

SAFETY DATA SHEET

ISK BIOCIDES, INC.

SECTION 1: Identification

Product identifier: Adjust-O-Bor®
Other means of identification: Corrosion Inhibitor
SDS number: ISK001
Recommended use: pH Adjustor for use with sapstain control chemicals to prevent equipment corrosion.
Recommended restrictions: None known.
Manufacturer/Importer/Supplier/Distributor information:
Company name: ISK Biocides, Inc.
Address: 416 East Brooks Road,
Memphis.
TN 38109.
Telephone: Office hours (Mon – Fri)
7:00 – 4:30pm (Central time)
(901) 344-5350 or (800) 248-7961
Contact Person: Anthony Accampo or Gail Watson
E-mail: SDSInquiry@iskbiocides.com
Emergency phone number: Chemtrec (800) 424-9300 (24hours)

SECTION 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200:

Physical hazards

None

Health hazards

Acute toxicity (oral), Category 4.

Acute toxicity (inhalation), Category 4.

Acute toxicity (dermal), Category 4.

Skin corrosion, Category 1B.

Serious eye damage Category 1.

Specific target organ toxicity - single exposure, Category 3, Respiratory system.

Reproductive toxicity Category 2.

Environmental hazards

Acute aquatic toxicity Category 3.

Chronic aquatic toxicity, Category 3.

Signal word: **DANGER**

Hazard statement(s):

Harmful if swallowed.
Harmful in contact with skin.
Causes severe skin burns and eye damage.
Harmful if inhaled.
May cause respiratory irritation.
Suspected of damaging fertility or the unborn child.
Harmful to aquatic life with long lasting effects.

Hazard symbol(s):



Precautionary statement(s):

Prevention:

Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

Hazard(s) not otherwise Classified (HNOC): None known.

Percentage of ingredient(s) of unknown acute toxicity:
25% of the mixture consists of ingredient(s) of unknown acute toxicity (oral/dermal).
25% of the mixture consists of ingredient(s) of unknown acute toxicity (inhalation).

SECTION 3: Composition/information on ingredients

Mixture: Monoethanolamine and boric acid in water.

Chemical name	Concentration (weight %)	CAS#
Monoethanolamine	25%	141-43-5
Boric Acid	50%	10043-35-3

SECTION 4: First-aid Measures

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for further treatment advice

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or physician for treatment advice.

Eye contact: Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or physician for treatment advice.

Ingestion: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or physician. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed: May cause eye irritation, skin rash, pain, diarrhea, nausea, vomiting, shock symptoms (rapid pulse, sweating, collapse) coma, even death, central nervous system (CNS) depression including giddiness, dizziness, confusion, drunken behavior, headache, nausea, diarrhea, vomiting, tiredness, and drowsiness. In extreme cases symptoms of central nervous system (CNS) depression include stupor, convulsions, unconsciousness, coma, and even death.

Indication of immediate medical attention and special treatment needed: If any symptoms described above are noted, contact a physician and give them this SDS sheet.

SECTION 5: Fire-fighting measures

Suitable extinguishing media: Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Use water spray to cool fire exposed containers. Water or foam may cause some foam and frothing.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical:

Hazardous combustion products may include: Carbon monoxide, carbon dioxide, toxic levels of ammonia, combustion products of nitrogen, irritating aldehydes and ketones may be formed on burning in a limited air supply.

Special protective equipment and precautions for fire-fighters:

Wear special chemical protective clothing and positive pressure self-contained breathing apparatus. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residue.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do not get in eyes, on skin, or clothing. Do not swallow.

Methods and materials for containment and cleaning up:

SMALL SPILL: Wear appropriate protective clothing (see Section 8). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If required notify state and local authorities.

LARGE SPILL: Wear appropriate protective clothing (see Section 8). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Follow all local, state, and federal regulations for disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes, or other bodies of water.

SECTION 7: Handling and Storage

Precautions for safe handling: Observe good personal hygiene practices. Change protective gloves/clothing when signs of contamination appear. Keep out of reach of children. Avoid getting this material into contact with your skin and eyes. Use this product with adequate ventilation. Read and follow the directions on the product label; they are the best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

Conditions for safe storage, including any incompatibles: Store away from food or feed in a secure, well-ventilated area. Protect from extreme temperatures. May thicken at cooler temperatures. Freezes at 14°F. Do not transfer to an unmarked container. Keep container closed when not in use. (See Section 10 for incompatibles).

