

# Safety Data Sheet

## Denatured alcohol (95% Ethanol)

Product Code: SO-AL0020

Department: solvents

C.A.S.: 64-17-5, 67-56-1, 141-78-6, 7732-18-5



**KAMA**  
PIGMENTS

### Section: 1 Identification

|   |   |
|---|---|
| Product Name:                                 | Denatured Ethyl Alcohol DA-2A (Anhydrous)   |
| Synonyms:                                     | 2A Alcohol or solvent   |
| Chemical Family:                              | Alcohol / Esters.   |
| Application:                                  | General purpose organic solvent, printing inks, protective and decorative coatings, resins. |
| 24-Hour Emergency Telephone Number (CANUTEC): | (613) 996-6666  |

### Section: 2 Hazard Identification

#### HGS Label Elements



## Signal Word

Danger

## GHS Classification

Flammable liquids Cat.2

Acute toxicity - Oral Cat.4

Acute toxicity - Dermal Cat.3

Acute toxicity - Inhalation (Dusts/Mists) Cat.3

Skin corrosion/irritation Cat.2

Serious eye damage/eye irritation Cat.2A

Specific target organ toxicity (single exposure) Cat.1

## Hazard Statements

Highly flammable liquid and vapor

May cause respiratory irritation

Causes damage to organs

Toxic in contact with skin

Toxic if inhaled

Harmful if swallowed

Causes skin irritation

Causes serious eye irritation

## Precautionary Statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ ventilating / lighting/ equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/eye protection/face protection

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell Rinse mouth

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

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## Section: 3 Composition / Information on Ingredients

| Chemical name | CAS no.   | % weight (W/W) | Synonyms |
|---------------|-----------|----------------|----------|
| Ethanol       | 64-17-5   | 80 - 90%       |          |
| Methanol      | 67-56-1   | 10 - 20%       |          |
| ethyl Acetate | 141-78-6  | 0 - 10%        |          |
| water         | 7732-18-5 | 0 - 10%        |          |

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## Section: 4 First-Aid Measures

|                     |  |
|---------------------|--|
| Eye Contact:        | Immediately flush eyes with copious quantities of water for at least 20 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.   |
| Skin Contact:       | In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.   |
| Inhalation:         | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Get medical attention immediately.                       |
| Ingestion:          | Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.  |
| Notes to Physician: | Treatment based on sound judgment of physician and individual reactions of patient. This product contains methanol, a toxic substance having produced blindness and other serious effects on vision, as well as death. However, this product also contains the accepted antidote, ethanol. |

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## Section: 5 Fire-Fighting Measures

|  |   |
|--|---|
| Suitable Extinguishing Media                                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.   |
| Specific hazards arising from the substance or mixture         | Vapors from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point. Use water spray to cool fire-exposed containers and structures. Use water spray to disperse vapors; re-ignition is possible. |
| Hazardous combustion products                                  | Carbon monoxide. Carbon dioxide. Formaldehyde.  |
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.  |

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## Section: 6 Accidental Release Measures

|                                       |  |
|---------------------------------------|--|
| Personal Precautionary Measures:      | Wear appropriate protective equipment.   |
| Environmental Precautionary Measures: | Prevent entry into sewers or streams, dike if needed. Consult local authorities.   |
| Procedure for Clean Up:               | Isolate hazard area and restrict access. Stop leak only if safe to do so. Remove ignition sources and work with non-sparking tools. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water. |

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## Section: 7 Handling And Storage

|           |  |
|-----------|--|
| Handling: | For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment. |
| Storage:  | Store in a cool, dry, well ventilated area, away from heat and ignition sources. Place away from incompatible materials. Store in accordance with good industrial practices.   |

