



ExhaustWeld

J-B Weld Company LLC

Version No: 2.5

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

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S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

| | |
|-------------------------------|-------------------|
| Product name | ExhaustWeld |
| Synonyms | 38572 ExhaustWeld |
| Other means of identification | Not Available |

Recommended use of the chemical and restrictions on use

| | |
|--------------------------|---|
| Relevant identified uses | Use according to manufacturer's directions. |
|--------------------------|---|

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

| | |
|-------------------------|--|
| Registered company name | J-B Weld Company LLC |
| Address | 400 CMH Road Sulphur Springs TX 75482 United States |
| Telephone | 903-885-7696 |
| Fax | Not Available |
| Website | WWW.JBWeld.com |
| Email | info@JBWeld.com |

Emergency phone number

| | |
|-----------------------------------|---|
| Association / Organisation | InfoTrac |
| Emergency telephone numbers | Transportation Emergencies: 800-535-5053 or (24 hours) |
| Other emergency telephone numbers | Poison Control Centers: Medical Emergencies 800-222-1222 (24 hours) |

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

| | |
|----------------|--|
| Classification | Eye Irritation Category 2A, Skin Corrosion/Irritation Category 2 |
|----------------|--|

Label elements

| | |
|---------------------|--|
| Hazard pictogram(s) | |
|---------------------|--|

| | |
|-------------|---------|
| Signal word | Warning |
|-------------|---------|

Hazard statement(s)

| | |
|------|--------------------------------|
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |

Hazard(s) not otherwise classified

Not Applicable

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

| | |
|------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
|------|--|

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Precautionary statement(s) Response

| | |
|-----------------------|--|
| P321 | Specific treatment (see advice on this label). |
| P362 | Take off contaminated clothing and wash before reuse. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|---------------|-----------|---|
| Not Available | 0.1-1 | Confidential Alcohol #1 |
| Not Available | 0.1-1 | Confidential Sulfate #1 |
| Not Available | 0.1-1 | Confidential Sodium Salt #1 |
| 67-56-1 | 0.01-0.1 | <u>methanol</u> |
| 112926-00-8 | 1-5 | <u>silicic acid</u> |
| 21645-51-2 | 1-5 | <u>aluminium hydroxide</u> |
| 65997-17-3 | 40-60 | <u>glass fibre - from continuous filament</u> |
| 1344-09-8* | 5-10 | <u>sodium metasilicate</u> |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

| | |
|---------------------|--|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ 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. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <ul style="list-style-type: none"> ▶ Gently brush or vacuum off adherent fibres. ▶ Wash affected areas thoroughly with water (and soap if available). ▶ Seek medical attention if irritation exists and persists. |
| Inhalation | <ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary. |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. |

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute and short term repeated exposures to methanol:

- ▶ Toxicity results from accumulation of formaldehyde/formic acid.
- ▶ Clinical signs are usually limited to CNS, eyes and GI tract. Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- ▶ Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- ▶ Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- ▶ Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 meq/L).
- ▶ Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal.
- ▶ Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment. 8-Phenytoin may be preferable to diazepam for controlling seizure.

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[Ellenhorn Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

| Determinant | Index | Sampling Time | Comment |
|-------------------------|---------------------|-------------------------------------|---------|
| 1. Methanol in urine | 15 mg/l | End of shift | B, NS |
| 2. Formic acid in urine | 80 mg/gm creatinine | Before the shift at end of workweek | B, NS |

B: Background levels occur in specimens collected from subjects **NOT** exposed.

NS: Non-specific determinant - observed following exposure to other materials.

SECTION 5 Fire-fighting measures

Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|--|
| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

Special protective equipment and precautions for fire-fighters

| | |
|------------------------------|--|
| Fire Fighting | <ul style="list-style-type: none"> ▶ When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles. ▶ When heated to extreme temperatures, (>1700 deg.C) amorphous silica can fuse. ▶ Alert Fire Department and tell them location and nature of hazard. ▶ Wear full body protective clothing with breathing apparatus. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles. ▶ When heated to extreme temperatures, (>1700 deg.C) amorphous silica can fuse. ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. <p>Combustion products include: carbon dioxide (CO₂) hydrogen fluoride silicon dioxide (SiO₂) other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.</p> |

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 | <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. |
| Major Spills | <p>Moderate hazard.</p> <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. |

