

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards¹

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (As Labeled): DNA AWAY^(TM)
CHEMICAL NAMES, COMMON NAMES: Proprietary Cleaning Solution
SYNONYMS: None

MANUFACTURER'S NAME: Molecular BioProducts, Inc.
ADDRESS: 9880 Mesa Rim Road
San Diego, CA 92121

EMERGENCY PHONE: Chemtrec: Toll free, 24-hour line: 800-424-9300
BUSINESS PHONE: 858-453-7551

PRODUCT USE: Cleaning Agent

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% v/v	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA			OTHER
			TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³	IDLH mg/m ³	
Proprietary	Proprietary	<1	NE*	2 C	2	2 C	200	NIOSH REL 2 mg/m ³
Water	7732-18-5	>95	NE	NE	NE	NE	NE	NE
Other constituents are less than 1% concentration.								

* NE = Not Established

¹ NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is clear, colorless liquid with a mildly fragrant odor. The product is mildly irritating to skin, eyes, mucous membranes and other tissues which may be contaminated. The byproducts of thermal decomposition of this material include toxic gases (i.e. sodium oxides).

SYMPTOMS OF OVER EXPOSURE BY ROUTE OF EXPOSURE:

INHALATION: Inhalation of a dust or mist of this material may cause mild respiratory irritation, coughing, burning of the respiratory tract, shortness of breath, and difficulty breathing.

CONTACT WITH SKIN or EYES: Eye contact will cause irritation and may damage the eye. Contact of the solution with the skin or eyes may cause burning, itching, or otherwise redden or damage skin. Prolonged contact with the skin may cause dermatitis.

SKIN ABSORPTION: This product is not known to skin absorb.




INGESTION: This material is moderately toxic by ingestion, leading to possible burns or irritation of the mouth, throat, esophagus and digestive system. Ingestion may cause pain or discomfort at all points of contact.

INJECTION: Injection of this material may cause symptoms of pain or irritation similar to skin contact.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. This material may redden or damage skin and will cause injury or irritation to the eye, if contact occurs. Under conditions of normal use, no ingestion, inhalation, or injection of the material should occur.

ACUTE: This material may cause burning or reddening of the point of contact upon acute exposure. If the product is splashed into the eye, pain or irritation may result.

CHRONIC: This material should not cause any chronic exposure effects.

HAZARDOUS MATERIAL INFORMATION SYSTEM			
HEALTH (BLUE)			2
FLAMMABILITY (RED)			0
REACTIVITY (YELLOW)			0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		
For routine industrial applications			

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

If spilled on skin or eyes, immediately begin decontamination with running water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim and rescuers must seek immediate medical attention. If chemical is in eyes, open victim's eyes while under gentle running water. Use sufficient force to open eye lids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. If chemical is inhaled, remove victim to fresh air and use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

4. FIRST-AID MEASURES (cont.)

If chemical is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow.

Victim of chemical exposure and all rescuers must be taken for medical attention. Take copy of label and MSDS to physician or health professional with victim.

5. FIRE-FIGHTING MEASURES

FLASH POINT, °C (method): Not applicable.
AUTOIGNITION TEMPERATURE, °C: Not applicable.
FLAMMABLE LIMITS in air by volume, %: Lower: Not applicable.
Upper: Not applicable.

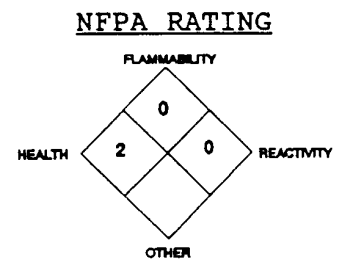
TRANSPORTATION OF DANGEROUS GOODS FLAMMABILITY CLASSIFICATION: Not applicable.

FIRE EXTINGUISHING MATERIALS: Product will not contribute to a fire. Control surrounding fires. Control run-off if possible.

Water Spray: OK Carbon Dioxide: OK Foam: OK
Dry Chemical: OK Halon: OK Other:

SPECIAL FIRE FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire fighters must wear self-contained breathing apparatus and full protective equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product may release oxides of sodium if subject to a fire. Fire fighters should prevent the material from coming into contact with their skin or clothing.



6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel. Minimum Personal Protective Equipment should be double-gloves (rubber over latex gloves) and rubber apron, splash goggles or safety glasses. Respiratory protection should be used. Absorb spilled liquid with polypads or other appropriate materials. Decontaminate the area thoroughly. Place all spill residue in a double plastic bag and seal. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations.

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: Avoid getting chemicals ON YOU or IN YOU. Wash hands after handling chemicals. Do not eat or drink while handling chemicals. Care must be taken to avoid contact with the eyes or skin.

STORAGE AND HANDLING PRACTICES: This chemical may be stored with other laboratory cleaning compounds, away from material with which it is incompatible. Only persons familiar with handling corrosive chemicals and properly trained in their use should use this product.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated above. Make certain equipment is locked safe and adequate ventilation is provided.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Use a mechanical fan or vent area to outside. This product does not produce mists or vapors; however, the process in which the product is used may produce irritating mists or vapors. Provide adequate ventilation in such cases.

RESPIRATORY PROTECTION: No respiratory protection is required when this product is used for its intended purpose.

EYE PROTECTION: Splash goggles or safety glasses are mandatory.

HAND PROTECTION: Use neoprene rubber, nitrile, or latex gloves. Double-glove for spill clean-up procedures. Check gloves for leaks. Wash hands after removing gloves.

BODY PROTECTION: Wear a laboratory coat, closed in the front. For some tasks, an impermeable apron may be necessary.

