



The Registry of Toxic Effects of Chemical Substances

Polyvinyl alcohol

RTECS #: TR8100000

CAS #: 9002-89-5

UPDATE: February 2008

MW: N/R

MF: (C₂H₄O)_x

NOTE:

- **TOXICITY DATA HAVE NOT BEEN EVALUATED. OMISSION OF A SUBSTANCE OR NOTATION DOES NOT IMPLY ANY RELIEF FROM REGULATORY RESPONSIBILITY.**

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SYNONYMS:

- | | |
|-------------------------------|------------------------|
| 1. Alcotex 88/05 | 60. Lemol 24 - 98 |
| 2. Alcotex 88/10 | 61. Lemol 30 - 98 |
| 3. Alkotex | 62. Lemol 5 - 88 |
| 4. Alvyl | 63. Lemol 5 - 98 |
| 5. Aracet APV | 64. Lemol 51 - 98 |
| 6. Cipoviol W 72 | 65. Lemol 60 - 98 |
| 7. Covol | 66. Lemol 75 - 98 |
| 8. Covol 971 | 67. Lemol GF - 60 |
| 9. EP 160 | 68. M 13/20 |
| 10. Elvanol | 69. Mowiol |
| 11. Elvanol 50 - 42 | 70. Mowiol N 30 - 88 |
| 12. Elvanol 52 - 22 | 71. Mowiol N 50 - 98 |
| 13. Elvanol 70 - 05 | 72. Mowiol N 70 - 98 |
| 14. Elvanol 71 - 30 | 73. NH 18 |
| 15. Elvanol 90 - 50 | 74. NM 11 |
| 16. Elvanol 522 - 22 | 75. NM 14 |
| 17. Elvanol 73125G | 76. PVA 008 |
| 18. Ethenol homopolymer (9CI) | 77. PVS 4 |
| 19. GH 20 | 78. Polydesis |
| 20. GL 02 | 79. Polysizer 173 |
| 21. GL 03 | 80. Polyvinol |
| 22. GLO 5 | 81. Polyviol |
| 23. GM 14 | 82. Polyviol M 13/140 |
| 24. Galvatol 1 - 60 | 83. Polyviol MO 5/140 |
| 25. Gelvatol | 84. Polyviol W 25/140 |
| 26. Gelvatol 1 - 30 | 85. Polyviol W 40/140 |
| 27. Gelvatol 1 - 90 | 86. Poval 117 |
| 28. Gelvatol 3 - 91 | 87. Poval 120 |
| 29. Gelvatol 20 - 30 | 88. Poval 1700 |
| 30. Gelvatol 2090 | 89. Poval 203 |
| 31. Gohsenol | 90. Poval 205 |
| 32. Gohsenol AH 22 | 91. Poval 217 |
| 33. Gohsenol GH | 92. Poval C 17 |
| 34. Gohsenol GH 17 | 93. Resistoflex |
| 35. Gohsenol GH 20 | 94. Rhodoviol |
| 36. Gohsenol GH 23 | 95. Rhodoviol 4/125 |
| 37. Gohsenol GL 03 | 96. Rhodoviol 16/200 |
| 38. Gohsenol GL 05 | 97. Rhodoviol 4 - 125P |

39. Gohsenol GL 08	98. Rhodoviol R 16/20
40. Gohsenol GM 14	99. Solvar
41. Gohsenol GM 94	100. Sumitex H 10
42. Gohsenol GM 14L	101. Vibatex S
43. Gohsenol KH 17	102. Vinacol MH
44. Gohsenol NH 05	103. Vinalak
45. Gohsenol NH 17	104. Vinarol
46. Gohsenol NH 18	105. Vinarol DT
47. Gohsenol NH 20	106. Vinarole
48. Gohsenol NH 26	107. Vinarol ST
49. Gohsenol NK 114	108. Vinavilol 2 - 98
50. Gohsenol NL 05	109. Vinnarol
51. Gohsenol NM 14	110. Vinol
52. Ivalon	111. Vinol 125
53. Kuralon VP	112. Vinol 205
54. Kurare poval 1700	113. Vinol 351
55. Kurare PVA 205	114. Vinol 523
56. Kurate poval 120	115. Vinol unisize
57. Lemol	116. Vinyl alcohol polymer
58. Lemol 12 - 88	117. Vinylon film 2000
59. Lemol 16 - 98	