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

SECTION 7 Handling and storage

Precautions for safe handling

| | |
|--------------------------|---|
| Safe handling | <ul style="list-style-type: none"> ▶ The use of ceramic fibres in the work place should be reviewed in the context of frequency of use and potential for exposure. ▶ In circumstances where the respiratory standards or excursion limits are approached, work areas should be designated by the use of ropes or other similar barriers and appropriate signs be utilised, where possible. ▶ DO NOT allow clothing wet with material to stay in contact with skin |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. |

Conditions for safe storage, including any incompatibilities

| | |
|---------------------------|--|
| Suitable container | <ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks. |
|---------------------------|--|

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Storage incompatibility

The substance may be or contains a 'metalloid'

The following elements are considered to be metalloids; boron, silicon, germanium, arsenic, antimony, tellurium and (possibly) polonium. The electronegativities and ionisation energies of the metalloids are between those of the metals and nonmetals, so the metalloids exhibit characteristics of both classes. The reactivity of the metalloids depends on the element with which they are reacting.

Silicas:

- ▶ react with hydrofluoric acid to produce silicon tetrafluoride gas
- ▶ react with xenon hexafluoride to produce explosive xenon trioxide
- ▶ reacts exothermically with oxygen difluoride, and explosively with chlorine trifluoride (these halogenated materials are not commonplace industrial materials) and other fluorine-containing compounds
- ▶ may react with fluorine, chlorates
- ▶ are incompatible with strong oxidisers, manganese trioxide, chlorine trioxide, strong alkalis, metal oxides, concentrated orthophosphoric acid, vinyl acetate
- ▶ may react vigorously when heated with alkali carbonates.
- ▶ Avoid storage and reaction with hydrofluoric or phosphoric acids and concentrated alkalis.
- ▶ Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
- ▶ These trifluorides are hypergolic oxidisers.

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) | methanol | Carbinol, Columbian spirits, Methanol, Pyroligneous spirit, Wood alcohol, Wood naphtha, Wood spirit | 200 ppm / 260 mg/m3 | 325 mg/m3 / 250 ppm | Not Available | [skin] |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | methanol | Methyl alcohol | 200 ppm / 260 mg/m3 | Not Available | Not Available | Not Available |
| US ACGIH Threshold Limit Values (TLV) | methanol | Methanol | 200 ppm | 250 ppm | Not Available | Headache; eye dam; dizziness; nausea; BEI |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | silicic acid | Silica, amorphous, precipitated and gel | Not Available | Not Available | Not Available | See Table Z-3 |
| US NIOSH Recommended Exposure Limits (RELs) | aluminium hydroxide | Synonyms vary depending upon the specific aluminum compound. | 2 mg/m3 | Not Available | Not Available | Not Available |
| US NIOSH Recommended Exposure Limits (RELs) | aluminium hydroxide | Synonyms vary depending upon the specific aluminum compound. | 5 mg/m3 | Not Available | Not Available | Not Available |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | aluminium hydroxide | Particulates not otherwise regulated (PNOR): Total dust | 15 mg/m3 | Not Available | Not Available | (f) All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3. |
| US ACGIH Threshold Limit Values (TLV) | aluminium hydroxide | Aluminum metal and insoluble compounds (Respirable particulate matter) | 1 mg/m3 | Not Available | Not Available | Pneumoconiosis; LRT irr; neurotoxicity |

Emergency Limits

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|--|---|---------------|---------------|---------------|
| methanol | Methanol; (Methyl alcohol) | Not Available | Not Available | Not Available |
| silicic acid | Silica gel, amorphous synthetic | 18 mg/m3 | 200 mg/m3 | 1,200 mg/m3 |
| silicic acid | Silica gel dessicant | 18 mg/m3 | 95 mg/m3 | 570 mg/m3 |
| aluminium hydroxide | Aluminum hydroxide | 8.7 mg/m3 | 73 mg/m3 | 440 mg/m3 |
| glass fibre - from continuous filament | Fibrous glass; (Fiber glass; Glass frit; Synthetic vitreous fibers) | 15 mg/m3 | 170 mg/m3 | 990 mg/m3 |
| sodium metasilicate | Silicic acid, sodium salt; (Sodium silicate) | 5.9 mg/m3 | 65 mg/m3 | 390 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|--|---------------|---------------|
| methanol | 6,000 ppm | Not Available |
| silicic acid | Not Available | Not Available |
| aluminium hydroxide | Not Available | Not Available |
| glass fibre - from continuous filament | Not Available | Not Available |
| sodium metasilicate | Not Available | Not Available |

