# ALPHA SOLVE (SODIUM HYDROXIDE)

**Alpha Resources LLC**

**Safety Data Sheet**

**Issue Date: 07/20/2021**

## SECTION 1 Identification

### Product Identifier

| | |
|---|---|
| Product Name | ALPHA SOLVE |
| Chemical Name | Not Applicable |
| Part Numbers | AR169, AR2174, AR2176 |
| Chemical Formula | Not Applicable |
| CAS Number | 1310-73-2 |

### Company Information

| | |
|---|---|
| Registered Company Name | Alpha Resources LLC |
| Address | 3090 Johnson Road, Stevensville, MI 49127 United States |
| Telephone | (800) 833-3083 |
| Fax | (269) 465-3629 |
| Website | https://www.alpharesources.com |
| Email | sales@alpharesources.com |

### Emergency Phone Number

| | |
|---|---|
| Association / Organization | CHEMTREC |
| Emergency Telephone No. | (800) 424-9300 |

## SECTION 2 Hazard(s) Identification

### Classification of the Substance or Mixture

**NFPA 704 Diamond**


Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health, Red = Fire, Yellow = Reactivity, White = Special (Oxidizer or water reactive substances)

| | |
|---|---|
| Classification | Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1 |

### Label Elements

| | |
|---|---|
| Hazard Pictogram(s) |  |
| Signal Word | Danger |

### Hazard Statement(s)

| | |
|---|---|
| H314 | Causes severe skin burns and eye damage |

### Hazard(s) not Otherwise Classified

Not applicable

### Precautionary Statement(s) Prevention

| | |
|---|---|
| P260 | Do not breathe dust/fume |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection |

### Precautionary Statement(s) Response

| | |
|---|---|
| P301+P330+P331 | IF SWALLOWED: Rinse mouth, do NOT induce vomiting |
| P303+P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing, rinse skin with water/shower |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, continue rinsing |
| P310 | Immediately call a POISON CENTER or doctor/physician |
| P363 | Wash contaminated clothing before reuse |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |

### Precautionary Statement(s) Storage

| | |
|---|---|
| P405 | Store locked up |

### Precautionary Statement(s) Disposal

| | |
|---|---|
| P501 | Dispose of contents/container to authorized hazardous or special waste collection point in accordance with any local regulation. |

## SECTION 3 Composition / Information on Ingredients

### Substances

| CAS No | %[weight] | Name |
|---|---|---|
| 1310-73-2 | >90 | Sodium hydroxide |
| 1318-00-9 | 5-10 | Vermiculite |

## SECTION 4 First-Aid Measures

### Description of First Aid Measures

| | |
|---|---|
| Eye Contact | If this product comes in contact with the eyes:<br>➢ Immediately hold eyelids apart and flush the eye continuously with running water.<br>➢ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>➢ Continue flushing until advised to stop by the Poison Center or a doctor, or for at least 15 minutes.<br>➢ Transport to hospital or doctor without delay. |
| Skin Contact | If skin contact occurs:<br>➢ Immediately flush body and clothes with large amounts of water, using safety shower if available.<br>➢ Quickly remove all contaminated clothing, including footwear.<br>➢ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poison Center.<br>➢ Transport to hospital, or doctor. |
| Inhalation | ➢ If fumes or combustion products are inhaled remove from contaminated area.<br>➢ Lay patient down. Keep warm and rested.<br>➢ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. |

| | |
|---|---|
| | ➢ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>➢ Transport to hospital, or doctor. |
| Ingestion | ➢ For advice, contact a Poison Center or a doctor at once.<br>➢ Urgent hospital treatment is likely to be needed.<br>➢ IF SWALLOWED, do NOT induce vomiting.<br>➢ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>➢ Give water to rinse out mouth, then provide liquid slowly and as much as patient can comfortably drink.<br>➢ Transport to hospital or doctor without delay. |

### Most important symptoms and effects, both acute and delayed

See Section 11

## SECTION 5 Fire-Fighting Measures

### Extinguishing Media

➢ Water spray or fog, foam, dry chemical powder, carbon dioxide.

