SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name WS-37

Other means of identification

Product code 335VHV
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use [RU] No information available
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Anderson Chemical Company
325 South Davis Ave.
Litchfield, MN 55355
(320) 693-2477
Hours: Monday-Friday 8:00-5:00 CST (Central Standard Time)

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC: (800) 424-9300

Contact Point www.accomn.com/sds

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

GHS Label elements, including precautionary statements
EMERGENCY OVERVIEW

The product contains no substances which at their given concentration, are considered to be hazardous to health.

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Color</th>
<th>Appearance</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquid</td>
<td>yellow</td>
<td>highly viscous</td>
<td>slight odor</td>
</tr>
</tbody>
</table>

Other information

* Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>weight-%</th>
<th>TRADE SECRET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polydimethyldiallylammonia chloride</td>
<td>26062-79-3</td>
<td>35%</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First Aid Measures

Eye contact
Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. If eye irritation persists: Get medical advice/attention.

Skin contact
Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Ingestion
Do NOT induce vomiting. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person. Get medical attention.

Inhalation
Remove person from affected area to fresh air and watch for delayed reaction. Give oxygen/artificial respiration if needed. Seek medical attention for any breathing problem.

Most important symptoms and effects, both acute and delayed

Acute effects
May result in mild irritation of a short-term nature for the skin and eyes.

Chronic effects
Prolonged or repeated skin exposure may cause dermatitis.

Indication of any immediate medical attention and special treatment needed

Note to physicians
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media
This material is not expected to burn unless heated to dryness. Use extinguishing agent suitable for type of surrounding fire: Water, Foam, Carbon dioxide (CO2), Dry chemical.
Extinguishing media which must not be used for safety reasons
No information available

Special hazards arising from the substance or mixture

Special Hazard
Thermal decomposition (as may be experienced in a fire) may produce hydrogen chloride gas and/or may liberate oxides of nitrogen and carbon. Spills produce slippery surfaces and could present a physical hazard for firemen.

Advice for firefighters

Firefighting measures
Cool exposed containers with water spray after extinguishing fire.

Special protective equipment for firefighters
Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

Explosion data

Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear suitable protective clothing and gloves.

Environmental precautions

Environmental precautions
Avoid runoff to waterways and sewers.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods for cleaning up
Clean up spill immediately using inert absorbent materials such as clays, sand, earth, or other commercially available dry sweeping compound. Spills of solution are extremely slippery so all residue must be removed promptly. If slippery conditions persist, apply additional dry sweeping compound. Following containment, large spills should be pumped into salvage tanks.

7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling
Keep container closed when not in use
Avoid contact with eyes, skin and clothing
Wear chemical splash goggles, gloves, and protective clothing when handling.
Wash thoroughly after handling
Take off contaminated clothing and wash before reuse
Use with adequate ventilation and employ respiratory protection where mist or spray may be generated.
Ensure that eyewash stations and safety showers are close to the workstation location.

Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep container closed when not in use
Store in a cool, well ventilated area
Avoid storage temperatures below freezing, since product may stratify.
Store between 5 - 30 °C (41 - 86 °F)
Changes in temperature create air pressure changes inside drums.
Use proper precaution in unscrewing plug and/or opening container.

Incompatible products
Strong oxidizers. Contact with copper, copper alloys, aluminum, mild steel or iron may cause corrosion/degradation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls
Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

Individual protection measures, such as personal protective equipment

Eye/face Protection
Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).

Hand Protection
Gloves impervious to liquid material.

Skin and body protection
While there is a possibility of skin contact, rubber gloves and boots impervious to liquid material should be worn.

Respiratory protection
Under most conditions, use adequate general ventilation and protective equipment since volatility and toxicity are very low. If significant vapors, mists or aerosols are present, use NIOSH approved respirator (ANSI Z88.2.1980) or equivalent, that is equipped with a dust/mist cartridge.

Other personal protection data
Eyewash fountains and safety showers must be easily accessible.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Physical state: liquid
Color: yellow
Appearance: highly viscous
Odor: slight odor
Odor threshold: No information available

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks / Method</th>
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</thead>
<tbody>
<tr>
<td>pH</td>
<td>4.0 - 8.0</td>
<td>as is</td>
</tr>
<tr>
<td>Melting / freezing point</td>
<td>&lt; -3 0 °C / &lt; 26.6 32 °F</td>
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</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 100 °C / &gt; 212 °F @ 760 mm Hg</td>
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</tr>
<tr>
<td>Flash point</td>
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<td>Flammability (solid, gas)</td>
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<tr>
<td>Flammability Limit in Air</td>
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<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
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</tr>
<tr>
<td>Lower flammability limit</td>
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</tr>
<tr>
<td>Vapor pressure</td>
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<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
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</tr>
<tr>
<td>Specific gravity</td>
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</tr>
<tr>
<td>Solubility (water)</td>
<td>completely; 100%</td>
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<tr>
<td>Solubility in other solvents</td>
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</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
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<td>Autoignition temperature</td>
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<tr>
<td>Decomposition temperature</td>
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<td>Kinematic viscosity</td>
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<tr>
<td>Density</td>
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<td>Bulk Density</td>
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<tr>
<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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<td></td>
</tr>
<tr>
<td>Softening point</td>
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</tr>
<tr>
<td>Molecular weight</td>
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</tr>
<tr>
<td>Volatile organic compounds (VOCs) content</td>
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</tr>
<tr>
<td>Percent Volatile, wt.%</td>
<td>No information available 90</td>
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</tr>
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</table>
10. STABILITY AND REACTIVITY

Reactivity

Reactivity
No data available.