Occupational Exposure Banding

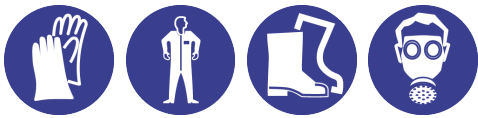
| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|------------|-----------------------------------|----------------------------------|
|------------|-----------------------------------|----------------------------------|

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| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|--|--|----------------------------------|
| glass fibre - from continuous filament | E | $\leq 0.01 \text{ mg/m}^3$ |
| sodium metasilicate | E | $\leq 0.01 \text{ mg/m}^3$ |
| Notes: | Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health. | |

Exposure controls

| | |
|---|---|
| Appropriate engineering controls | <ul style="list-style-type: none"> Provide good ventilation (either forced or natural) Where possible, enclose sources of dust and provide dust extraction at the source. Restrict access to work areas involved in handling man-made mineral fibres and ensure that adequate training, in the handling of such materials, has been provided. <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> Safety glasses with side shields. Chemical goggles. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> Personnel involved in the installation of unbonded ceramic materials should wear disposable coveralls, or long-sleeve loose fitting clothing, gloves and suitable respirator. Such equipment should also be used by personnel employed in removing materials which have not become embrittled. |

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

| | | | |
|---|-----------------------------|--|---------------|
| Appearance | Fiberglass Cloth with Resin | | |
| Physical state | Liquid | Relative density (Water = 1) | Not Available |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | Not Available | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Available | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water | Miscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 Stability and reactivity

| | |
|-------------------|---------------|
| Reactivity | See section 7 |
|-------------------|---------------|

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| | |
|---|--|
| Chemical stability | <ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Extremely high temperatures. |
| 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

| | |
|---------------------|--|
| Inhaled | <p>The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <p>Minor but regular methanol exposures may effect the central nervous system, optic nerves and retinae. Symptoms may be delayed, with headache, fatigue, nausea, blurring of vision and double vision.</p> |
| Ingestion | Accidental ingestion of the material may be damaging to the health of the individual. |
| Skin Contact | <p>This material can cause inflammation of the skin on contact in some persons.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Man-made mineral fibres may produce mild skin reaction with itching or redness of the skin. This is due to the physical and not from the chemical nature of the substance.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>The material is mildly abrasive and may produce discomfort which results in a temporary skin rash. Discomfort is accentuated by fibre adhering to sweaty skin at higher temperatures.</p> |
| Eye | This material can cause eye irritation and damage in some persons. |
| Chronic | <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Amorphous silicas generally are less hazardous than crystalline silicas, but the former can be converted to the latter on heating and subsequent cooling. Inhalation of dusts containing crystalline silicas may lead to silicosis, a disabling lung disease that may take years to develop.</p> <p>Soluble silicates do not exhibit sensitizing potential. Testing in bacterial and animal experiments have not shown any evidence of them causing mutations or birth defects.</p> <p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.</p> <p>Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision. Liver and/or kidney injury may also result.</p> |

| ExhaustWeld | TOXICITY | IRRITATION |
|-------------|---------------|---------------|
| | Not Available | Not Available |

| methanol | TOXICITY | IRRITATION |
|----------|---|--|
| | =11000 mg/kg ^[2] | Eye (rabbit): 100 mg/24h-moderate |
| | =420 mg/kg ^[2] | Eye (rabbit): 40 mg-moderate |
| | =7000 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] |
| | =7500 mg/kg ^[2] | Skin (rabbit): 20 mg/24 h-moderate |
| | =7500 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] |
| | =9500 mg/kg ^[2] | |
| | >=4000-7000 mg/kg ^[2] | |
| | 300 mg/kg ^[2] | |
| | 3429 mg/kg ^[2] | |
| | 6422 mg/kg ^[2] | |
| | Inhalation (rat) LC50: 36208.63875 mg/l/1H ^[2] | |
| | Oral (dog) LD50: =8000 mg/kg ^[2] | |
| | Oral (monkey) LD50: =7000 mg/kg ^[2] | |
| | Oral (mouse) LD50: =7300 mg/kg ^[2] | |
| | Oral (rabbit) LD50: =14200 mg/kg ^[2] | |
| | Oral (rabbit) LD50: =14400 mg/kg ^[2] | |
| | Oral (rat) LD50: =10300 mg/kg ^[2] | |
| | Oral (rat) LD50: =12800 mg/kg ^[2] | |
| | Oral (rat) LD50: =5300 mg/kg ^[2] | |