### Special hazards arising from the substrate or mixture

| | |
|---|---|
| Fire Incompatibility | None known. |

### Special protective equipment and precautions for fire-fighters

| | |
|---|---|
| Fire Fighting | ➢ Alert fire department and tell them location and nature of hazard.<br>➢ Wear breathing apparatus plus protective gloves in the event of a fire.<br>➢ Prevent, by any means available, spillage from entering drains or water courses.<br>➢ Cool fire exposed containers with water spray from a protected location.<br>➢ Equipment should be thoroughly decontaminated after use. |
| Fire / Explosion Hazard | ➢ Not combustible.<br>➢ Not considered a significant fire risk, however, containers may burn.<br>➢ May emit corrosive fumes. |

## SECTION 6 Accidental Release Measures

### Personal precautions, protective equipment, and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

| | |
|---|---|
| Minor Spills | ➢ Clean up all spills immediately.<br>➢ Avoid contact with skin and eyes.<br>➢ Control personal contact with the substance by using protective equipment.<br>➢ Use dry clean up procedures and avoid generating dust.<br>➢ Place in a suitable, labelled container for waste disposal.<br>➢ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. |
| Major Spills | ➢ Environmental hazard – contain spillage.<br>➢ Clear area of personnel and move upwind.<br>➢ May be violently or explosively reactive.<br>➢ Wear full body protective clothing with breathing apparatus. |

| | |
|---|---|
| | ➢ Prevent, by any means available, spillage from entering drains or water courses.<br>➢ Consider evacuation (or protect in place).<br>➢ Stop leak if safe to do so.<br>➢ Contain spill with sand, earth, or vermiculite.<br>➢ NEVER USE organic absorbents such as sawdust, paper, or cloth.<br>➢ Collect recoverable product into labelled containers for recycling.<br>➢ Neutralize/decontaminate residue.<br>➢ Collect solid residues and seal in labelled drums for disposal.<br>➢ Wash area with water and prevent runoff into drains.<br>➢ Decontaminate equipment and launder protective clothing before storage and reuse. |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and Storage

### Precautions for safe handling

| | |
|---|---|
| Safe Handling | ➢ Avoid all personal contact and inhalation of dust.<br>➢ Use in a well-ventilated area.<br>➢ Wear protective clothing when risk of exposure occurs.<br>➢ WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.<br>➢ Keep cool, dry, and away from incompatible materials.<br>➢ Avoid physical damage to containers.<br>➢ When handling, NEVER eat, drink, or smoke.<br>➢ Keep containers securely sealed when not in use.<br>➢ Always wash hands with soap and water after handling. |

### Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| Suitable Container | ❖ Glass container is suitable for laboratory quantities.<br>❖ Lined metal can, plastic pail, polyliner drum.<br>❖ Packaging as recommended by manufacturer. |
| Storage Incompatibility | ❖ Reacts with water evolving heat and corrosive fumes.<br>❖ Reacts violently with acids, organic halogen compounds, amphoteric metals such as aluminum, zinc, tin, and lead.<br>❖ Reacts with fluorine, nitroalkanes, forming explosive compounds. |

## SECTION 8 Exposure Controls / Personal Protection

### Control parameters

❖ **Occupational Exposure Limits (OEL)**

❖ **INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|
| US NIOSH Recommended Exposure Limits (RELs) | Sodium hydroxide | Sodium hydroxide | Not Available | Not Available | 2 mg/m3 | Not Available |
| US OSHA Permissible Exposure Levels (PELs) – Table Z1 | Sodium hydroxide | Sodium hydroxide | 2 mg/m3 | Not Available | Not Available | Not Available |
| US ACGIH Threshold Limit Values (TLV) | Sodium hydroxide | Sodium hydroxide | Not Available | Not Available | 2 mg/m3 | Not Available |

❖ **Emergency Limits**

| Ingredient | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|
| Sodium hydroxide | Not Available | Not Available | Not Available |
| Vermiculite | 32 mg/m3 | 360 mg/m3 | 2,200 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| Sodium hydroxide | 10 mg/m3 | Not Available |
| Vermiculite | Not Available | Not Available |

### Exposure Controls

| | |
|---|---|
| Engineering Controls | ➢ Exhaust ventilation should be designed to prevent accumulation and recirculation in the workplace and safely remove dust from the air.<br>➢ Provide eye wash stations and a water source or safety shower.<br>➢ Provide secure, lockable, dry area for storage. |
| Eye and Face Protection | ➢ Safety glasses with side shields.<br>➢ Chemical goggles.<br>➢ Eye wash unit. |
| Skin and Body Protection | ➢ Protective over-garments for extended periods of exposure. |
| Hand Protection | ➢ Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.<br>➢ Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include frequency and duration of contact, chemical resistance of glove material, glove thickness, and dexterity.<br>➢ Wear chemical protective gloves, e.g. nitrile, neoprene.<br>➢ Gloves should be examined for wear and/or degradation constantly. |
| Respiratory Protection | ➢ Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent) |