SKIN AND EYE IRRITATION DATA AND REFERENCES:

ROUTE/ ORGANISM	DOSE	EFFECT	REFERENCE
N/R	N/R	N/R	N/R

MUTATION DATA AND REFERENCES:

SYSTEM TEST	ROUTE/ ORGANISM/ TISSUE	DOSE	REFERENCE
N/R	N/R	N/R	N/R

REPRODUCTIVE EFFECTS DATA AND REFERENCES:

ROUTE/ ORGANISM	DOSE	EFFECT	REFERENCE
N/R	N/R	N/R	N/R

TUMORIGENIC DATA AND REFERENCES:

ROUTE/ ORGANISM	DOSE	EFFECT	REFERENCE
implant rat	lowest published toxic dose: 10 gm/kg	Tumorigenic: Equivocal tumorigenic agent by RTECS criteria Immunological Including Allergic: Increase in cellular immune response	BJSUAM 52,49,1965
implant rat	toxic dose : 3,768 mg/kg	Tumorigenic: Equivocal tumorigenic agent by RTECS criteria Tumorigenic: Tumors at site of application	EXPEAM 19,424,1963
subcutaneous rat	lowest published toxic dose: 2,500 mg/kg	Tumorigenic: Carcinogenic by RTECS criteria Liver: Tumors Skin and Appendages: Tumors	AMPLAO 67,589,1959

ACUTE TOXICITY DATA AND REFERENCES:

ROUTE/ ORGANISM	DOSE	EFFECT	REFERENCE
intraperitoneal	lethal dose (50	N/R	FCTOD7

mouse	percent kill): 2,000 mg/kg		41,405,2003
intratracheal rat	lowest published toxic dose: 108.7 mg/kg	Behavioral: Somnolence (general depressed activity) Behavioral: Ataxia	TPKVAL 5,136,1963
oral mouse	lethal dose (50 percent kill): 14,700 mg/kg	Behavioral: Altered sleep time (including change in righting reflex) Behavioral: Somnolence (general depressed activity) Behavioral: Muscle weakness	GISAAA 51(10),75,1986
oral mouse	lethal dose (50 percent kill): >4,000 mg/kg	N/R	FCTOD7 41,405,2003
oral mouse	lethal dose : 5,000 mg/kg	Lung, Thorax, or Respiration: Structural or functional change in trachea or bronchi Lung, Thorax, or Respiration: Emphysema Lung, Thorax, or Respiration: Other changes	TPKVAL 5,136,1963
oral rat	lethal dose (50 percent kill): >20 gm/kg	Behavioral: Altered sleep time (including change in righting reflex) Behavioral: Somnolence (general depressed activity) Behavioral: Muscle weakness	GISAAA 51(10),75,1986
rectal mouse	lethal dose (50 percent kill): >1,000 mg/kg	N/R	FCTOD7 41,405,2003

OTHER MULTIPLE DOSE DATA AND REFERENCES:

ROUTE/ ORGANISM	DOSE	EFFECT	REFERENCE
inhalation rat	lowest published toxic concentration: 45 mg/m ³ /2 hour/15 day- intermittent	Blood: Changes in serum composition (e.g. TP, bilirubin, cholesterol) Blood: Changes in erythrocyte (RBC) count Nutritional and Gross Metabolic: Weight loss or decreased weight gain	TPKVAL 5,136,1963
oral rat	lowest published toxic dose: 22,500 mg/kg/45 day- intermittent	Blood: Changes in serum composition (e.g. TP, bilirubin, cholesterol) Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: Phosphatases	GISAAA 51(10),75,1986
oral rat	lowest published toxic dose: 315 gm/kg/90 day- continuous	Gastrointestinal: Hypermotility, diarrhea	FCTOD7 41,719,2003
oral rat	lowest published toxic dose: 315 gm/kg/90 day- continuous	Liver: Changes in liver weight	FCTOD7 41,719,2003
oral rat	lowest published toxic dose: 70 gm/kg/5 week- continuous	Nutritional and Gross Metabolic: Weight loss or decreased weight gain	FCTOD7 41,729,2003
oral rat	lowest published toxic dose: 140 gm/kg/70 day- intermittent	Nutritional and Gross Metabolic: Weight loss or decreased weight gain	TOXID9 66,375,2002
oral rat	lowest published toxic dose: 15,000 mg/kg/30 day- intermittent	Kidney, Ureter, and Bladder: Other changes Blood: Changes in spleen Nutritional and Gross Metabolic: Weight loss or decreased weight gain	TPKVAL 5,136,1963

