge, NY 11788
(631) 234-0600
www.h-b.com

Telephone Numbers:

During normal business hours call: (800) 645-0616
24-hour emergency call Chemtrec: (800) 255-3924

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Directive 67/548/EEC or 1999/45/EC: Not classified as hazardous (polymeric state)
Regulation (EC) N° 1272/2008 (CLP): Not classified as hazardous (polymeric state)

Label Elements: Not labelled as hazardous

Other Hazards:

vPvB/PBT assessment: not available
Swallowing may cause gastrointestinal irritation and pain of guts.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| CAS# | NAME | CONTENT |
|------------|---|---------|
| 25929-04-8 | Polycarbonate | >70 % |
| 9003-56-9 | Acrylonitrile-Butadiene-Styrene Copolymer | <15 % |
| -- | Additives | <15 % |

Additional Information: Reach Info

| | Pre-registration No. | Registration No. |
|-----------------------------|-----------------------|---|
| Acrylonitrile | 05-2117149456-38-0000 | 01-2119474195-34-0045 |
| Styrene | 05-2117149462-45-0000 | 01-2119457861-32-0006 01-2119457861-32-0007 01-2119457861-32-0057 01-2119457861-32-0065 01-2119457861-32-0081 |
| Buta-1,3-diene | 05-2117149467-35-0000 | 01-2119471988-16-0044 |
| 4,4'-isopropylidenediphenol | - | 01-2119457856-23-0028 |
| Methanol | 05-2117149506-41-0000 | - |
| Ethylene carbonate | - | 01-2119540523-46-0006 |
| Phenol | - | 01-2119471329-32 |
| Triphenyl phosphate | 05-2117149497-32-0000 | - |

For full text of R- and H-phrases: see section 16

4. FIRST-AID MEASURES

General notes: Remove affected persons from the danger area, at the same time ensuring your own safety. Remove all contaminated clothing immediately

Following inhalation: In case of gases evolving from melted resin, move subject to fresh air. Treat symptomatically

Following skin contact: In case of pellets or powder, wash with water. In case of smelt, wash affected skin area and clothing with plenty of soap and water. Seek medical advice

Following eye contact: In case of pellets or powder; flush with plenty of water for at least 15 minutes. Seek medical advice if any dust particles still remain. In case of gases evolving from melted resin of high temperature; flush with plenty of water for at least 15 minutes. Seek medical advice if necessary

Following ingestion: Induce vomiting. Rinse mouth with water. Seek medical advice if necessary

Most important symptoms & effects both acute & delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed: If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Water, foam, dry chemical powder, Carbon dioxide fire extinguishers

Special hazards arising from the substance or mixture:

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Phenolic compounds.

Unusual Fire and Explosion Hazards: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate. Dense smoke is emitted when burned without sufficient oxygen.

Advice for firefighters:

Fire fighting instructions: Keep people away. Isolate fire area and de unnecessary entry. Cool surroundings with water to localize fire zone. Soak thoroughly with water to cool and prevent re-ignition. Pellets or powder remained on ground may cause slipping.

Protective equipment: Protective fire fighting clothing (including fire fighting helmet, coat, pants, boots, and gloves), positive-pressure self contained breathing apparatus (SCBA).

6. ACCIDENTAL RELEASE MEASURES

Precautions, protective equipment & emergency procedures: Keep out of irrigation ditches, sewers, and water supplies. Spills should be collected to prevent contamination of waterways. Isolate area. Wear protective equipment. Ensure adequate ventilation. Keep away from ignition sources. Keep unprotected persons away.

Environmental precautions: Gather pellets and powder thoroughly to avoid birds or fishes taking from draining water. Do not allow product to reach sewage system or water bodies. Inform respective authorities in case product reaches water, sewage system or soil.

Clean up: Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers.

Reference to other sections: See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.

7. HANDLING AND STORAGE

Precautions for safe handling: No smoking, open flames or sources of ignition in handling and storage area. Good house-keeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation.

When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

Conditions for safe storage: Keep the material in a cool dry place. Protect from direct sunlight, rain and violent temperature fluctuation. Fire is inhibited around storage area.