SECTION 8: Exposure controls/personal protection

Control Parameters:

Occupational exposure limits:

US OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): Permissible Exposure Limits		
Substance	PEL-TWA (8 hour)	PEL-STEEL (15 min)
Boric Acid	None available	None available
Monoethanolamine	3 ppm (6 mg/m ³)	None available

ACGIH Threshold Limit Values		
Substance	TLV-TWA (8 hour)	TLV-STEEL (15 min)
Boric Acid	2 mg/m ³	6 mg/m ³
Monoethanolamine	3 ppm (7.5 mg/m ³)	6 ppm (15 mg/m ³)

Other Exposure Limits: Monoethanolamine NIOSH TWA – 3 ppm, STEL - 6ppm
(National Institute for Occupational Safety and Health).

Appropriate engineering controls: Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear goggles or safety glasses with side shields.

Skin and Hand protection: Wear rubber gloves when handling, using, or applying this product. Special precautions should be taken to ensure that material cannot get inside gloves.

Respiratory protection: Airborne concentrations should be kept at the lowest possible levels. If vapor, mist or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

Other: None normally required. Use as necessary to prevent exposure. Safety showers and eyewash stations should be provided in all areas in which this product is stored and/or handled. Persons exposed routinely to this material should shower prior to leaving work each day. Work clothing should be changed daily.

Thermal hazards: None known.

SECTION 9: Physical and chemical properties

Appearance:

Physical state: Liquid.
Form: Clear viscous liquid.
Color: Clear.

Odor: Mild amine.

Odor threshold: Not available.

pH: 9.2 – 10.0

Melting point/freezing point: <35°F

Initial Boiling point/Boiling Range: 276°F

Flash point: Not available. Will not flash.

Evaporation rate: <1 (nBuAC=1)

Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits:

Flammability limit – lower: 5%

Flammability limit – upper: 17%

Explosive limit – lower: Not available.

Explosive limit – upper: Not available.

Vapor pressure: 8.9 lbs per gal @ 20°C

Vapor density: Not available.

Relative density (Specific gravity): 1.33

Solubilities (water, other): Miscible in water.

Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature: unknown.

Decomposition temperature: Not available.

Viscosity: 210-330 cps (#2 spindle 20 rpm @ 70°F)

Other information

Bulk density: 11.06

VOC (Weight %): Not available.

SECTION 10: Stability and Reactivity

Reactivity: Ethanolamines are known to react exothermically with many chemicals. Vigorous reactions can occur with acids, organic acids and oxidizing agents.

Chemical stability: May react with strong acids.

Possibility of hazardous reactions: Material is not known to polymerize.

Conditions to avoid: Elemental zirconium (hot) and contact with strong acids.

Incompatible materials: Avoid metals and metal blends which can generate explosive hydrogen gas upon contact in some cases. Avoid contact with strong reducing agents which include hydrogen, hydrazine, sulfides, sulfites, and nitrites.

Hazardous decomposition Products: Carbon monoxide, carbon dioxide, toxic levels of ammonia, combustion products of nitrogen, irritating aldehydes and ketones may be formed on burning in a limited air supply.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation: Affects mucous membranes of upper respiratory.

Ingestion: May be harmful if swallowed. May cause target organ damage based on animal data.

Skin: Corrosive to skin.

Eye: Causes eye irritations and burns.

Symptoms related to the physical, chemical, and toxicological characteristics: None known.

Delayed and immediate effects and chronic effects from short or long-term exposure: None known.

Acute toxicity:

Product data:

Ingredient Information:

Substance	Test Type (species)	Value
Monoethanolamine	LD ₅₀ Oral (Rat)	1,020 mg/kg
	LD ₅₀ Dermal (Rabbit)	1,025 mg/kg
	LC ₅₀ Inhalation, Vapor (Rat)	>1.3 mg/l
Boric Acid	LD ₅₀ Oral (Rat)	2660 mg/kg
	LD ₅₀ Dermal (Rabbit)	2000 mg/kg
	LC ₅₀ Inhalation, Dust (Rat)	>2.03 mg/L 4 h

Product Acute Toxicity Estimates:

Oral: Not available.