oral rat	lowest published toxic dose: 5,500 mg/kg/11 day- intermittent	Peripheral Nerve and Sensation: Recording from peripheral motor nerve	TPKVAL 5,136,1963
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REVIEWS:		
ORGANIZATION	STANDARD	REFERENCE
International Agency for Research on Cancer (IARC) Cancer Review	Human No Adequate Data	IMEMDT 19,341,1979
International Agency for Research on Cancer (IARC) Cancer Review	Animal Inadequate Evidence	IMEMDT 19,341,1979
International Agency for Research on Cancer (IARC) Cancer Review	Group 3	IMSUDL 7,56,1987
TOXICOLOGY REVIEW		AJMEAZ 38,409,1965
TOXICOLOGY REVIEW		EMMUEG 39,69,2002

STANDARDS AND REGULATIONS:		
ORGANIZATION	STANDARD	REFERENCE
Occupational Exposure Limit - RUSSIA	short term exposure limit 10 mg/m ³	JUN2003

NIOSH DOCUMENTATION AND SURVEILLANCE:		
ORGANIZATION	STANDARD or SURVEY	REFERENCE
National Occupational Hazard	National Occupational Hazard Survey 1974: Hazard	

Survey 1974	Code: 81944; Number of Industries 159; Total Number of Facilities 17,615; Number of Occupations 98; Total Number of Employees Exposed 124,708
National Occupational Exposure Survey 1983	National Occupational Exposure Survey 1983: Hazard Code: X8571 ERIT ; Number of Industries 181; Total Number of Facilities 25,435; Number of Occupations 133; Total Number of Employees Exposed 500,947; Total Number of Female Employees Exposed 183,064

STATUS IN FEDERAL AGENCIES:	
ORGANIZATION	REFERENCE
EPA TSCA Section 8(b) CHEMICAL INVENTORY	
Used as a textile warp sizing and finishing agent, and a component of adhesives	
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 2001	
NCI Carcinogenesis Studies (intravaginal);no evidence:mouse	

REFERENCES:	
CODEN	REFERENCE
AJMEAZ	American Journal of Medicine. (Technical Pub., 875 Third Ave., New York, NY 10022) V.1- 1946-
AMPLAO	AMA Archives of Pathology. (Chicago, IL) V.50(4)-69, 1950-60. For publisher information, see APLMAS.
BJSUAM	British Journal of Surgery. (Quadrant Subscription Services Ltd., Oakfield House, Perrymount Rd., Haywards Heath, W. Sussex RH16 3DH, UK) V.1-1913-

EMMUEG	Environmental and Molecular Mutagenesis. (Alan R. Liss, Inc., 41 E. 11th St., New York, NY 10003) V.10- 1987-
EXPEAM	Experientia. (Birkhaeuser Verlag, POB 133, CH-4010 Basel, Switzerland) V.1- 1945-
FCTOD7	Food and Chemical Toxicology. (Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523) V.20- 1982-
GISAAA	Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936-
IMEMDT	IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man. (WHO Publications Centre USA, 49 Sheridan Ave., Albany, NY 12210) V.1- 1972-
IMSUDL	IARC Monographs, Supplement. (WHO Publications Centre USA, 49 Sheridan Ave., Albany, NY 12210) No.1- 1979-
TOXID9	Toxicologist. (Soc. of Toxicology, Inc., 475 Wolf Ledge Parkway, Akron, OH 44311) V.1- 1981-
TPKVAL	Toksikologiya Novykh Promyshlennykh Khimicheskikh Veshchestv. Toxicology of New Industrial Chemical Substances. For English translation, see TNICS*. (Izdatel'stvo Meditsina, Moscow, USSR) No.1- 1961-

Used as a textile warp sizing and finishing agent, and a component of adhesives

FDA-over the counter drug

RTECS Compound Description:

Tumorigen

[Click Here for Additional Information about RTECS](#) **EXIT**