## SECTION 9 Physical and Chemical Properties

### Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Tan, light brown granular solid |
| Physical State | Solid |
| Odor | Odorless |
| pH | 14 |
| Melting Point / Freezing Point (°C) | 318 |
| Boiling Point (°C) | 1390 |
| Relative Density (Water = 1) | 2.1 |
| Solubility in Water | Very soluble |

## SECTION 10 Stability and Reactivity

| | |
|---|---|
| Reactivity | See section 7 |
| Chemical Stability | ➢ Product is considered stable when handled and stored properly.<br>➢ Product will absorb moisture and react with atmospheric carbon dioxide.<br>➢ Hazardous polymerization will not occur. |
| Possibility of Hazardous Reactions | See section 7 |
| Conditions to Avoid | See section 7 |
| Incompatible Materials | See section 7 |
| Hazardous Decomposition Products | See section 5 |

## SECTION 11 Toxicological Information

### Information on toxicological effects

Sodium hydroxide is capable of causing severe destruction of tissue by all routes of exposure. The extent of tissue damage depends on the amount of chemical and duration of exposure.

| | |
|---|---|
| Inhaled | Severe cases may result in damage to mucous membranes, upper respiratory tract, and lungs. |
| Ingestion | Severe cases may result in chemical burns to mouth, throat, esophagus, and gastrointestinal tract. |
| Skin Contact | Severe corrosion of the skin is possible. Chemical burns and ulceration may result. |
| Eye | Contact with eyes may result in irreversible damage, including blindness. |
| Chronic | Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Not known to be a carcinogen. |

| | |
|---|---|
| Magnesium perchlorate | Toxicity –Oral (Rabbit) LD50; 325 mg/kg<br>Toxicity – Dermal (Rabbit) LD50; 1350 mg/kg<br>Irritation – Eye (Rabbit): 0.05 mg/24h SEVERE<br>Irritation – Eye (Rabbit): 1 mg/24h SEVERE<br>Irritation – Eye (Rabbit): 1 mg/30s rinsed – SEVERE<br>Irritation – Eye: adverse effect observed (irritating)<br>Irritation – Skin (Rabbit): 500 mg/24h SEVERE<br>Irritation – Skin: adverse effect observed (corrosive) |

| | | | |
|---|---|---|---|
| Acute Toxicity | X | Carcinogenicity | X |
| Skin Irritation/Corrosion | √ | Reproductivity | X |
| Serious Eye Damage/Irritation | √ | STOT – Single Exposure | X |
| Respiratory or Skin Sensitization | X | STOT – Repeated Exposure | X |
| Mutagenicity | X | Aspiration Hazard | X |

*Legend:* X *– Data either not available or does not fill the criteria for classification*
√ *- Data available to make classification.*

## SECTION 12 Ecological Information

### Toxicity

| Endpoint | Test Duration (hr) | Species | Value |
|---|---|---|---|
| LC50 | 24 | Carassius auratus (Goldfish) | 160 mg/L |
| LC50 | 48 | Gambusia affins (Mosquito fish) | 189 mg/L |
| LC50 | 48 | Ceriodaphinia cf Dubia (Water flea) | 40 mg/L |

DO NOT discharge into sewer or waterways

**Persistence and Degradability –** LOW

**Bioaccumulative Potential –** LOW (LogKOW = -3.8796)

**Mobility in Soil –** LOW (KOC = 14.3)

## SECTION 13 Disposal Considerations

### Waste Treatment Methods

| | |
|---|---|
| Product / Packaging Disposal | ➢ Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.<br>➢ This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.<br>➢ DO NOT allow wash water from cleaning or process equipment to enter drains.<br>➢ It may be necessary to collect all wash water for treatment before disposal.<br>➢ In all cases, disposal to sewer may be subject to local laws and regulations and these should be considered first. |

## SECTION 14 Transport Information

### Labels Required

| | |
|---|---|
| |  |
| Marine Pollutant | NO |

### Land transport (DOT):

| | |
|---|---|
| **UN Number** | 1823 |
| **UN proper shipping name** | Sodium hydroxide, solid |
| **Transport hazard class(es)** | 8 |
| **Packing group** | II |
| **Environmental hazard** | Not Applicable |
| **Special precautions for user** | Hazard Label – 8<br>Special Provisions – IB8, IP2, IP4, T3, TP33 |

