

MATERIAL SAFETY DATA SHEET

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Version 1.9

Section 1 - Product and Company Information

Product Name POLYVINYLPIRROLIDONE AV. MOL. WT.
40,000
Product Number PVP40
Brand SIGMA

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS MO 63103 US
Technical Phone: 314 771 5765
Emergency Phone: 414 273 3850 Ext. 5996
Fax: 800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
POLYVINYLPIRROLIDONE	9003-39-8	No

Formula (C6H9NO)x
Synonyms Agent AT 717 * Agrimer * Albigen A * Aldacol Q *
AT 717 * Bolinan * 1-Ethenyl-2-pyrrolidinone
polymers * Ganex P 804 * Hemodesis * Hemodez *
K15 * K25 * K25 (polymer) * K30 * K30 (polymer) *
K60 * K60 (polymer) * K90 * K115 * K115
(polyamide) * Kollidon * Kollidon 17 * Kollidon
25 * Kollidon 30 * Luviskol * Luviskol K30 *
Luviskol K90 * MPK 90 * NCI C60582 * Neocompansan
* Peragal ST * Peregale ST * Periston * Periston-N
* Peviston * Pladone * Pladone K-26/28 *
Pladone K 29-32 * Pladone XL * Plasmosan *
Polyclar AT * Polyclar H * Polyclar L *
Poly(1-(2-oxo-1-pyrrolidinyl)ethylene) *
Polyvidone * Poly(n-vinylbutyrolactam) *
Poly(vinylpyrrolidinone) *
Poly(N-vinylpyrrolidinone) *
Poly(1-vinylpyrrolidinone) * Polyvinylpyrrolidone
* Povidone * Povidone (usp xix) * Protagent * PVP
* PVP 40 * PVP-K 15 * PVP-K 30 * PVP-K 60 * PVP-K
90 * PVPP * 2-Pyrrolidinone, 1-ethenyl,
homopolymer * 2-Pyrrolidinone, 1-vinyl-, polymers
* 143 RP * Subtosan * Vinisil *
N-Vinylbutyrolactam polymer * Vinylpyrrolidinone
polymer * N-Vinylpyrrolidinone polymer *

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution: Avoid contact and inhalation.

HMIS RATING

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Wear dust mask.

Hand: Protective gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Solid Color: Very faintly beige Form: Powder	
Property	Value	At Temperature or Pressure
Molecular Weight	N/A	
pH	5 - 8	20 °C Concentration: 10 g/l
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

SENSITIZATION

Sensitization: Will not occur

SIGNS AND SYMPTOMS OF EXPOSURE

Unexcreted particles may be phagocytized by cells of the reticuloendothelial system and deposited in storage sites in the liver, spleen, lung, and bone marrow resulting in the storage disease thesaurosis. Severity and symptoms depend on storage site and nature of the particle. Pathological changes are not necessarily attributed to the thesaurosis, but in some cases an inflammation or granulomatoma have occurred.

TOXICITY DATA

Oral

Rat

100000 mg/kg

LD50

Remarks: Gastrointestinal:Hypermotility, diarrhea.

Oral

Mouse

> 40000 mg/kg

LD50

Intraperitoneal

Mouse

12 GM/KG

LD50

Oral

Rabbit

1040 mg/kg

LD50

Oral

Guinea pig

100000 mg/kg

LD50

Remarks: Gastrointestinal:Hypermotility, diarrhea.

IRRITATION DATA

Eyes
Rabbit
Remarks: No irritation effect
Skin
Rabbit
Remarks: No irritation effect

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC CARCINOGEN LIST

Rating: Group 3

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

S: 22 24/25

Safety Statements: Do not breathe dust. Avoid contact with skin and eyes.

US CLASSIFICATION AND LABEL TEXT

US Statements: Caution: Avoid contact and inhalation.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.