9. PHYSICAL and CHEMICAL PROPERTIES

VAPOR DENSITY: Equal to water

SPECIFIC GRAVITY: 1

SOLUBILITY IN WATER: Complete

OIL - WATER DISTRIBUTION COEFFICIENT: (approx) 0

VAPOR PRESSURE, mm Hg @ 20 °C: 20

EVAPORATION RATE (water 1): 1

MELTING POINT or RANGE: 0°C

BOILING POINT: 100°C

DENSITY: 1 gm/mL

pH: 11 - 12

APPEARANCE AND COLOR: Clear, colorless solution with a mild fragrant odor.

HOW TO DETECT THIS SUBSTANCE (warning properties): The only unique warning property of this material is the mild fragrance. The liquid will turn pH paper purple.

10. STABILITY and REACTIVITY

STABILITY: Stable.

CONDITIONS TO AVOID: Extreme heat may cause product to decompose, producing toxic gases containing oxides of sodium.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is incompatible with aluminum, and other metals, acid solutions and acidic chemicals, and any other material susceptible to a caustic, corrosive solution.

HAZARDOUS POLYMERIZATION: Will not occur.

EXPLOSION IMPACT SENSITIVITY: Insensitive.

STATIC DISCHARGE SENSITIVITY: Insensitive.

PART IV

Is there any other useful information about this material?

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Eye damage is severe when tested in monkeys or rabbits for 24 hours. Skin damage is severe when tested on rabbits for 24 hours. LD₅₀ intraperitoneal, mouse 40 mg/kg; LDLo oral rabbit 500 mg/kg.

SUSPECTED CANCER AGENT: This product's ingredients are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, CAL/OSHA.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin contact will aggravate any pre-existing skin disorder.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms. Contact of caustic solutions to the eye may cause glaucoma.

IRRITANCY: This product may be irritating to the skin.

SENSITIZATION: This product does not cause allergic sensitization.

SYNERGISTIC MATERIALS: No synergistic materials are known.

REPRODUCTIVE TOXICITY INFORMATION: Listed below are the potential reproductive effects which may occur after exposure to this product.

Mutagenicity:	While no data exist for the product, it is <u>not</u> expected to cause any fetal toxicity problems related to mutagenicity.
Teratogenicity:	While no data exist for the product, it is <u>not</u> expected to cause any fetal toxicity problems related to teratogenicity.
Reproductive Toxicity:	While no data exist for the product, it is <u>not</u> expected to have an adverse effect on the male or female reproductive system or to cause any fetal toxicity problems.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY: Sodium hydroxide is rapidly dissipated into the environment. Releases may cause a local transitory environmental upset at the point of release, but the effects are quickly minimized via neutralization or dilution processes.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: Sodium hydroxide solutions can cause severe burns to plants or animals resulting in significant local environmental damage. Damaged plants will usually recover; burned animals may not survive.

EFFECT OF CHEMICAL ON AQUATIC LIFE: Sodium hydroxide releases of this concentration, if released into waterways, may cause a local increase in pH, leading to injury or death of aquatic plants and animals. The pH is usually quickly returned to normal when the sodium hydroxide source is removed or dissipated.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This chemical, if unaltered by the handling, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA WASTE NUMBER: Not applicable for wastes consisting only of this product.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Not Applicable.
HAZARD CLASS NUMBER and DESCRIPTION: Not Applicable.
UN IDENTIFICATION NUMBER: Not Applicable.
PACKING GROUP: Not Applicable.
DOT LABEL(S) REQUIRED: Not Applicable.
EMERGENCY RESPONSE GUIDE NUMBER: Not Applicable.

CTC DANGEROUS GOODS SHIPPING REGULATIONS: THIS MATERIAL IS NOT CONSIDERED AS DANGEROUS GOODS.

15. REGULATORY INFORMATION

TSCA INVENTORY STATUS: The chemicals in this compounds ARE listed on the TSCA Inventory.

STATE REGULATORY INFORMATION: Materials in this product are covered under specific State regulations:

Alaska - Designated Toxic and Hazardous Substances:	YES
California - Permissible Exposure Limits for Chemical Contaminants:	YES
Florida - Substance List:	YES
Illinois - Toxic Substance List:	YES
Kansas - Section 302/313 List:	YES
Massachusetts - Substance List:	YES
Minnesota - List of Hazardous Substances:	YES
Missouri - Employer Information/Toxic Substance List:	YES
New Jersey - Right to Know Hazardous Substance List:	YES
North Dakota - List of Hazardous Chemicals and Reportable Quantities:	YES
Pennsylvania - Hazardous Substance List:	YES
Rhode Island - Hazardous Substance List:	YES
Texas - Hazardous Substance List:	YES
West Virginia - Hazardous Substance List:	YES
Wisconsin - Toxic and Hazardous Substances:	YES

LABELING (Precautionary Statements):

TARGET ORGANS: EYES, SKIN, MUCOUS MEMBRANES.

CAUTION!: May cause eye burns or skin irritation. May be harmful or fatal if ingested. Do not get in eyes or on skin or clothing. Avoid prolonged or repeated skin contact. Avoid breathing dust or mist containing this product. In the event of contact, immediately rinse affected area for at least 15 minutes with large amounts of water. If inhaled, remove to fresh air. If not breathing, give artificial respiration. Seek medical assistance; medical personnel should treat symptoms. In the event of a spill, carefully clean-up and decontaminate area using established procedures. In the event of a fire, follow standard response procedures. Store in tightly closed container in a cool location. Open containers carefully. Avoid storage or contact with incompatible materials. Refer to MSDS for additional information.

KEEP OUT OF REACH OF CHILDREN.

16. OTHER INFORMATION

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc.
9163 Chesapeake Drive, San Diego, CA 92123-1002
619/565-0302

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