## Section: 8 Exposure Control/Personal Protection

| Chemical name             | Alberta OEL<br>OEL   | Brit. Columbia<br>OEL                | Ontario                              | Quebec<br>OEL  | Exposure Limit<br>ACGIH.           | Immediately<br>Dangerous to life<br>or Health -IDLH |
|---------------------------|--|--------------------------------------|--------------------------------------|--|------------------------------------|---|
| Ethanol<br>64-17-5        | TWA: 1000 ppm<br>TWA: 1880 mg/m <sup>3</sup>   | STEL:1000 ppm                        | STEL:1000 ppm                        | TWA: 1000 ppm<br>TWA: 1880 mg/m <sup>3</sup>   | 1000 ppm STEL3300 ppm              |   |
| Methanol<br>67-56-1       | TWA: 200 ppm<br>TWA: 262 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 328 mg/m <sup>3</sup><br>skin | TWA: 200 ppm<br>STEL:250 ppm<br>Skin | TWA: 200 ppm<br>STEL:250 ppm<br>skin | TWA: 200 ppm<br>TWA: 262 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 328 mg/m <sup>3</sup><br>skin | 250 ppm STEL<br>200 ppm<br>TLV-TWA | 6000 ppm  |
| Ethyl Acetate<br>141-78-6 | TWA: 400 ppm<br>TWA: 1440<br>mg/m <sup>3</sup>   | TWA: 150 ppm                         | TWA: 400 ppm                         | TWA: 400 ppm<br>TWA: 1440 mg/m <sup>3</sup>  | TWA: 400 ppm<br>TLV-TWA            | 2000ppm   |
| water                     | not available<br>7732-18-5   | not available                        | not available                        | not available  | not available                      | not available                                       |

Consult local authorities for recommended exposure limits

Appropriate engineering controls

Engineering controls                      Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Use explosion proof equipment.

Individual protection measures, such as personal protective equipment

|                                |  |
|--------------------------------|--|
| Eye/face protection            | Chemical goggles; also wear a face shield if splashing hazard exists.  |
| Hand protection                | Butyl rubber gloves. Neoprene gloves. Rubber gloves.   |
| Skin and body protection       | Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.   |
| Respiratory protection         | Up to 1000 ppm, an approved organic vapor cartridge respirator can be used. For concentrations above 1000 ppm, an air-supplying respirator is recommended. The user should consult a respirator guide, such as the Canadian Standards Association's guide Z94.4- M1982.  |
| General hygiene considerations | Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. |

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## Section: 9 Physical and Chemical Properties

|                         |                     |
|-------------------------|---------------------|
| Physical State:         | Liquid.             |
| Colour:                 | Colourless          |
| Odour:                  | Alcohol             |
| pH:                     | Not Available.      |
| Specific Gravity:       | 0.7889              |
| Boiling Point:          | 75.6 °C /168 °F     |
| Freezing/Melting Point: | Not Available.      |
| Vapour Pressure:        | Not Available.      |
| Vapour Density:         | Not Available.      |
| % Volatile by Volume:   | 100%                |
| Evaporation Rate:       | 1.8                 |
| Solubility:             | Completely soluble. |
| VOCs:                   | Not Available.      |
| Viscosity:              | Not Available.      |
| Molecular Weight:       | Not Available.      |
| Other:                  | Not Available.      |

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## Section: 10 Stability And Reactivity

|                                   |   |
|-----------------------------------|---|
| Chemical Stability:               | Stable.   |
| Hazardous Polymerization:         | Will not occur.   |
| Conditions to Avoid:              | Avoid excessive heat, open flames and all ignition sources. |
| Materials to Avoid:               | Oxidizing materials.  |
| Hazardous Decomposition Products: | Carbon monoxide. Carbon dioxide. Formaldehyde.              |
| Additional Information:           | No additional remark.                                       |

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## Section: 11 Toxicological Information

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|--|--|
| Information on likely routes of exposure |  |
| Inhalation                               | High vapor concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.   |
| Eye contact                              | Causes moderate to severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva.  |
| Skin contact                             | Causes mild skin irritation. May cause dermatitis, prolonged or repeated contact may cause skin sensitization. May be absorbed through the skin and contribute to the symptoms listed under ingestion.   |
| Ingestion                                | A small amount of methanol (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death if treatment is not received. May cause headache, nausea, abdominal discomfort, vomiting, diarrhea, dizziness, drowsiness, faintness, lack of coordination and unconsciousness.   |
| Information on toxicological effects     |  |
| Symptoms                                 | Repeated exposure by inhalation or absorption of methanol may cause systemic poisoning, brain disorders, impaired vision and blindness. Inhalation may worsen conditions such as emphysema or bronchitis. Repeated skin contact may cause dermal irritation, dryness and cracking. Effects of sub lethal doses may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity. Methanol is toxic by inhalation and ingestion. Inhalation of vapors may cause cyanosis, CNS effects, lethargy, loss of consciousness and death. The effects from inhalation may be delayed. Ingestion may cause malaise, CNS effects, discomfort, and death if not treated promptly. Ingestion of methanol has resulted in adverse effects (necrosis and hemorrhaging) in the brain. Medical conditions aggravated by exposure include: skin disorders and allergies, liver disorders and eye disease. Long term exposure to methanol has been associated with headaches, |

giddiness, conjunctivitis, insomnia and impaired vision. Dermal absorption of significant amounts of methanol resulted in death in several animal species. Toxic effects in animals exposed to methanol by inhalation include eye irritation, blindness and nasal discharge. Toxic effects observed in animals exposed to methanol by ingestion include CNS effects, gastrointestinal effects, anesthetic effects, damage to the optic nerve and acidosis.

