MSDS Number: **P5290** * * * * * *Effective Date:* ***07/19/07*** * * * * * *Supercedes:* ***05/08/00***

MSDS Material Safety Data Sheet

24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. And Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865

J.T.Baker®

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

POLYVINYLPYRROLIDONE

1. Product Identification

Synonyms: Polvinylpolypyrrolidone; N-Vinylbutyrolactam polymer; poly[1-(2-oxo-1-pyrrolidynyl)ethylene];
CAS No.: 9003-39-8
Molecular Weight: Not applicable.
Chemical Formula: (C6H9NO) x
Product Codes: U251, XL-310

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Polyvinyl Pyrrolidone	9003-39-8	98 - 100%	No

3. Hazards Identification

Emergency Overview

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight
Flammability Rating: 0 - None
Reactivity Rating: 1 - Slight
Contact Rating: 2 - Moderate
Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES
Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation:
May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, labored breathing, and chest pain.
Ingestion:
May cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.
Skin Contact:
May cause irritation with redness and pain.
Eye Contact:
May cause irritation, redness and pain.
Chronic Exposure:
No information found.
Aggravation of Pre-existing Conditions:
No information found.

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4. First Aid Measures

Inhalation:
If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion:
Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean

shoes before reuse. Get medical attention if irritation develops.
Eye Contact:
Wash thoroughly with running water. Get medical advice if irritation develops.

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5. Fire Fighting Measures

Fire:
Not considered to be a fire hazard.
Explosion:
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fire Extinguishing Media:
Dry chemical, foam, water or carbon dioxide.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

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7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
- OSHA Permissible Exposure Limit (PEL):
15 mg/m3 total dust, 5 mg/m3 respirable fraction for nuisance dusts.
- ACGIH Threshold Limit Value (TLV):

10 mg/m3 total dust containing no asbestos and < 1% crystalline silica for Particulates Not Otherwise Classified (PNOC).

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

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9. Physical and Chemical Properties

Appearance:

Off-white to yellow powder.

Odor:

Odorless.

Solubility:

Soluble in water.

Specific Gravity:

1.1 - 1.3

pH:

3.0 - 7.0 (1:20 solution)

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

No information found.

Melting Point:

100C (212F)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):
No information found.
Evaporation Rate (BuAc=1):
No information found.

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10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:
Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
Strong oxidizers. Strong reducing agents.
Conditions to Avoid:
Heat, incompatibles. Excessive dust generation.

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11. Toxicological Information

Toxicological Data:
Oral rat LD50: 100 gm/kg; investigated as a tumorigen;
Carcinogenicity:
There is limited evidence that this material causes cancer in laboratory animals.
There is no evidence that this material causes cancer in humans.

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  --------\Cancer Lists\-----------------------------------------------------
-
                                          ---NTP Carcinogen---
  Ingredient                              Known    Anticipated    IARC
Category
  ------------------------------------   -----    -----------    ------------
-
  Polyvinyl Pyrrolidone (9003-39-8)       No          No              3
```

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12. Ecological Information

Environmental Fate:
No information found.
Environmental Toxicity:
No information found.

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13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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14. Transport Information

Not regulated.

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15. Regulatory Information

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  --------\Chemical Inventory Status - Part 1\--------------------------------
--
  Ingredient                                          TSCA  EC   Japan
Australia
  ----------------------------------------------  ----  ---  -----  --------
-
  Polyvinyl Pyrrolidone (9003-39-8)                 Yes  No    Yes      Yes

  --------\Chemical Inventory Status - Part 2\--------------------------------
--
                                                             --Canada--
  Ingredient                                          Korea  DSL   NDSL  Phil.
  ----------------------------------------------  -----  ---   ----  -----
  Polyvinyl Pyrrolidone (9003-39-8)                 Yes   Yes   No     Yes

  --------\Federal, State & International Regulations - Part 1\--------------
--
                                              -SARA 302-    ------SARA 313----
--
  Ingredient                                  RQ    TPQ     List  Chemical
Catg.
  ----------------------------------------  ---   -----   ----  ------------
--
  Polyvinyl Pyrrolidone (9003-39-8)          No    No      No         No

  --------\Federal, State & International Regulations - Part 2\--------------
--
                                                          -RCRA-    -TSCA-
  Ingredient                                  CERCLA     261.33     8(d)
  ----------------------------------------  ------     ------    ------
  Polyvinyl Pyrrolidone (9003-39-8)          No         No         No
```

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Chemical Weapons Convention:  No     TSCA 12(b):  No     CDTA:  No
SARA 311/312:  Acute: Yes      Chronic: No   Fire: No  Pressure: No
Reactivity: No          (Pure / Solid)
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Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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16. Other Information

NFPA Ratings: Health: **1** Flammability: **0** Reactivity: **0**
Label Hazard Warning:
CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
Label Precautions:
Avoid contact with eyes, skin and clothing.
Avoid breathing dust.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.
Label First Aid:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.
Product Use:
Laboratory Reagent.
Revision Information:
MSDS Section(s) changed since last revision of document include: 3, 5, 8, 10, 15.
New 16 section MSDS format, all sections have been revised.
Disclaimer:
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