

**MATERIAL SAFETY DATA SHEET**Product: **VINISOL® H**Version: **3**Date: **09/15/2009**

Page: 1 / 7

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name: VINISOL® H  
Manufacturer's name: Braskem S/A  
Address: São Paulo Plant  
Rua Guamiranga, 1674  
04220-020 - São Paulo – SP – Brazil  
Phone: (+55 11) 3202-6400  
Fax: (+55 11) 3202-6527

Commercial Office  
World Wide Partnership Imp. e Exp. Ltd.  
Rua Garça, 174 - Vila Prosperidade  
09550-470 - São Caetano do Sul – SP  
Phone: (+55 11) 4226-1058 / 4224-3406  
Fax: (+55 11) 4226-3812

e-mail: [wwp@vinisol.com.br](mailto:wwp@vinisol.com.br)

**2. COMPOSITION AND INFORMATION ON INGREDIENTS**

PVC VINISOL® resins are substances.

Chemical name: Poly (vinyl chloride – co – vinyl acetate)  
Other names: PVC copolymer, vinyl, solution vinyl resin  
CAS number: 9003-22-9  
Ingredients that contribute for hazard: Not applicable.

## MATERIAL SAFETY DATA SHEET

Product: **VINISOL<sup>®</sup> H**

Version: **3**

Date: **09/15/2009**

Page: **2 / 7**

### 3. HAZARDS IDENTIFICATION

Potential health effects:

- Routes of entry: Inhalation, ingestion.
- Target organs: None known.
- Irritancy: Fumes produced in processing may irritate the eyes and respiratory tract.
- Sensitizing capability: None known.
- Reproductive effects: None known.
- Cancer information: The resin contains residual VCM (vinyl chloride monomer), normally well below 100 PPM by weight.

Short-term exposure (acute)

- Inhalation: Fumes produced in processing may irritate the eyes and respiratory tract.
- Eyes: Fumes produced in processing may irritate the eyes and respiratory tract.
- Skin: None known.
- Ingestion: Not a likely route of exposure.
- Repeated exposure (chronic) May be irritating.
- Synergistic materials: None known.
- Medical conditions aggravated by exposure: None known.

### 4. FIRST AID MEASURES

First aid measures:

- Inhalation: Remove to fresh air if safe to transport. Otherwise attempt to provide fresh air by ventilation.
- Skin: Wash thoroughly with soap and water after handling.
- Eyes: Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness.
- Ingestion: Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. (If available, give several glasses of milk). If vomiting occurs spontaneously, keep airway clear and give more water.

## MATERIAL SAFETY DATA SHEET

Product: **VINISOL® H**

Version: **3**

Date: **09/15/2009**

Page: **3 / 7**

### 5. FIRE FIGHTING MEASURES

Flash point:	391°C (ASTM D1929)
Auto ignition temperature:	(435 a 557)°C
Extinguishing media:	Water is most effective. ABC dry chemical, AFFF and protein type air foams are also effective.
Fire fighting procedures:	Keep unauthorized personnel removed and upwind. Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective clothing.

Vinisol resins are self-extinguishing plastic materials. They will burn only in the presence of other materials which support combustion and under these conditions will generate hydrogen chloride, benzene, water, carbon monoxide, carbon dioxide, smoke, and other thermal decomposition products. Since Vinisol resins are not combustible materials, they present no dust explosion risk (classification ST 0).

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Evacuate unnecessary personnel and eliminate all sources of ignition.
Environmental precautions	Contain spill with dike to prevent entry into sewers or waterways.
Methods for cleaning up	Sweep or vacuum spills. To minimize dust, vacuum cleaning is preferred.

## MATERIAL SAFETY DATA SHEET

Product: **VINISOL<sup>®</sup> H**

Version: **3**

Date: **09/15/2009**

Page: 4 / 7

### 7 HANDLING AND STORAGE

**Handling:**

Use good housekeeping practices. As with handling of all powdered materials, accumulations of the product should be removed from settling areas such as rafters, roofs, building columns, and ductwork to eliminate any secondary potential dust explosion or fire hazards.

Use with adequate ventilation.

- **Technical measures:**

**Normal Melt Processing:** Virtually all thermoplastic materials will emit fumes and/or vapors when heated to processing temperatures. The concentration and composition of these vapors will depend upon variables such as specific compound formulation and processing method and temperature. Always use the product under well-ventilated conditions and avoid breathing process vapors. For personal hygiene, wash thoroughly after handling resin, especially before eating, smoking, or using toilet facilities. Do not store or consume food in processing areas.

**Cleanup:** Cleanup following normal melt processing should be performed under well-ventilated conditions. Compound based upon vinyl resin may be held at process temperatures for a short time without significant thermal degradation. However, it should be recognized that exposure to either elevated temperature or excessive heat history (time) will result in decomposition. Equipment should not be shut down for extended time periods with the product in it, or decomposition and possible corrosion of unprotected metal may result. If dies and screws are not cleaned manually, then compound should be purged from processing equipment prior to shutdown using special vinyl purge compound or a compatible thermoplastic such as general purpose ABS.

**Storage:**

Store in a cool, dry, ventilated area away from heat, sparks and flame, preferably under 50°C. The resin by itself will not support combustion, however, materials such as wooden pallets, paper bags, cardboard boxes, and other combustibles can provide sufficient fuel to cause the product to burn.

As will all vinyl resins, Vinisol resins present some potential for static charge buildup during handling/transfer. Good grounding practices should be used in any circumstance when static charge buildup could present a risk. Vinisol should be handled in the same ways as other vinyl resins.

## MATERIAL SAFETY DATA SHEET

Product: **VINISOL<sup>®</sup> H**

Version: **3**

Date: **09/15/2009**

Page: **5 / 7**

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Handle product in a well-ventilated area. If product is handled in an open system, the use of process enclosures, local exhaust ventilation, and/or other engineering controls should be considered to control airborne levels to below recommended exposure limits, or below acceptable levels where there are no limits.

Personal protection:

- Respiratory: For conditions of use where exposure to dust or mist is apparent, a NIOSH approved half-face respirator may be worn.
- Skin: Wear protective gloves such as leather, canvas or cotton to minimize skin contact.
- Eyes/face: Wear safety glasses with side shields.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	White powder or granules with discrete typical odor.
Odor Threshold:	Not determined
Specific Gravity (Water=1):	1.36 – 1.38
Vapor Pressure:	Not determined
Vapor Density (Air=1):	Not applicable
Density:	1.36 - 1.38 g/cm <sup>3</sup>
Evaporation Rate:	Not determined
% Volatiles by weight:	Not determined
Boiling Point:	Not determined
Freezing Point:	Not determined
Melting Point:	Not determined
Solubility in Water (% by weight):	Negligible
pH:	Not applicable
Octanol/Water Partition Coefficient:	Not determined
Other:	Softening point: 70 – 80°C Bulk density: 0,49 – 0,55 g/cm <sup>3</sup>

## MATERIAL SAFETY DATA SHEET

Product: **VINISOL<sup>®</sup> H**

Version: **3**

Date: **09/15/2009**

Page: **6 / 7**

### 10 STABILITY AND REACTIVITY

Chemical stability                      Stable.

- Reacts with:                      None.
- Hazardous polymerization                      Will not occur.

Hazardous decomposition products:                      Hydrogen chloride, carbon monoxide, carbon dioxide, and very small amounts of benzene and aromatic and aliphatic hydrocarbons.

### 11. TOXICOLOGICAL INFORMATION

Toxicological information:                      Copolymeric PVC is practically non-toxic by the oral route. It is unlikely to cause skin irritation. Eye irritation may occur from the mechanical action of lodged particles.

### 12. ECOLOGICAL INFORMATION

Toxicity:                      No data available. This material is believed to be non-toxic to aquatic life.

Persistence:                      No data available. This material is believed to be likely to persist in the environment.

Bioaccumulation:                      No data available. This material is believed to be unlikely to bioaccumulate.

### 13. DISPOSAL CONSIDERATIONS

Disposal measures:                      Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

### 14. TRANSPORT INFORMATION

Transport information                      Special precautions during transportation: protection is needed in order to avoid contact with moisture and spilling/leakage.

### 15. REGULATORY INFORMATION

International regulations:                      Please consult the regulations of the importing country.

---

**MATERIAL SAFETY DATA SHEET**

---

Product: **VINISOL<sup>®</sup> H**

---

Version: **3**Date: **09/15/2009**Page: **7 /7**

---

**16. OTHER INFORMATION**

---

- HMIS hazard ratings:
- Health hazard 0
  - Fire hazard 1
  - Reactivity 0
- 

IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE, OR OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, STABILITY OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any local laws, rules, regulations or ordinances.