**Synergistic Products:**

In animals, high concentrations of methanol can increase the toxicity of other chemicals, particularly liver toxins like carbon tetrachloride. Ethanol significantly reduces the toxicity of methanol because it competes for the same metabolic enzymes, and has been used to treat methanol poisoning.

**Potential for Accumulation:**

Methanol is readily absorbed into the body following inhalation and ingestion. Skin absorption may occur if the skin is broken or exposure is prolonged. Once absorbed, methanol is rapidly distributed to body tissues. A small amount is excreted unchanged in exhaled air and the urine. The rest is first metabolized to formaldehyde, which is then metabolized to formic acid and/or formate. The formic acid and formate are eventually converted to carbon dioxide and water. In humans, methanol clears from the body, after inhalation or oral exposure, with a half-life of 1 day or more for high doses (greater than 1000 mg/kg) or about 1.5-3 hours for low doses (less than 100 mg/kg or 76.5-230 ppm (100-300 mg/m<sup>3</sup>)). Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis. Synergistic Materials: Ethanol with carbon tetrachloride, chloroform, bromotrichloromethane, dimethylnitrosamine, thioacetamide, methanol with carbon tetrachloride.

**Numerical measures of toxicity**

**Acute toxicity**

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

|                               |              |
|-------------------------------|--------------|
| ATEmix (oral)                 | 671.00 mg/kg |
| ATEmix (dermal)               | 318.00 mg/kg |
| ATEmix (inhalation-dust/mist) | 0.53 mg/l    |

| Chemical name             | Oral LD50            | Dermal LD50  | Inhalation LC50                                    |
|---------------------------|----------------------|--|--|
| Ethanol<br>64-17-5        | = 7060 mg/kg ( Rat ) | Not available  | = 124.7 mg/L ( Rat ) 4 h                           |
| Methanol<br>67-56-1       | = 6200 mg/kg ( Rat ) | = 15800 mg/kg ( Rabbit )<br>= 15840 mg/kg ( Rabbit ) | = 22500 ppm ( Rat ) 8 h<br>= 64000 ppm ( Rat ) 4 h |
| Ethyl acetate<br>141-78-6 | = 5620 mg/kg ( Rat ) | > 18000 mg/kg ( Rabbit )<br>> 20 mL/kg ( Rabbit )    | = 4000 ppm ( Rat ) 4 h                             |
| water<br>7732-18-5        | > 90 mL/kg ( Rat )   | Not available  | Not available                                      |

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

|                                   |   |
|-----------------------------------|---|
| Skin corrosion/irritation         | Causes mild skin irritation. May cause dermatitis, prolonged or repeated contact may cause skin sensitization. May be absorbed through the skin and contribute to the symptoms listed under ingestion.  |
| Serious eye damage/eye irritation | Causes moderate to severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva.   |
| Respiratory or skin sensitization | No information available.   |
| Germ cell mutagenicity            | No information available.   |
| Carcinogenicity                   | Ethanol possesses properties that indicate a carcinogenicity hazard for human health but these are manifest only at doses associated with consumption of alcoholic beverages. In the context of an industrial chemical, these hazards do not warrant concern as these are not likely to result from the manufacture and use of ethanol and ethanol containing products. |

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name             | ACGIH                      | AIRCNTPOSHA                   |
|---------------------------|----------------------------|-------------------------------|
| Ethanol<br>64-17-5        | A3                         | Group 1knownX                 |
| Methanol<br>67-56-1       | Not available<br>available | Not availableNot availableNot |
| Ethyl acetate<br>141-78-6 | Not available<br>available | Not availableNot availableNot |
| Water<br>7732-18-5        | Not available<br>available | Not availableNot availableNot |