Dermal: Not available.

Inhalation: Not available.

Skin corrosion/irritation: Harmful to skin and causing irritations and burns.

Serious eye damage/eye irritation: Corrosive to eye causing serious burns.

Respiratory sensitization: May give off gas, vapor or dust causing irritation.

Skin sensitization: Can cause sensitization.

Germ cell mutagenicity: Not mutagenic, Salmonella typhimurium, Ames Test.

Carcinogenicity: Based upon information available on the known components, the product is not anticipated to be a carcinogen.

Reproductive toxicity: Monoethanolamine: No available data
Boric acid: Short term and long term animal feeding studies in rat, mouse and dog, at high doses, have demonstrated that it acts as reproductive toxin to males and females exposed to sufficient doses.

**Specific target organ toxicity-
Single exposure:** Inhalation may cause respiratory tract irritation.

**Specific target organ toxicity-
Repeat exposure:** Based upon information available on the known components, the product is not anticipated to cause specific target organ toxicity after repeated or prolonged exposure.

Aspiration hazard: Based upon information available on the known components, the product is not anticipated to be an aspiration hazard.

Further information: Not available.

SECTION 12: Ecological information

Ecotoxicity

Product data: Not available.

Ingredient Information:

Substance	Test Type	Species	Value
Monoethanolamine	LC ₅₀ Pimephales promelas (fathead minnow)	Fish	227 mg/l - 96 h
	EC ₅₀ Daphnia magna (Water flea)	Invertebrate	65 mg/l - 48 h
	LC ₅₀ Desmodesmus subspicatus (green algae)	Algae	15 mg/l - 72 h

Persistence and degradability: Not available.
Bioaccumulative potential: Not available.
Mobility in soil: Not available.
Mobility in general: Not available.
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

Disposal instructions:

Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility in accordance with all Federal, State, and local regulations.

SECTION 14: Transport Information

DOT: UN 2491, Ethanolamine solution, Class 8, PG III (Guide 153 ERG 2004).

IATA: UN 2491, Ethanolamine solution, Class 8, PG III.

IMDG: UN 2491, Ethanolamine solution, Class 8, PG III (IMDG code- 8161).

Special precautions during transport: Not available.

Bill of lading classification: Borax NMFC 43525 SUB 9

SECTION 15: Regulatory Information

USA:

United States Federal Regulations: SDS complies with the OSHA, 29 CFR 1910.1200.

SARA Superfund and Reauthorization Act of 1986 Title III sections 302, 311,312 and 313:

Section 302 – None of the chemicals are EPCRA hazards.

CERCLA/Superfund, 40 CFR 117, 302: Not listed.

CHEMICAL	C.A.S. Number	Weight %	Section 311/312
Monoethanolamine	141-43-5	20 - 30%	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
Boric Acid	10043-35-3	40 - 60%	Chronic Health Hazard.

Section 313 – List of Toxic Chemicals (40CFC 372): This product does not contain the chemicals (at level of 1% or greater) found on the 313 list of Toxic Chemicals.

Toxic Substance Control Act (TSCA): All substances are TSCA listed.

Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15 (formerly section 307) 40 CFR 116 (formerly section 311): This product does not contain listed chemicals.

STATE REGULATIONS:

This SDS contains specific health and safety data is applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Proposition 65: Chemicals in this product are not on the list.

New Jersey Right to Know: Monoethanolamine is listed (substance number 0835 ETHANOLAMINE).

INTERNATIONAL REGULATIONS:

Canadian Regulations Class E: Corrosive material
Class D-2B: Material causing other toxic effects (Toxic).

Canadian Controlled Products Regulations (WHMIS): This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*.

SECTION 16: Other Information

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The information in this Safety Data Sheet is provided in good faith and is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance and is not to be considered a warranty or quality specification. User is responsible to evaluate all available information when using product for any particular use, including, if necessary, conducting any tests needed to determine the suitability of the product for a particular use. User is also responsible for compliance with all Federal, State, Provincial and Local laws and regulations. ISK Biocides, Inc. assumes no responsibility for injury, damage or loss resulting from the use of the material. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, INCLUDING THAT THE INFORMATION OR PRODUCT MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS, ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

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