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| | | |
|--|---|---|
| | Oral (rat) LD50: =5800 mg/kg ^[2] | |
| | Oral (rat) LD50: =6200 mg/kg ^[2] | |
| | Oral (rat) LD50: =7000 mg/kg ^[2] | |
| | Oral (rat) LD50: =9100 mg/kg ^[2] | |
| | Oral (rat) LD50: 5628 mg/kg ^[2] | |
| silicic acid | TOXICITY | IRRITATION |
| | Oral (rat) LD50: >5000 mg/kg ^[1] | Eye (rabbit) : 8.3 mg/48h |
| aluminium hydroxide | TOXICITY | IRRITATION |
| | Not Available | Eye: no adverse effect observed (not irritating) ^[1] Skin: no adverse effect observed (not irritating) ^[1] |
| glass fibre - from continuous filament | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| sodium metasilicate | TOXICITY | IRRITATION |
| | Oral (rat) LD50: 1153 mg/kg ^[2] | Skin (human): 250 mg/24h SEVERE Skin (rabbit): 250 mg/24h SEVERE |
| Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances | | |

| | |
|---|--|
| ExhaustWeld | The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. |
| ALUMINIUM HYDROXIDE | No significant acute toxicological data identified in literature search. |
| GLASS FIBRE - FROM CONTINUOUS FILAMENT | There is little evidence for acute toxicity after inhalation of MMMF. Glasswool administered by inhalation produced little pulmonary fibrosis in experimental animals [IARC Monograph 43] The dust has been associated with skin irritation due to the mechanical action of the fibres [CHEMINFO, Sax, ILO ENCYCLOPAEDIA]. Filaments are manufactured to definite fibre diameters; cannot split along their length rather they break across and form small particles not needles [FARIMA]. NOTE: Carcinogenic by RTECS criteria (rat inhalation studies) |
| sodium metasilicate | The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. |
| ExhaustWeld & SILICIC ACID | For silica amorphous: Derived No Adverse Effects Level (NOAEL) in the range of 1000 mg/kg/d. In humans, synthetic amorphous silica (SAS) is essentially non-toxic by mouth, skin or eyes, and by inhalation. Epidemiology studies show little evidence of adverse health effects due to SAS. |
| METHANOL & sodium metasilicate | The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. |
| SILICIC ACID & GLASS FIBRE - FROM CONTINUOUS FILAMENT | The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. |

| | | | |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity | ✗ | Carcinogenicity | ✗ |
| Skin Irritation/Corrosion | ✓ | Reproductivity | ✗ |
| Serious Eye Damage/Irritation | ✓ | STOT - Single Exposure | ✗ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✗ |
| Mutagenicity | ✗ | Aspiration Hazard | ✗ |

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

| | | | | | |
|-------------|-----------------|---------------------------|----------------|---------------|---------------|
| ExhaustWeld | Endpoint | Test Duration (hr) | Species | Value | Source |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| methanol | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96 | Fish | >100mg/L | 4 |

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| | | | | | |
|---|----------|--------------------|-------------------------------|--------------------|--------|
| | EC50 | 48 | Crustacea | 1460.00-mg/L | 4 |
| | EC50 | 96 | Algae or other aquatic plants | -14.110-20.623mg/L | 4 |
| | BCF | 24 | Algae or other aquatic plants | 0.05-mg/L | 4 |
| | EC01 | 240 | Not Available | 2.3685mg/L | 4 |
| | NOEC | 96 | Fish | <0.0004=% vol | 4 |
| silicic acid | | | | | |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| | NOEL | 2016 | Not Available | 1100-mg/L | 4 |
| aluminium hydroxide | | | | | |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96 | Fish | 0.0029mg/L | 2 |
| | EC50 | 48 | Crustacea | >0.065mg/L | 4 |
| | EC50 | 96 | Algae or other aquatic plants | 0.0054mg/L | 2 |
| | NOEC | 72 | Algae or other aquatic plants | >=0.004mg/L | 2 |
| glass fibre - from continuous filament | | | | | |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96 | Fish | >1000mg/L | 2 |
| | EC50 | 96 | Algae or other aquatic plants | 2.655mg/L | 2 |
| | EC10 | 48 | Algae or other aquatic plants | 0.0045mg/L | 2 |
| | NOEC | 264 | Algae or other aquatic plants | 0.0091mg/L | 2 |
| sodium metasilicate | | | | | |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96 | Fish | 1108mg/L | 2 |
| | EC50 | 48 | Crustacea | -0.28-0.57mg/L | 4 |
| | EC50 | 72 | Algae or other aquatic plants | 207mg/L | 2 |
| | EC0 | 72 | Algae or other aquatic plants | 35mg/L | 2 |
| | NOEL | 1656 | Not Available | 134.4-mg/L | 4 |
| Legend: <i>Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data</i> | | | | | |

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

For Amorphous Silica: Amorphous silica is chemically and biologically inert. It is not biodegradable.

