



MATERIAL SAFETY DATA SHEET

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| TRADE NAME: NDG-2000 NON-DOPED SPIN-ON GLASS | | DATE ISSUED: October 2, 2007 | |
| CHEMICAL NAME AND/OR SYNONYM: Silicate in Alcoholic Solutions | | EMERGENCY TELEPHONE NUMBER: (602) 618-8452 | |
| MANUFACTURER: Desert Silicon L.L.C. 8617 W. Cavalier Dr. Glendale, AZ., 85305 | | TELEPHONE NUMBER: (623) 872-8659 FAX: (623) 877-7754 | |
| HAZARDOUS INGREDIENTS | | | |
| MATERIAL OR COMPONENT/C.A.S. # | | WT. % | HAZARD DATA |
| Silicate Glass | | 0.1-4% | OSHA/TWA: 0.5 (B) mg/m ³ ACGIH/TLV: the same Oral-rat LD ₅₀ : 525 mg/kg |
| ETHANOL Synonym: Ethyl alcohol/ Methyl carbinol Formula: C ₂ H ₅ OH Molecular weight: 46.08 Flash point: 12.8 C (c.c.) Flammable limits in air (vol%): 3.3-19 Aquatic toxicity rating: TLm96: over 1000 ppm DOT classification: Flammable liquid/UN1170 | | cas #64-17-5 40-60% | OSHA/TWA: 1000 ppm ACGIH/TLV: 1000 ppm LD ₅₀ (oral-rat): 7060 mg/kg. LC ₅₀ (ihl-rat): 20000 ppm/10 hrs. |
| ETHYL ACETATE Synonym: Ethyl Ethanoate/Acetic Acid Ethyl Ester Formula: CH ₃ COOC ₂ H ₅ Molecular weight: 88.11 Flash point: -4.4 C (t.c.c.) Flammable limits in air (vol %): 2.20-11 DOT classification: /UN1173 | | cas #141-78-6 15-25% | OSHA/TWA: 400 ppm ACGIH/TLV: 400 ppm LD ₅₀ (oral-rat): 5620 mg/kg LC ₅₀ (ihl-rat): 1600 ppm/8 hrs |
| PHYSICAL DATA | | | |
| MATERIAL IS: Liquid | | APPEARANCE AND ODOR: Colorless, clear liquid with acidic odor | |
| BOILING POINT: > 86 C | | SPECIFIC GRAVITY: 0.95 | VAPOR DENSITY (Air = 1): 1.1 |
| MELTING POINT: No Data | | VAPOR PRESSURE (mm Hg): | |
| VISCOSITY: 1.05 cps | | EVAPORATION RATE (BuAc = 1): 5.91 | 97 20C |

SOLUBILITY IN WATER: Slight

FIRE AND EXPLOSION HAZARD

FLASH POINT: 11.1 C

METHOD USED: Closed Cup

FLAMMABLE LIMITS

LOWER: 6.7

UPPER: 36.5

EXTINGUISHING MEDIA: Carbon dioxide or dry chemicals

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear self-contained, NIOSH-approved breathing apparatus and full protective clothing. Use water spray to keep fire-exposed containers cool and to reduce vapor concentrations. After fire, flush area with water to prevent re-ignition.

REACTIVITY DATA

STABILITY: Stable Unstable

CONDITIONS TO AVOID:
Not pertinent

INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizing agents, Alkaline materials

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Combustion products CO, CO₂, Silicate containing vapor

HAZARDOUS POLYMERIZATION:

May Occur Will Not Occur

HEALTH HAZARD DATA

INHALATION: Vapors, when inhaled, can irritate eyes, nose and throat. Greater exposure can produce headache and in coordination; gross exposure may result in respiratory depression and adverse (narcotic) effect on the central nervous system.

INGESTION: May irritate or burn digestive tract, resulting in severe nausea, vomiting and abdominal pain. However, overall toxicity is estimated to be moderate to low, based on toxicity of individual components. Silicate precursors may produce gastro-intestinal irritation with nausea, vomiting, diarrhea and, possibly, death.

SKIN: Material is readily absorbed through skin to produce toxic effects similar to those described for inhalation. Repeated or extended contact may also cause erythema (reddening of skin) or dermatitis, resulting from a defatting action on tissue. Silicate precursors, in some compounds, are known to cause skin and mucous membrane irritation.

EYES: Vapor may irritate slightly. Direct liquid contact caused intense stinging and burning sensations, resulting from a defatting action on tissue. Silicate precursors can be a strong irritant and may become airborne by mist. Liquid may irritate strongly.

PERMISSIBLE CONCENTRATION: AIR

No OSHA/TWA or ACGIH/TLV established for this material
See Hazardous Ingredients Section for values for individual components

BIOLOGICAL

None established

FIRST AID MEASURES

INHALATION: Remove to fresh air, away from flame, spark or other ignition sources. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen if qualified operator is available. Call a physician.

INGESTION: If conscious, give 3 glasses of water or milk and induce vomiting by touching back of throat with finger. Get medical attention as soon as possible.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

SKIN: Flush skin with water until all chemical has been removed. Remove contaminated clothing and shoes. Wash clothing before reuse.

PRECAUTIONS AND PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all ignition sources. Provide personal protection and ventilation. Soak up spill with inert material, such as vermiculite, and collect in covered glass or steel container.

WASTE DISPOSAL METHOD: Incineration of waste material in an EPA approved facility

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Avoid skin or eye contact; do not get on clothing. Do not breathe product vapor or mist. Keep away from sparks or open flame. Keep container closed and use with adequate ventilation. Store in a well-ventilated area, out of sun, away from heat and ignition sources. Remove closures carefully to relieve possible internal pressure. Keep upright and protect from damage. Refrigerate to prolong material shelf life.

OTHER PRECAUTIONS: For handling in closed ventilation system recommended above wear safety glasses with non-perforated side shields. For leak or spill or other emergency use chemical safety goggles and face shield. Do not wear contact lenses.

PERSONAL PROTECTION

RESPIRATORY PROTECTION: NIOSH/MSHA approved, positive pressure supplied air respirator if ventilation is unavailable

VENTILATION: Local exhaust needed

PROTECTIVE GLOVES: Impermeable gloves (rubber)

EYE PROTECTION: Chemical Goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Lab coat and apron, flame & chemical resistant coveralls, eyewash capable of sustained flushing

DOT CLASSIFICATION: UN1993/Flammable Liquid