VERICHEM

TECHNICAL DATA SHEETS

N-2000

EPA Registration No. 67869-30

DESCRIPTION	**N-2000** is a 35% patented (U.S. Patent No. 5,532,413) active solution of Dodecylguanidine Hydrochloride (DGH) in Dipropylene Glycol/Propylene Glycol. DGH is a non-oxidizing, liquid, nitrogen-based organic for use in aqueous industrial systems as a broad spectrum biocide, effective in controlling bacteria, yeast and fungi.

TYPICAL PROPERTIES

Dodecylguanidine Hydrochloride

ρH of 1% solution	≤ 4
Flash Point	>245° F
Freeze Point	32° F
Specific Gravity @ 25°C	1.02 – 1.06 @ 25°C
Appearance	Clear yellow to blue/green liquid with slight odor

*In long-term storage, a slight precipitate sometimes forms. Studies have shown that this is **not** the active ingredient, and product performance is unaffected.

$$[CH_3 - (CH_2)_{11} - NH - \underset{\displaystyle NH}{\underset{|}{C}} - NH_2\ ] \bullet\ HCl$$

APPLICATIONS

To inhibit the growth of microorganisms in aqueous systems, dosage ranges from 25 to 1,000 ppm are suggested. Exact levels will depend on the components, storage time, temperature, microorganism, and should be determined through laboratory testing.

APPLICATION BENEFITS

- Effective over a broad pH range
- Broad spectrum effectiveness against bacteria, yeast and fungi
- Does not contain or release formaldehyde
- Effective at low concentrations
- Compatible with many preservatives and mildewcides
- Easy handling liquid formulation
- Extremely effective for controlling sulfate reducing bacteria
- Non-corrosive to metallurgy at use concentrations
- Non-oxidizing: will not be consumed by reducing substances in water

REGISTRATIONS AND APPROVALS	**N-2000** is registered with the U. S. Environmental Protection Agency (**EPA Reg. No. 67869-30**) as an end-use and manufacturing product for control of microorganisms such as bacteria, fungi and yeasts which cause deterioration of paper and paper board products; for control of bacteria and fungi in pulp and paper-mill processing chemical, adhesives and coatings; to inhibit the growth of microorganisms in aqueous systems such as paste and adhesive systems, polymer and latex emulsion systems, pigmented slurries, coating slurries, titanium dioxide and calcium carbonate systems; for control of algae, bacteria and fungi in oil recovery drilling fluids and oil field water systems. **N-2000** has FDA approval under 21 CFR 176.170, 176.180 and 176.300. Refer to the Code for applicable limitations. **N-2000** has German BGVV under Recommendation Number 14/36. **HMIS Rating: *** Health = 3 Flammability = 1 Reactivity = 0 Personal Protective Equipment = X (to be specified by user depending on use conditions). * Hazard Rating Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

STORAGE AND HANDLING	**N-2000** is stable. All chemicals should be stored in a manner to protect them from extremes of heat or cold, and are best if used within six months from the time of receipt. In laboratory studies the product has been found to be chemically stable under the following conditions: 2 years at 25°C 14 days at 50°C 14 days at 4°C 3 freeze thaw cycles from –10 to 22°C In long term storage, a slight precipitate sometimes forms. Studies have proven this is not the active ingredient, and performance is unaffected.

PRODUCT STORAGE AND DISPOSAL	Do not contaminate water, food or feed by storage or disposal. Keep away from heat and open flame. Keep container closed. Biocide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

ADVANTAGES OVER DGH/IPA SOLUTIONS	**N-2000** is not considered flammable or combustible (flash point above 200°C), has excellent cold weather stability and better chemical stability than standard DGH/IPA solutions available on the market. • Verichem **N-2000** has FDA/BGVV approval, and a classified 3B (non-flammable) by the NFPA. • A higher flash point increases worker and plant safety by reducing the chances of an industrial accident. • DGH/Dipropylene glycol solution can tolerate low temperatures and repeated freeze/thaws without affecting the efficacy of the biocide.

NOTICE

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instruction.

The information of this Data Sheet is offered solely for your information, consideration, and investigation and represents our current data and best opinion as to the proper use of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user. This information is provided without warranties, either express or implied, and we assume no responsibility for the accuracy or completeness of the data contained herein.

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CHEMICAL SOLUTIONS FOR MICROBIOLOGICAL PROBLEMS