Chemical stability

Chemical stability
Stable.

Possibility of hazardous reactions

Possibility of hazardous reactions
None under normal processing.

Hazardous polymerization
Hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid
None known

Incompatible materials

Materials to avoid
Strong oxidizers. Contact with copper, copper alloys, aluminum, mild steel or iron may cause corrosion/degradation.

Hazardous decomposition products

Hazardous decomposition products
Thermal decomposition (as may be experienced in a fire) may produce hydrogen chloride gas and/or oxides of nitrogen and carbon.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
None expected, but prolonged or repeated eye contact may result in mild irritation and redness of a short-term nature.

Skin contact
None expected, but prolonged or repeated skin contact may result in irritation of a short-term nature.

Ingestion
Effects of ingesting small amounts are negligible; ingesting large amounts may injure person slightly.

Inhalation
This product is not toxic by inhalation.

Acute toxicity - Product Information

Oral LD50
> 2,000 mg/kg
Dermal LD50  No information available
Inhalation LC50  No information available

**Acute toxicity - Component Information**

<table>
<thead>
<tr>
<th>Component</th>
<th>weight-%</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polydimethyldiallylammonium chloride 26062-79-3</td>
<td>35%</td>
<td>= 3000 mg/kg (Rat)</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

**Symptoms**
No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation**
Mild skin irritation

**Serious eye damage/eye irritation**
Testing conducted on rabbits showed minor transient irritation that cleared within days.

**Sensitization**
Product is not expected to be sensitizing.

**Germ cell mutagenicity**
Negative in the Ames test
Negative in the mouse micronucleus test

**Carcinogenicity**
This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.

**Reproductive toxicity**
No information available

**Specific target organ toxicity - Single exposure**
No information available.

**Specific target organ toxicity - Repeated exposure**
No information available

**Aspiration hazard**
No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

- ATEmix (oral): 8108 mg/kg

**Other information**
Conclusions are drawn from sources other than direct testing.

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**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**
• The effects of this product on aquatic organisms are rapidly and significantly reduced with the presence of 5 to 10 mg/L organic carbon as found in most surface waters.

**Acute aquatic toxicity - Product Information**

**Fish**
LC50 (96 hour): > 10 mg/L - Zebra Fish (*Danio rerio*)

**Crustacea**
EC50 (48 hour): > 10 mg/L - Water flea (*Daphnia magna*)

**Algae/aquatic plants**
No information available

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available

**Mobility**

No information available

**Results of PBT and vPvB assessment**

No information available

**Other adverse effects**

No other ecological studies have been carried out on this product.

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Disposal of wastes**
Recycle, if possible. If not, dispose of the waste material in accordance with all applicable federal, state and local laws and regulations regarding health and pollution. Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine whether a material should be classified waste at the time of the disposal. This is due to the fact that product use, transformation, synthesis, mixing, etc. may change the nature of the product.

**Contaminated packaging**
Since empty containers retain product residue, follow label warnings even after container is emptied.

### 14. TRANSPORT INFORMATION

**DOT**
Not regulated

**ICAO/IATA**
Not regulated

**IMDG**
Not regulated
## 15. REGULATORY INFORMATION

### International Inventories

- **TSCA (United States)**
  All ingredients are on the inventory or exempt from listing

- **Australia (AICS)**
  All ingredients are on the inventory or exempt from listing

- **Canada (DSL)**
  All ingredients are on the inventory or exempt from listing

- **Canada (NDSL)**
  None of the ingredients are on the inventory.

- **China (IECSC)**
  All ingredients are on the inventory or exempt from listing

- **EINECS (European Inventory of Existing Chemical Substances)**
  All ingredients are on the inventory or exempt from listing

- **ELINCS (European List of Notified Chemical Substances)**
  None of the ingredients are on the inventory.

- **ENCS (Japan)**
  All ingredients are on the inventory or exempt from listing

- **South Korea (KECL)**
  All ingredients are on the inventory or exempt from listing

- **Philippines (PICCS)**
  All ingredients are on the inventory or exempt from listing

### Legend

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **AICS** - Australian Inventory of Chemical Substances
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **IECSC** - China Inventory of Existing Chemical Substances
- **EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances

### U.S. Federal Regulations

- **CERCLA**
  This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

- **CWA (Clean Water Act)**
  This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).
SARA 311/312 Hazard Categories
Acute health hazard No
Chronic health hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive hazard No

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA Rating</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- 1</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS Rating</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazard</th>
<th>Personal protection</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>- 1</td>
<td>0</td>
<td>0</td>
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</tr>
</tbody>
</table>

Product code 335VHV
Revision date 2015-04-30
Revision number 1

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet