# Vanderbilt Minerals

# SAFETY DATA SHEET

GHS
United States
English (US)

## Section 1. Identification

**Product identifier** **DARVAN® 670**

**Product code** 14438

**Chemical identity** Sodium salt of naphthalene sulfonate polymerized with formaldehyde.

**Other means of identification** Sodium salt of poly-naphthalene sulfonic acid.

**Product type** Powder.

**Material uses** Dispersing agent.

**Supplier/Manufacturer**

Vanderbilt Minerals
33 Winfield Street
Norwalk, CT 06855

1-203-295-2140

**Emergency telephone number**

Chemtrec: 1-800-424-9300
Outside US: +1-703-527-3887

## Section 2. Hazard(s) identification

**OSHA/HCS status** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** COMBUSTIBLE DUSTS

**GHS label elements**

**Signal word** Warning

**Hazard statements** May form combustible dust concentrations in air.

**Precautionary statements**

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

**Supplemental label elements** Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.

**Hazards not otherwise classified** None known.

# Section 3. Composition and ingredient information

**Substance/mixture** Mixture

**Chemical identity** Sodium salt of naphthalene sulfonate polymerized with formaldehyde.

**Other means of identification** Sodium salt of poly-naphthalene sulfonic acid.

| Ingredient name | CAS number | % by weight |
|---|---|---|
| sodium polynaphthalenesulfonate | 9084-06-4 | 83.5 - 93.7 |
| water | 7732-18-5 | 5 - 8 |
| sulfuric acid sodium salt (1:2) | 7757-82-6 | 1.3 - 8.5 |
| quinoline | 91-22-5 | 0 - 0.09 |
| formaldehyde | 50-00-0 | 0 - 0.09 |
| naphthalene | 91-20-3 | 0 - 0.03 |

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

**The total concentration of ingredients in this product, reported or not in this section, is 100%.**

**Occupational exposure limits, if available, are listed in Section 8.**

# Section 4. First aid measures

## Description of necessary first aid measures

**Eye contact** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Skin contact** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact** Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

**Inhalation** Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

**Skin contact** No known significant effects or critical hazards.

**Ingestion** No known significant effects or critical hazards.

### Over-exposure signs/symptoms

**Eye contact** Adverse symptoms may include the following:
irritation
redness

**Inhalation** Adverse symptoms may include the following:
respiratory tract irritation
coughing

**Skin contact** No specific data.

**Ingestion** No specific data.

# Section 4. First aid measures

## Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** No specific treatment.

**Protection of first-aiders** No action shall be taken involving any personal risk or without suitable training.

**See toxicological information (Section 11)**

# Section 5. Fire-fighting measures

## Extinguishing media

**Suitable extinguishing media** In case of fire, use water spray (fog), foam, dry chemical or $CO_2$.

**Unsuitable extinguishing media** Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

**Specific hazards arising from the chemical** May form explosible dust-air mixture if dispersed.

**Hazardous thermal decomposition products** Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

**Special protective actions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.

**For emergency responders** If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Methods and materials for containment and cleaning up

**Small spill** Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

# Section 6. Accidental release measures

**Large spill**

Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

# Section 7. Handling and storage

## Precautions for safe handling

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls and personal protection

## Control parameters

### Occupational exposure limits

None.

**Appropriate engineering controls**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## Individual protection measures

# Section 8. Exposure controls and personal protection

**Hygiene measures**
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles. Recommended: safety glasses with side-shields

**Skin protection**

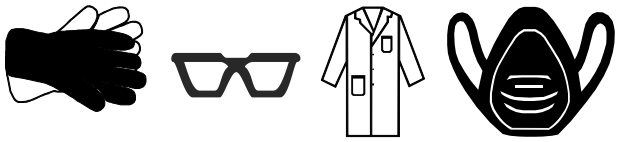
**Hand protection**
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

**Other skin protection**
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**
Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Dust respirator.

**Personal protective equipment (Pictograms)**



# Section 9. Physical and chemical properties

**Appearance**

**Physical state** Solid. [Powder.]

**Color** Beige.

**Odor** Aromatic. [Slight]

**Odor threshold** Not available.

**pH** 8 to 10.5 [Conc. (% w/w): 1%]

**Melting point** Not available.

**Boiling point** Not available.

**Flash point** Not applicable.

**Burning time** Not available.

**Burning rate** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Lower and upper explosive (flammable) limits** Not applicable.

# Section 9. Physical and chemical properties

**Vapor pressure** Not available.

**Vapor density** Not applicable.

**Density** 0.65 to 0.8 g/cm³ [25°C (77°F)]

**Relative density** 0.65 to 0.8

**Solubility(ies)**

| Media | Result |
|---|---|
| cold water<br>hot water | Easily soluble<br>Easily soluble |

**Solubility in water** Not available.

**Partition coefficient: n-octanol/water** Not applicable.

**Auto-ignition temperature** >588°C (>1090.4°F)

**Decomposition temperature** Not available.

**SADT** Not available.

**Viscosity** Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

# Section 10. Stability and reactivity

**Reactivity** No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** The product is stable.

**Possibility of hazardous reactions** Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

**Incompatible materials** Reactive or incompatible with the following materials:
oxidizing materials

**Hazardous decomposition products** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# Section 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| DARVAN® 670 | LD50 Oral | Rat | >2000 mg/kg<br>Based on tests of similar materials | - |

# Section 11. Toxicological information

## Irritation/Corrosion

Not available.

### Conclusion/Summary

**Eyes** Slight irritant.

**Respiratory** Slight irritant.

## Sensitization

Not available.

## Mutagenicity

Not available.

## Carcinogenicity

Not available.

## Reproductive toxicity

Not available.

## Teratogenicity

Not available.

## Specific target organ toxicity (single exposure)

Not available.

## Specific target organ toxicity (repeated exposure)

Not available.

## Aspiration hazard

Not available.

**Information on the likely routes of exposure** Routes of entry anticipated: Oral, Inhalation, Eyes.

## Potential acute health effects

**Eye contact** Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

**Inhalation** Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

**Skin contact** No known significant effects or critical hazards.

**Ingestion** May be harmful if swallowed.

## Symptoms related to the physical, chemical and toxicological characteristics

# Section 11. Toxicological information

**Eye contact** Adverse symptoms may include the following:
irritation
redness

**Inhalation** Adverse symptoms may include the following:
respiratory tract irritation
coughing

**Skin contact** No specific data.

**Ingestion** No specific data.

## Delayed and immediate effects and also chronic effects from short and long term exposure

### Short term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

### Long term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

### Potential chronic health effects

Not available.

**General** Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Teratogenicity** No known significant effects or critical hazards.

**Developmental effects** No known significant effects or critical hazards.

**Fertility effects** No known significant effects or critical hazards.

## Numerical measures of toxicity

### Acute toxicity estimates

| Route | ATE value |
|---|---|
| Oral | 2500 mg/kg |

**Other information** Not available.

# Section 12. Ecological information

## Toxicity

Not available.

## Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| DARVAN® 670 | - | - | Not readily |

## Bioaccumulative potential

# Section 12. Ecological information

Not available.

**Mobility in soil**

**Soil/Water partition coefficient** Not available.

**Other adverse effects** No known significant effects or critical hazards.

# Section 13. Disposal considerations

**Disposal methods** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# Section 14. Transport information

| Regulatory information | UN number | Proper shipping name | Classes | PG* | Label | Additional information |
|---|---|---|---|---|---|---|
| DOT Classification | Not regulated. | - | - | - | | - |
| TDG Classification | Not regulated. | - | - | - | | - |
| ADR/RID Class | Not regulated. | - | - | - | | - |
| IMDG Class | Not regulated. | - | - | - | | - |
| IATA-DGR Class | Not regulated. | - | - | - | | - |

PG* : Packing group

# Section 15. Regulatory information

**U.S. Federal regulations**

**TSCA 8(a) PAIR**: Naphthalene

**TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

**Clean Water Act (CWA) 307**: Naphthalene

**Clean Water Act (CWA) 311**: Quinoline; Formaldehyde; Naphthalene

**TSCA 12(b) - Chemical export notification**

Not applicable.

# Section 15. Regulatory information

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** Listed

**Clean Air Act Section 602 Class I Substances** Not listed

**Clean Air Act Section 602 Class II Substances** Not listed

**DEA List I Chemicals (Precursor Chemicals)** Not listed

**DEA List II Chemicals (Essential Chemicals)** Not listed

## SARA 302/304

### Composition/information on ingredients

| Name | % | EHS | SARA 302 TPQ | | SARA 304 RQ | |
|---|---|---|---|---|---|---|
| | | | (lbs) | (gallons) | (lbs) | (gallons) |
| Formaldehyde | 0 - 0.09 | Yes. | 500 | 73.6 | 100 | 14.7 |

**SARA 304 RQ** 222222.2 lbs / 100888.9 kg

## SARA 311/312

**Classification** COMBUSTIBLE DUSTS

### Composition/information on ingredients

No products were found.

## State regulations

**Massachusetts** The following components are listed: SODIUM SULFATE (SOLUTION)

**New York** None of the components are listed.

**New Jersey** None of the components are listed.

**Pennsylvania** The following components are listed: SODIUM SULFATE (SOLUTION)

**California Prop. 65**

**WARNING**: This product can expose you to chemicals including Quinoline and its strong acid salts, Formaldehyde and Naphthalene, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

| Ingredient name | No significant risk level | Maximum acceptable dosage level |
|---|---|---|
| Quinoline and its strong acid salts | - | - |
| Formaldehyde | Yes. | - |
| Naphthalene | Yes. | - |

## Inventory list

**Australia** All components are listed or exempted.

**Canada** All components are listed or exempted.

**China** All components are listed or exempted.

**Japan** All components are listed or exempted.

**New Zealand** All components are listed or exempted.

## Section 15. Regulatory information

| | |
|---|---|
| **Philippines** | All components are listed or exempted. |
| **Republic of Korea** | All components are listed or exempted. |
| **Taiwan** | All components are listed or exempted. |
| **United States** | All components are active or exempted. |

## Section 16. Any other relevant information

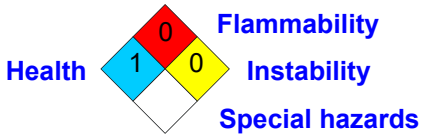
**Hazardous Material Information System (U.S.A.)**

| | | |
|---|---|---|
| Health | / | 1 |
| Flammability | | 0 |
| Physical hazards | | 0 |

**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.**

**The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.**

**National Fire Protection Association (U.S.A.)**




**History**

| | |
|---|---|
| **Date of printing** | 7/14/2026 |
| **Date of issue/Date of revision** | 7/14/2026 |
| **Date of previous issue** | 11/17/2025 |
| **Version** | 6 |
| **Key to abbreviations** | ATE = Acute Toxicity Estimate<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = Intermediate Bulk Container<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>UN = United Nations |
| **References** | Not available. |
| **Information contact** | **Vanderbilt Global Services, LLC**<br>**Corporate Risk Management**<br>**1-203-295-2143** |

**Visit www.vanderbiltchemicals.com for more information.**

# Section 16. Any other relevant information

## Notice to reader

**Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for himself the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.**