SAFETY DATA SHEET
This SDS complies with HazCom 2012 OSHA 29CFR 1910.1200

Section 1: Chemical Product and Company Identification

1.1 Product identifiers
PRODUCT NAMES: SOLBIN AL
FORMULA: Substance/Vinyl chloride-Vinyl acetate Based Copolymer.

1.2 Relevant identified uses of the substance or mixture and uses advised against
PRODUCT USE: This product is intended for use as an additive for coatings, inks, paints, and adhesives.

1.3 Details of the supplier of the safety data sheet
CHEMICAL SUPPLIER COMPANY NAME: Shin-Etsu MicroSi, Inc.
10028 South 51st Street
Phoenix, AZ 85044
Information: (480) 893-8898
Fax: (480) 893-8637
Customer Service: csteam@microsi.com

MANUFACTURER’S NAME: Nissin Chemical Industry Co., Ltd.
ADDRESS: Uchikanda TK Bldg 1-5-13, Chiyodaku, Tokyo, 101-0047, Japan
TELEPHONE NUMBER: 81-03-3295-3931 Japan
FAX NUMBER: 81-03-3295-3929 Japan

1.4 Emergency telephone number
Chemtrec 24 hrs: 800-424-9300
Chemtrec International: 703-527-3887

Section 2: Hazards Identification

2.1 Classification of the substance or mixture
Combustible Dust (No Pictogram)

2.2 Label elements
Signal word: Warning
Hazard Statement: May form combustible dust concentrations in air
Precautionary Statements: Prevention
P210 Keep away from heat/sparks/open flames/hot surfaces. – NO smoking.
P243 Take precautionary measures against static discharge.

2.3 Hazards not otherwise classified (HNOC)
Prevent dust accumulation (to minimize explosion hazard).
May be harmful if inhaled.
Wear dust mask when handling this material.
<0 % of mixture consists of ingredients of unknown acute toxicity.

HAZARD CLASSIFICATION: Not Hazardous
FIRE AND EXPLOSION: May form flammable / explosive dust-air mixture.
NFPA RATINGS:

<table>
<thead>
<tr>
<th>Component</th>
<th>Health (Blue)</th>
<th>Flammability (Red)</th>
<th>Reactivity (Yellow)</th>
<th>Special (White)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLBIN AL</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>--</td>
</tr>
</tbody>
</table>

SAFETY NOTICE—VINYL CHLORIDE EXPOSURE
The manufacturing process of Solbin products results in residual Vinyl Chloride (VC) being contained in the product.
During shipment, the exposure of this product to ambient temperatures causes the residual VC to volatilize and accumulate within the shipping container.
Vinyl Chloride has both a very low flash point (-108 °F) and boiling point (7 °F).
Ambient air testing has been conducted to determine the initial concentration of VC that an employee may be exposed to when opening the container doors prior to unloading the product.

The OSHA exposure limit for VC is 1 ppm TWA including a 15-minute ceiling limit of 5 ppm. Vinyl Chloride is an IARC Group 1 carcinogen.

15-minute test results in shipping containers completely full of Solbin products have confirmed Vinyl Chloride concentrations at >10 ppm. However, after leaving the container doors open for an hour or more the laboratory reported VC concentrations are non-detect.

Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>PRODUCT COMPOSITION</th>
<th>APPROX %</th>
<th>CAS No.</th>
<th>EC/List No.</th>
<th>DSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl chloride – Vinyl acetate-based copolymer</td>
<td>≥ 97</td>
<td>*</td>
<td>*</td>
<td>Y</td>
</tr>
<tr>
<td>Acetone</td>
<td>&lt; 1.5</td>
<td>67-64-1</td>
<td>200-662-2</td>
<td>Y</td>
</tr>
<tr>
<td>Methanol residual</td>
<td>≤ 1</td>
<td>67-56-1</td>
<td>200-659-6</td>
<td>Y</td>
</tr>
<tr>
<td>Vinyl chloride residual</td>
<td>10 ppm (&lt; 0.001%)</td>
<td>75-01-4</td>
<td>200-831-0</td>
<td>Y</td>
</tr>
</tbody>
</table>

*Some items on this SDS may be designated as trade secrets (TS). Bona fide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13.

