



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Substance name: Polyvinyl Alcohol Resin
CAS No.: 9002-89-5
Product code: **TekLeu® PVA**
REACH Registration No.: Irrelevant as pharmaceutical excipient

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: For industrial use only. Dissolution into water for use as a synthetic binder, coating, or viscosity modifier.

Uses advised against: Not identified

Reason why uses advised against: Not identified

1.3. Details of the Supplier of the safety data sheet

1.3.1 Details of the supplier of the safety data sheet:

Manufacturer/Supplier: Libertia Performance Chemicals Co., Ltd
Address: Creative Campus | Alfred-Nobel-Strasse 10 | 40789 Monheim am Rhein | Germany
Telephone number: 0086 138 18547689

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Physical hazards: Not Classified
Health hazards: Specific target organ toxicity - single exposure, Category 1, Eyes, H370
OSHA defined hazards: Combustible dust

2.2 Label elements

Hazard pictograms



Signal word: Danger

Hazard statements: H370: Causes damage to organs - Eyes
EUH066: Repeated exposure may cause skin dryness or cracking
May form combustible dust concentrations in air.

2.3 Precautionary statement

Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
Prevent dust accumulation to minimize explosion hazard.
Observe good industrial hygiene practices.

Response: P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage: Store away from incompatible materials.

Disposal: Dispose of waste and residues in accordance with local authority requirements.

3: Composition/information on ingredients

Product identifier type in accordance	Identification number	name Weight % content (or range)	EC Number	CL/ M-factor/ATE
Polyvinyl Alcohol (PVA)	9002-89-5	88%(85%-89%)	618-340-9	n/a
Polyvinyl Acetate	9003-20-7	12%(11-14%)	618-358-7	n/a

4: First aid measures

4.1. General information

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact: Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact: Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion: Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

Dusts may irritate the respiratory tract, skin and eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

4.4. General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5: Firefighting measures

5.1 Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Apply extinguishing media carefully to avoid creating airborne dust. Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture
5.2 Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.3 Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.
5.4 Advice for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
5.5 Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
5.6 Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
5.7 General fire hazards	May form combustible dust concentrations in air.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
6.2 Environmental precautions	Avoid discharge into drains or watercourses or onto the ground.
6.3 Methods and material for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7: Handling and storage

7.1 Precautions for safe handling	Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2 Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials(see Section 10 of SDS)

8: Exposure controls/personal protection

8.1 Control parameters	This product is not known to contain any substances with occupational exposure limit values.
8.2 Exposure controls	
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particles below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn.
Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other skin protection	Wear suitable protective clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid.
Form	Powder./Granular
Color	White or pale yellow.
Odor	Mild. Vinegar-like.
Odor threshold	Not available.
pH	4.5 – 7.5 (4% conc. in water)
Melting point/freezing point	392 - 446 °F (200 - 230 °C)
Initial boiling point and boiling range	Not applicable.
Flash point	> 199.4 °F (> 93.0 °C)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not available.

9.2 Upper/lower flammability or explosive limits

Flammability limit - lower(%)	Not applicable.
Flammability limit - upper(%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Solubility (water)	> 80
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	> 824 °F (> 440 °C)
Decomposition temperature	> 320 °F (> 160 °C)
Viscosity	3 - 52 mPa. s (4% conc. in water)

9.3 Other information

Bulk density	400 - 750 kg/m ³
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	≤5 %

10: Stability and Reactivity

10.1 Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2 Chemical stability	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4 Conditions to avoid	Keep away from heat, sparks and open flame. Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Minimize dust generation and accumulation.
10.5 Incompatible materials	Strong oxidising agents.
10.6 Hazardous decomposition products	Alcohols. Carbon oxides. Aldehydes. Organic acids.

11: Toxicological information

11.1 Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Skin contact	Dust or powder may irritate the skin. Repeated exposure may cause skin dryness or cracking
Eye contact	Dust may irritate the eyes. H370: Causes damage to organs - Eyes
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Dusts may irritate the respiratory tract, skin and eyes.
11.2 Information on toxicological effects	
Acute toxicity	Not classified.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	Modified polyvinyl alcohol (1428741-30-3, 139871-83-3) – Group 3 Not Classifiable as to its carcinogenicity to humans.
NTP Report on Carcinogens	Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	No regulated.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity -single exposure	Not classified.
Specific target organ toxicity -repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12: Ecological information

12.1 Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
12.2 Persistence and degradability	No data is available on the degradability of this product.
12.3 Mobility in soil	No data available.
12.4 Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone

creation potential, endocrine disruption, global warming potential) are expected from this component.

13: Disposal considerations

13.1 Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
13.2 Local disposal regulations	Dispose in accordance with all applicable regulations.
13.3 LHazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
13.4 Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
13.5 Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14: Transport Information

The product is not covered by international regulations on the transport of dangerous goods (DOT, IATA, IMDG).

14.1 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15: Regulatory information

15.1. US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not regulated.
Methanol (CAS # 67-56-1)	LISTED
15.2 Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	Not listed.
SARA 311/312 Hazardous chemical	Yes

16: Other information, including date of preparation or last revision

Further information Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Disclaimer Our company Libertia Performance Chemicals Co., Ltd provides this MSDS sheet in good faith but makes no representation as to its comprehensiveness or accuracy. This SDS sheet is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The above information has been compiled from various sources and has the possibility of discrepancy and being out-dated information. Individuals receiving the information must exercise their independent judgment and do further search in determining its appropriateness for a particular purpose. In no case shall our company be liable to loss or damages by the product user.