Specific end use(s): See the recommended processing condition and technical data sheet on this product for further information.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION**Control parameters**

Exposure Limits: Although some of the additives used in this product may have exposure guidelines, these additives are encapsulated in the product and no exposure would be expected under normal handling conditions.

Exposure control

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Personal protection:

- **Respiratory protection:** Wear masks for cleaning molding machines
- **Hand protection:** Heat-insulating gloves when handling molten form
- **Eye protection:** Wear safety glasses for general purpose. Wear chemical goggles for cleaning molding machines
- **Skin and body protection:** Gloves necessary for handling melted resin
- **Hygiene measures:** Wash hands after handling

Environmental exposure controls:

Product related measures to prevent exposure: None specific

Instruction measures to prevent exposure: None specific

Organizational measures to prevent exposure: None specific

Technical measures to prevent exposure: None specific

Environmental exposure controls: Do not allow product to reach sewage system or water bodies

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pellet

Odor: Odorless

Color: Natural or off white

Odor threshold: No test data available

Melting point / freezing point: This product does not exhibit a sharp melting point, but softens gradually over a wide temperature range.

Boiling point/range: Not applicable

Flash point: Not applicable

Evaporation rate: Not applicable

pH: Not applicable

Flammability (solid, gas): Not available

Upper/lower explosive limits: Not applicable

Vapor pressure: Not applicable

Vapor density: Not applicable

Relative density (H₂O=1): 1.10~1.20 g/cm³

Bulk density: Not available

Solubility: Insoluble in water

Partition coefficient (n-octanol/water): Not available

Auto-ignition temperature: >450°C

Decomposition temperature: Not applicable

Viscosity: Not applicable

Explosive properties: Not explosive

Oxidizing properties: Not oxidizing

10. STABILITY AND REACTIVITY

Reactivity: Non-reactive under normal handling and storage conditions

Chemical stability: Stable under normal handling and storage conditions. Fumes evolved by overheating during improperly processing or by burning may be injurious to health.

Possible hazardous reactions: If overheated, the melt may undergo exothermal decomposition in the air (increase in temperature, generation of smoke or fumes).

Conditions to avoid: Avoid temperatures above 425°C. Exposure to elevated temperatures can cause product to decompose.

Incompatible materials: Not applicable

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Aromatic compounds. Hydrocarbons. Phenolics. Styrene, Alkyl phenols, acetophenone, cumene, phenol, alpha-phenol, diarylcarbonates, Polymer fragments....etc.

Hazardous polymerization: Not likely occurs

11. TOXICOLOGICAL INFORMATION

Toxicological effects:

- *Acute toxicity (oral):* Lack of data.
- *Acute toxicity (dermal):* Lack of data.
- *Acute toxicity (inhalative):* Lack of data.
- *Skin corrosion/irritation:* Lack of data. May cause irritations.
- *Eye damage/irritation:* Lack of data. May cause irritations.
- *Sensitisation to the respiratory tract:* Lack of data. Not to be expected
- *Skin sensitisation:* Lack of data. Not to be expected
- *Germ cell mutagenicity/Genotoxicity:* Lack of data. Not to be expected
- *Carcinogenicity:* Lack of data. Not to be expected
- *Reproductive toxicity:* Lack of data. Not to be expected
- *Effects on or via lactation:* Lack of data.
- *Specific target organ toxicity (single exposure):* Lack of data.
- *Dusts:* Irritating to eyes, respiratory system and skin.
- *Specific target organ toxicity (repeated exposure):* Lack of data.

Symptoms

- Dust: Can cause skin, eye and respiratory tract irritation.
- The melted product can cause severe burns.
- Irritating to eyes, respiratory system and skin.
- Swallowing may cause gastrointestinal irritation and pain of guts.

12. ECOLOGICAL INFORMATION

Toxicity: Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

Persistence and degradability: This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Bioaccumulative potential: To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.

Mobility in soil: In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.

Results PBT & vPvB assessment: This mixture has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Other adverse effects: Do not allow to enter into ground-water, surface water or drains.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods: After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point set up within the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.