Legend

|   |                                  |
|---|----------------------------------|
| ACGIH<br>(American Conference of Governmental Industrial Hygienists)                  | A3 - Animal Carcinogen           |
| IARC<br>(International Agency for Research on Cancer)                                 | Group 1 - Carcinogenic to Humans |
| NTP<br>(National Toxicology Program)  | Known - Known Carcinogen         |
| OSHA<br>(Occupational Safety and Health Administration of the US Department of Labor) | X - Present                      |

|  |  |
|--|--|
| Reproductive toxicity  | Methanol is reported to cause birth defects in rats exposed to 20 000 ppm. In experimental animals, methanol is fetotoxic, teratogenic and has produced significant behavioral abnormalities in offspring at dose levels not producing maternal toxic effects. Behavioral abnormalities were observed in the offspring of rats given drinking water containing 2% methanol. Methanol has produced mutagenic effects (somatic cells) in experimental animals. Contains Ethanol, which may cause birth defects or other adverse effects on pregnancy. Risk of effects depends on duration and level of exposure. |
| Specific target organ systemic toxicity<br>- single exposure | Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs.   |
| - repeated exposure  | No information available.  |
| Aspiration hazard  | No information available.  |

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## Section: 12 Ecological Information

### Ecotoxicological Information:

| Ingredients        | Ecotoxicity Fish Species Data   | Crustacea   | Ecotoxicity Freshwater Algae Data      |
|--------------------|---|---|--|
| Ethanol            | LC50 96 h (Oncorhynchus mykiss)<br>12.0-16.0 ml/L static<br>LC50 96 h (Pimephales promelas)<br>>100 mg/L static<br>LC50 96 h (Pimephales promelas)<br>13400-15100 mg/L flow-through<br>LC50 96 h (Oncorhynchus mykiss)<br>12.0-16.0 ml/L static | LC50: 9268 - 14221 mg/L<br>(48h, Daphnia magna)<br>EC50: =10800mg/L (24h<br>Daphnia magna) EC50:<br>=2mg/L (48h, Daphnia magna) | Not Available.                         |
| Methanol           | LC50 (Oncorhynchus mykiss)<br>13200 mg/L<br>LC50 (Pimephales promelas)<br>28100 mg/L (96 hrs)<br>LC50 (Lepomis macrochirus)<br>15400 mg/L (96 hrs)  | Not Available   | Not Available                          |
| Ethyl Acetate      | 220 - 250 mg/L LC50<br>(Pimephales promelas)<br>96 h flow-through 352<br>-500 mg/L LC50<br>(Oncorhynchus mykiss)  | Not Available   | EC50: =560mg/L (48h,<br>Daphnia magna) |
| Water              | Not Available   | Not Available   | Not Available.                         |
| Other Information: | No additional remark.   |   |  |

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## Section: 13 Disposal Considerations

|                           |   |
|---------------------------|---|
| Disposal of Waste Method: | Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations. |
| Contaminated Packaging:   | Empty containers should be recycled or disposed of through an approved waste management facility.     |

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## Section: 14 Transport Information

|                                |  |
|--------------------------------|--|
| DOT (U.S.):                    |  |
| DOT Shipping Name:             | ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (ETHANOL) |
| DOT Hazardous Class:           | 3 (6.1)                                      |
| DOT UN Number:                 | UN1986                                       |
| DOT Packing Group:             | II   |
| DOT Reportable Quantity (lbs): | Not Available.                               |
| Note:                          | No additional remark.                        |
| Marine Pollutant:              | No.  |
| TDG (Canada):                  |  |
| TDG Shipping Name:             | ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (ETHANOL) |
| Hazard Class:                  | 3 (6.1)                                      |
| UN Number:                     | UN1986                                       |
| Packing Group:                 | II   |
| Note:                          | No additional remark.                        |
| Marine Pollutant:              | No.  |



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## Section: 15 Regulatory Information

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

### U.S. Regulatory Rules

| Ingredients   | CERCLA/SARA Section 302:<br>Section 313: | SARA (311, 312) Hazard Class: | CERCLA/SARA – |
|---------------|--|-------------------------------|---------------|
| Ethanol       | Not Listed.                              | Not Listed.                   | Not Listed.   |
| Methanol      | Not Listed.                              | Listed                        | Listed        |
| Ethyl Acetate | Not Listed.                              | Listed                        | Not Listed.   |
| Water         | Not Listed.                              | Not Listed.                   | Not Listed.   |

California Proposition 65: Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List: Listed.

Pennsylvania Right to Know List: Listed.

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## Section: 16 Other Information

Reference: Manufacturer's material safety data sheet.

Prepared by: Kama pigments

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### Disclaimer:

Kama pigments, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information, refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Kama pigments Sales Office.

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