### Air transport (ICAO-IATA / DGR)

| | |
|---|---|
| **UN Number** | 1823 |
| **UN proper shipping name** | Sodium hydroxide, solid |
| **Transport hazard class(es)** | 8<br>ERG Code 8L |
| **Packing group** | II |
| **Environmental hazard** | Not Applicable |
| **Special precautions for user** | Special Provisions – Not Applicable<br>Cargo Only Packing Instructions – 863<br>Cargo Only Maximum Qty / Pack – 50 kg<br>Passenger and Cargo Packing Instructions – 859<br>Passenger and Cargo Maximum Qty / Pack – 15 kg<br>Passenger and Cargo Limited Quantity Packing Instructions – Y844<br>Passenger and Cargo Limited Maximum Qty / Pack – 5 kg |

### Sea transport (IMDG-Code / GGVSee)

| | |
|---|---|
| **UN Number** | 1823 |
| **UN proper shipping name** | SODIUM HYDROXIDE, SOLID |
| **Transport hazard class(es)** | 8 |
| **Packing group** | II |
| **Environmental hazard** | Not Applicable |
| **Special precautions for user** | EMS Number – F-A, S-B<br>Limited Quantities – 1 kg |

### Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

### Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product Name | Group |
|---|---|
| Sodium hydroxide | Not Available |
| Vermiculite | Not Available |

### Transport in bulk in accordance with the ICG Code

| Product Name | Ship Type |
|---|---|
| Sodium hydroxide | Not Available |
| Vermiculite | Not Available |

## SECTION 15 Regulatory Information

### Safety, Health, and Environmental Regulations / Legislation Specific for the Substance or Mixture

| ❖ **Sodium hydroxide is found on the following regulatory lists** |
|---|
| US ACGIH Threshold Limit Values (TLV) |
| US AIHA Workplace Environmental Exposure Levels (WEELs) |
| US CWA (Clean Water Act) – List of Hazardous Substances |
| US DOE Temporary Emergency Exposure Limits (TEELs) |
| US NIOSH Recommended Exposure Limits (RELs) |
| US OSHA Permissible Exposure Levels (PELs) Table Z-1 |
| US Toxic Substances Control Act (TSCA) – Chemical Substance Inventory |
| US TSCA Chemical Substance Inventory – Interim List of Active Substances |
| ❖ **Vermiculite is found on the following regulatory lists** |
| US DOE Temporary Emergency Exposure Limits (TEELs) |

### Federal Regulations

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

❖ **Section 311/312 hazard categories**

| | |
|---|---|
| Flammable (Gases, Aerosols, Liquids, or Solids) | No |
| Gas under pressure | No |
| Explosive | No |
| Self-heating | No |
| Pyrophoric (Liquid or Solid) | No |
| Pyrophoric Gas | No |
| Corrosive to metal | No |
| Oxidizer (Liquid, Solid, or Gas) | No |
| Organic Peroxide | No |
| Self-reactive | No |
| In contact with water emits flammable gas | No |
| Combustible Dust | No |
| Carcinogenicity | No |
| Acute toxicity (any route of exposure) | No |
| Reproductive toxicity | No |

| | |
|---|---|
| Skin Corrosion or Irritation | Yes |
| Respiratory or Skin Sensitization | No |
| Serious eye damage or eye irritation | Yes |
| Specific target organ toxicity (single or repeated exposure) | No |
| Aspiration Hazard | No |
| Germ cell mutagenicity | No |
| Simple Asphyxiant | No |
| Hazards Not Otherwise Classified | No |

❖ **US EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)**

| ❖ Name | Reportable Quantity in Pounds (lb) | Reportable Quantity in kg |
|---|---|---|
| Sodium hydroxide | 1000 | 454 |

## State Regulations

❖ **US California Proposition 65**

None Reported

## National Inventory Status

| National Inventory | Status |
|---|---|
| Australia – AIIC / Australia Non-Industrial Use | Yes |
| Canada – DSL | No (vermiculite) |
| Canada – NDSL | No (sodium hydroxide; vermiculite) |
| China – IECSC | Yes |
| Europe – EINEC / ELINCS / NLP | No (vermiculite) |
| Japan – ENCS | No (vermiculite) |
| Korea – KECI | Yes |
| New Zealand – NZIoC | Yes |
| Philippines – PICCS | Yes |
| USA – TSCA | No (vermiculite) |
| Taiwan – TCSI | Yes |
| Mexico – INSQ | Yes |
| Vietnam – NCI | Yes |
| Russia – FBEPH | No (vermiculite) |
| ***Legend:*** | *Yes = All CAS declared ingredients are on the inventory*<br>*No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)* |

## SECTION 16 Other Information

| | |
|---|---|
| Revision Date | 07/20/2021 |
| Initial Date | 08/09/2016 |

The data and information as stated was furnished by the manufacturer/vendor/supplier of this product. Alpha Resources LLC cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.