14. TRANSPORT INFORMATION

Not Regulated

15. REGULATORY INFORMATION

No data found

16. OTHER INFORMATION**Abbreviations and acronyms**

| | | | |
|-------|---|--------|--|
| AGS | Ausschuss für Gefahrstoffe | LoW | List of Waste |
| AF | Assessment Factor | MARPOL | MARine POLLution |
| BCF | BioConcentration Factor | MIE | Minimum Ignition Energy |
| CAS | Chemical Abstract Service | N°EC | European Commission number |
| CMR | Carcinogenic, Mutagenic and Reprotoxic | NFPA | National Fire Protection Association |
| CSR | Chemical Safety Report | NIOSH | National Institute of Occupational Safety and Health |
| DFG | German Research Foundation | NOEC | No Obseved Effect Concentration |
| DNEL | Derived No Effect Level | NOELR | No Observed Effect Loading Rate |
| EC | European Commission | OECD | Organisation for Economic Co-operation and Development |
| EC50 | Effective Concentration (required to induce a 50% effect) | OEL | Occupational Exposure Limit |
| EEC | European Economic Community | OSHA | Occupational Safety and Health Administration |
| EWC | European Waste Catalogue Code | PBT | Persistent Bioaccumulable Toxique |
| IDLH | Immediately Dangerous to Life or Health | PNEC | Previsible Non Effect Concentration |
| IBC | International Bulk Chemical | QSAR | Quantitative Structure-Activity Relationship |
| Koc | Soil/Water Partition Coefficient | STOT | Specific Target Organ Toxicity |
| Kow | Octanol/Water Partition Coefficient | TCLo | Toxic Concentration Low |
| LC50 | Lethal Concentration 50 | TDLo | Toxic Dose Low |
| LD50 | Lethal Dose 50 | UN | United Nations |
| LEL | Lower Explosive Limit | UVCB | Unknown or Variable Composition Complex Reaction Products, or Biological Materials |
| LL100 | Lethal Loading | vPvB | very Persistent, very Bioaccumulative |
| LOEC | Lowest Observed Effect Concentration | | |

Key literature references and sources for data

<http://esis.jrc.ec.europa.eu/>

<http://echa.europa.eu/>

<http://gestis-en.itrust.de>

Relevant R-phrases and/or H-statements (number and full text):

| | | | |
|------|---|-----------|---|
| H220 | Extremely flammable gas | R10 | Flammable |
| H225 | Highly flammable liquid and vapor | R11 | Highly flammable |
| H226 | Flammable liquid and vapor | R12 | Extremely flammable |
| H301 | Toxic if swallowed | R20 | Harmful by inhalation |
| H311 | Toxic in contact with skin | R23/24/25 | Toxic by inhalation, in contact with skin and if swallowed |
| H315 | Causes skin irritation | | |
| H317 | May cause an allergic skin reaction | R36 | Irritating to eyes |
| H318 | Causes serious eye damage | R37 | Irritating to respiratory system |
| H319 | Causes serious eye irritation | R38 | Irritating to skin |
| H331 | Toxic if inhaled | R40 | Limited evidence of a carcinogenic effect |
| H332 | Harmful if inhaled | R41 | Risk of serious damage to eyes |
| H335 | May cause respiratory irritation | R43 | May cause sensitisation by skin contact |
| H340 | May cause genetic defects | R45 | May cause cancer |
| H350 | May cause cancer | R46 | May cause inheritable genetic damage |
| H351 | Suspected of causing cancer | R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| H400 | Very toxic to aquatic life | | |
| H411 | Toxic to aquatic life with long lasting effects | R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |

Training advice: No data found

Further information: According to the guidance version 2.0 for monomers and polymers from the European Chemicals Agency dated as of April 2012, the classification of the polymer takes into account the classification of all its constituents, such as un-reacted monomers. These constituents in fact should be taken into account for classification of the polymer. This means that the same classification methods as for mixture should be applied to polymer substances. In order to determine a classification for the studies about the water soluble fraction as well as the absorption should be performed on the polymer as such.

To the best of our knowledge and belief, the information contained herein is accurate and obtained from sources believed to be reliable. No representation is made that the information is complete or the material is suitable for all purposes. The final determination as to the suitability of the user's intended use of the material is the sole responsibility of the user. All materials may present unknown hazards even when used in common applications and accordingly, it is the sole responsibility of the user to understand and address all potential hazards, including those identified herein. The information set forth in Sections 11 and 12 reflects data available as of the date hereof. It is anticipated that such data will be updated.