Section 4: First Aid Measures

4.1 Description of First Aid Measures

Inhalation: Remove to fresh air. If not breathing, provide CPR (cardio pulmonary resuscitation) get immediate medical attention.

Skin Contact: Wash skin with clean water. Get medical attention if irritation persists.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

Ingestion: If swallowed do not induce vomiting, give large quantities of water to drink. Never give anything to an unconscious person. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea, or vomiting.

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin Contact: May cause skin irritation. Symptoms may include redness, drying, defatting or cracking of the skin.

Eye Contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production with possible redness and swelling.

4.3 Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately.

Section 5: Fire-fighting Measures

5.1 Suitable extinguishing media

Use foam, dry chemical powder or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

During a fire, irritating and highly toxic gas may be generated by thermal decomposition or combustion.

5.3 Protective actions fire-fighters

Wear standard protective equipment and self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.
Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures
Wear proper personal protective equipment. Do not breathe dust. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Prevent spills or contaminated rinse water from entering sewers or watercourses.

6.3 Methods and materials for containment and cleaning up
In case of a spill sweep up material and place in a chemical waste container.
For disposal see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling
Take precautionary measures against static discharge.
Keep away from heat, sparks, flame, direct sunlight and other possible sources of ignition.
Use only with adequate ventilation.
Do not breathe/inhale dust.
Do not inhale vapors.
Wear proper protective equipment when handling this material.
Wear dust mask when handling this material.
Avoid contact with skin, eyes or clothing.
Wash hands and face after handling this material.
Keep out of reach of children.
Appropriate container should be used for disposal.
For precautions see section 2.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry place < 77ºF.
Keep container closed when not in use.
Prevent build-up of electro-static charges (e.g. by grounding).
Keep away from heat, sparks, flame, direct sunlight and other possible sources of ignition.
Utilize chemical segregation.
Follow all applicable local regulations for handling and storage.

7.3 Specific uses
This product is intended for use as an additive for coatings, inks, paints, and adhesives.

Section 8: Exposure Controls/Personal Protection

8.1 Control Parameters

<table>
<thead>
<tr>
<th>PRODUCT COMPOSITION</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl chloride – Vinyl acetate Based Copolymer</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Methanol</td>
<td>200 ppm TWA 250 ppm STEL Skin</td>
<td>200 ppm TWA</td>
<td>200 ppm TWA 250 ppm STEL</td>
</tr>
<tr>
<td>Acetone</td>
<td>500 ppm TWA 750 ppm STEL</td>
<td>1000 ppm TWA</td>
<td>250 ppm TWA</td>
</tr>
<tr>
<td>Vinyl chloride residual</td>
<td>1 ppm TWA</td>
<td>1 ppm: 5 ppm 15 min Ceiling</td>
<td>-----</td>
</tr>
</tbody>
</table>
8.2 Exposure Controls

Ventilation: Always provide good general, mechanical room ventilation where this chemical is used.

Special Ventilation Controls: Use this material inside totally enclosed equipment or use it with local exhaust ventilation at points where vapors/dust can be released into the workspace air.

Respiratory Protection: Wear a dust mask when handling this material. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Protective Gloves: Wear chemical impervious gloves at all times while working with this product. Recommended glove types include: Laminate Film, Nitrile, or Tri-polymer. Check with your company’s glove supplier to ensure chemical resistance.

Eye Protection: Safety Glasses, Chemical goggles, face shield

Protective Clothing: Wear suitable protective clothing to prevent skin contact.

Other Equipment: Make safety shower, eyewash stations, and hand washing equipment available in the work area.

Work/Hygiene Practices: Do not breathe dust. Avoid contact with eyes. Wash hands and face after handling.

Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>PRODUCT CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance - Color: Pale yellow</td>
</tr>
<tr>
<td>Physical State: Fine powder</td>
</tr>
<tr>
<td>Odor: Characteristic odor</td>
</tr>
<tr>
<td>Odor Threshold: No data available</td>
</tr>
<tr>
<td>pH: No data available</td>
</tr>
<tr>
<td>Melting Point/Freezing Point:</td>
</tr>
<tr>
<td>Initial Boiling Point and Boiling Range: No data available</td>
</tr>
<tr>
<td>Flash Point: No data available</td>
</tr>
<tr>
<td>Evaporation Rate: Negligible</td>
</tr>
<tr>
<td>Flammability (Solid, gas)</td>
</tr>
<tr>
<td>Upper/Lower Flammability or Explosive Limits Not measured</td>
</tr>
<tr>
<td>Vapor Pressure: Negligible</td>
</tr>
<tr>
<td>Vapor Density (Air = 1): No data available</td>
</tr>
<tr>
<td>Relative Density (25°C): 1.4 g/cm³</td>
</tr>
<tr>
<td>Solubility (s) Insoluble</td>
</tr>
<tr>
<td>Oxidizing Properties: No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water No data available</td>
</tr>
<tr>
<td>Auto-ignition Temperature: No data available</td>
</tr>
<tr>
<td>Decomposition Temperature: No data available</td>
</tr>
<tr>
<td>Viscosity: 50 – 90 mPa·s</td>
</tr>
<tr>
<td>% VOLATILE by VOLUME: &lt; 3%</td>
</tr>
</tbody>
</table>

Section 10: Stability and Reactivity

10.1 Reactivity: Not reactive.
10.2 Chemical Stability: Stable under recommended conditions.
10.3 Possibility of Hazardous Reactions: Will not occur under normal temperatures and pressures.
10.4 Conditions to Avoid: Heat, direct sunlight, contact with acids, sparks, and other sources of ignition.
10.5 Incompatibility (Materials to Avoid): None.
10.6 Hazardous Decomposition Products: Decomposition products include carbon monoxide, carbon dioxide, and hydrogen chloride.
Section 11: Toxicological Information

There is no toxicological information available for this product.

11.1 Likely routes of exposure
Inhalation, dermal, skin and eye contact.

11.2 Symptoms related to the physical, chemical and toxicological characteristics
May cause skin or eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness or swelling.

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure
Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately.

<table>
<thead>
<tr>
<th>GHS Required Criteria</th>
<th>Toxicity Criteria</th>
<th>Toxicity Information</th>
<th>Comments</th>
<th>Chemical Constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>LD50 (Oral/Rat):</td>
<td>5800 mg/kg</td>
<td></td>
<td>Acetone</td>
</tr>
<tr>
<td></td>
<td>LC50 (Inhalation/Rat):</td>
<td>50100 mg/m3</td>
<td></td>
<td>Acetone</td>
</tr>
<tr>
<td></td>
<td>LD50 (Oral/Rat):</td>
<td>5600 mg/kg</td>
<td></td>
<td>Methanol</td>
</tr>
<tr>
<td></td>
<td>LC50 (Inhalation/Rat):</td>
<td>64000 ppm/4Hr</td>
<td></td>
<td>Methanol</td>
</tr>
<tr>
<td></td>
<td>LD50 (Dermal/Rabbit):</td>
<td>15800 mg/kg</td>
<td></td>
<td>Methanol</td>
</tr>
<tr>
<td></td>
<td>LD50 (Oral/Rat):</td>
<td>500 mg/kg</td>
<td></td>
<td>Vinyl chloride</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>SKIN-RABBIT</td>
<td>Standard Draize, 500 mg/24H</td>
<td>Moderate</td>
<td>Acetone</td>
</tr>
<tr>
<td></td>
<td>SKIN-RABBIT</td>
<td>Standard Draize, 20mg/24Hr</td>
<td>Moderate</td>
<td>Methanol</td>
</tr>
<tr>
<td>Serious Eye Damage / Eye Irritation</td>
<td>EYE-RABBIT</td>
<td>Standard Draize, 20mg/24Hr</td>
<td>Moderate</td>
<td>Acetone</td>
</tr>
<tr>
<td></td>
<td>EYE-RABBIT</td>
<td>100mg/24Hr</td>
<td>Moderate</td>
<td>Methanol</td>
</tr>
<tr>
<td></td>
<td>EYE-RABBIT</td>
<td>40 mg</td>
<td>Moderate</td>
<td>Methanol</td>
</tr>
<tr>
<td>Respiratory or Skin Sensitization</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>IARC</td>
<td>Group 1</td>
<td></td>
<td>Vinyl chloride</td>
</tr>
<tr>
<td></td>
<td>NTP</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOT – Single Exposure</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOT – Repeated Exposure</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 12: Ecological Information

<table>
<thead>
<tr>
<th>Toxicity: Expected to be slightly toxic to aquatic life</th>
<th>Methanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability:</td>
<td>No data available</td>
</tr>
<tr>
<td>Bioaccumulative potential:</td>
<td>No data available</td>
</tr>
<tr>
<td>Mobility in soil:</td>
<td>No data available</td>
</tr>
<tr>
<td>PBT and vPvB assessment:</td>
<td>PBT/vPvB assessment not available as chemical assessment not required/not conducted</td>
</tr>
<tr>
<td>Other adverse effects:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Section 13: Disposal Considerations

Waste from residues/unused products: Recommend waste material be disposed of by using incineration. Follow the waste disposal requirements of your country, state, or local authorities.

Contaminated packaging: Contaminated packaging material should be disposed of by incineration as stated above for residues and unused product.

Rinsate: Do not dispose of rinse water containing product in a sanitary sewer system, stormwater drainage system, or wastewater treatment system. Rinsate should be disposed of by incineration as stated above for residues and unused product.
Section 14: Transport Information

14.1 – 14.5:

**DOT TRANSPORT:** Not Regulated  
**ADR:** International Carriage of Dangerous Goods by Road  
**RAIL TRANSPORT:** Not Regulated  
**SEA TRANSPORT:** IMDG  
**AIR TRANSPORT:** IATA/ICAO  

14.6 Special precautions for user: Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Not Applicable

Section 15: Regulatory Information

15.1 Safety, health, and environmental regulations / legislation specific for the substance or mixture

**TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:**  
This product is in compliance with rules, regulations, and orders of TSCA. All components are listed on the TSCA Inventory.

**SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:**  
This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40 CFR 372.  
The toxic chemicals contained in this product are: Methanol, Vinyl chloride

**CALIFORNIA PROPOSITION 65:**  
This regulation requires a warning for California Proposition 65 chemical(s) under the statute.  
The California proposition 65 chemical(s) contained in this product are: Methanol, Vinyl chloride  

**WARNING:** This product can expose you to chemicals including Methanol, Vinyl Chloride, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Methanol: Maximum Allowable Dose Level (MADL) for reproductive toxicants = 47,000 µg/day Inhalation  
Vinyl chloride: Carcinogen. No Significant Risk Level (NSRL) 3 µg/day

**STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:**  
Massachusetts: Acetone, Methanol, Chloroethylene  
Minnesota: Acetone, Methyl alcohol, Vinyl Chloride  
New Jersey: Acetone, Methyl alcohol, Vinyl Chloride  
Pennsylvania: 2-Propanone, Methanol, Ethene, chloro-

**CANADA:**  
WHMIS-2015: This SDS is in compliance with WHMIS 2015 (HPR / new HPA).

**EUROPEAN UNION:**  
This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Regulation (EC) No 1272/2008 on classification, labeling, and packaging (CLP) of substances and mixtures. None of the chemicals used in this product are on the EU’s REACH SVHC (Substances of Very High Concern) chemicals list (as of January 16, 2019).

15.2 Chemical Safety assessment: Not applicable
Section 16: Other Information

Abbreviation(s):
PEL = Permissible Exposure Limit
STOT = Specific Target Organ Toxicity
TLV = Threshold Limit Value
TWA = Time Weighted Average

Initial issue date: 4 July 2007
Final revision date: 3 March 2019
Revision Number: 3
Revision explanation: Removed FDA statements.
Information Sources: RTECS, ECHA, REACH, NITE, OSHA 29CFR 1910.1200

FOR INDUSTRIAL USE ONLY

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