For Silica:

Environmental Fate: Most documentation on the fate of silica in the environment concerns dissolved silica, in the aquatic environment, regardless of origin, (man-made or natural), or structure, (crystalline or amorphous).

Terrestrial Fate: Silicon makes up 25.7% of the Earth's crust, by weight, and is the second most abundant element, being exceeded only by oxygen.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|--------------|-------------------------|------------------|
| methanol | LOW | LOW |
| silicic acid | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|--------------|-----------------------|
| methanol | LOW (BCF = 10) |
| silicic acid | LOW (LogKOW = 0.5294) |

Mobility in soil

| Ingredient | Mobility |
|--------------|-------------------|
| methanol | HIGH (KOC = 1) |
| silicic acid | LOW (KOC = 23.74) |

SECTION 13 Disposal considerations

Waste treatment methods

| | |
|------------------------------|--|
| Product / Packaging disposal | <ul style="list-style-type: none"> Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. |
|------------------------------|--|

Continued...

ExhaustWeld

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

- ▶ **DO NOT allow wash water from cleaning or process equipment to enter drains.**
- ▶ It may be necessary to collect all wash water for treatment before disposal.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ▶ Consult State Land Waste Authority for disposal.

SECTION 14 Transport information

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

SECTION 15 Regulatory information

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

methanol is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
 US - California Proposition 65 - Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity
 US - California Proposition 65 - Reproductive Toxicity
 US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List
 US ACGIH Threshold Limit Values (TLV)
 US AIHA Workplace Environmental Exposure Levels (WEELs)
 US Clean Air Act - Hazardous Air Pollutants
 US DOE Temporary Emergency Exposure Limits (TEELs)

US EPA Integrated Risk Information System (IRIS)
 US EPCRA Section 313 Chemical List
 US NIOSH Recommended Exposure Limits (RELs)
 US OSHA Permissible Exposure Levels (PELs) - Table Z1
 US OSHA Permissible Exposure Limits - Annotated Table Z-1
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
 US TSCA Chemical Substance Inventory - Interim List of Active Substances

silicic acid is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)
 US OSHA Permissible Exposure Levels (PELs) - Table Z1
 US OSHA Permissible Exposure Limits - Annotated Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
 US TSCA Chemical Substance Inventory - Interim List of Active Substances

aluminium hydroxide is found on the following regulatory lists

US ACGIH Threshold Limit Values (TLV)
 US ACGIH Threshold Limit Values (TLV) - Carcinogens
 US AIHA Workplace Environmental Exposure Levels (WEELs)
 US DOE Temporary Emergency Exposure Limits (TEELs)
 US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Levels (PELs) - Table Z1
 US OSHA Permissible Exposure Limits - Annotated Table Z-1
 US OSHA Permissible Exposure Limits - Annotated Table Z-3
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
 US TSCA Chemical Substance Inventory - Interim List of Active Substances

glass fibre - from continuous filament is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

sodium metasilicate is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

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 |

Continued...

ExhaustWeld

| | |
|--|-----|
| 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 |
|----------|------------------------------------|---------------------------|
| Methanol | 5000 | 2270 |

State Regulations

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm

US - California Proposition 65 - Reproductive Toxicity: Listed substance

Methanol Listed

National Inventory Status

| National Inventory | Status |
|--|--|
| Australia - AIIIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (Confidential Alcohol #1; Confidential Sulfate #1; Confidential Sodium Salt #1; methanol; silicic acid; aluminium hydroxide; glass fibre - from continuous filament; sodium metasilicate) |
| China - IECSC | No (Confidential Sodium Salt #1) |
| Europe - EINEC / ELINCS / NLP | No (Confidential Sodium Salt #1) |
| Japan - ENCS | No (Confidential Alcohol #1; Confidential Sulfate #1; silicic acid; glass fibre - from continuous filament) |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | No (Confidential Alcohol #1) |
| Vietnam - NCI | Yes |
| Russia - ARIPS | No (Confidential Sulfate #1) |
| Legend: | Yes = All CAS declared ingredients are on the inventory 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 | 12/10/2020 |
| Initial Date | 12/09/2020 |

SDS Version Summary

| Version | Issue Date | Sections Updated |
|-----------|------------|------------------|
| 0.5.1.1.1 | 12/09/2020 | Ingredients |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.