

MATERIAL SAFETY DATA SHEET
Required under USDL Safety and Health Regulations

SECTION I - CHEMICAL COMPANY AND PRODUCT IDENTIFICATION

POWER SERVICE PRODUCTS

P. O. BOX 1089

WEATHERFORD, TEXAS 76086

817/599-9486

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Emergency Phone Number: 800/424-9300

Product Name: BIO-KLEEN

Chemical Description: Antimicrobial Agent

MSDS Preparation Date: March 23, 2007 – supersedes July 5, 2005

Emergency Phone Number: 800/424-9300

EPA ESTABLISHMENT NUMBER: 069633-TX-001

EPA REGISTERED PESTICIDE NUMBER: 464-659-069633 and 48301-7-069633

SECTION II - COMPOSITION/INFORMATION OF INGREDIENTS

INGREDIENTS	PERCENT	CAS REG NO.
4-(2-NITROBUTYL) MORPHOLINE	76.0 - 85.0	2224-44-4
4,4'-(2-ETHYL-2-NITROTRIMETHYLENE) DIMORPHOLINE	2.0 - 7.0	1854-23-5
METHYLENE DIMORPHOLINE	3.9 - 6.5	5625-90-1
MORPHOLINE	3.0 - 6.0	110-91-8
1-NITROPROPANE	0.3 - 5.3	108-03-2

SECTION III - HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: CAUSES SEVERE EYE AND SKIN DAMAGE, HARMFUL IF SWALLOWED OR ABSORBED THROUGH THE SKIN. MAY CAUSE ALLERGIC SKIN REACTION.

POTENTIAL HEALTH EFFECTS: CAUSES SEVERE EYE AND SKIN DAMAGE. MAY CAUSE SKIN SENSITIZATION. HARMFUL OR FATAL IF SWALLOWED OR ABSORBED THROUGH SKIN. NON-MUTAGENIC IN AMES TEST.

LISTED CARCINOGEN:

IARC: NO

NTP: NO

OTHER: NO

OTHER: Repeated exposure did not produce systemic toxicity when applied to the skin of rabbits or rats. No relevant cancer information found. Birth defects are unlikely and no relevant information found on reproductive effects.

SECTION IV - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids wide apart. Get medical attention immediately.

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SKIN CONTACT: Wash with large amounts of soap and water. Remove contaminated clothing and launder before re-use. Discard contaminated shoes.

INHALATION: If required use proper respiration protection, immediately remove the affected victim from exposure to fresh air. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

INGESTION: DO NOT INDUCE VOMITING. Drink large amounts of fluid, such as water, milk, egg whites or gelatin solution. Avoid alcohol. Contact a physician immediately. Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Larger amounts should be treated as stated above.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT.....174°F (PMCC) Min. 78.8°C

FLAMMABLE LIMITS: lower NA upperNA

EXTINGUISHING MEDIA: Water Spray, CO2. Alcohol resistant foams(ATC type) are preferred.

SPECIAL FIRE FIGHTING PROCEDURES: NONE KNOWN

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN

SECTION VI - ACCIDENTAL RELEASE PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain spill. Keep people away. Recover free liquid. Absorb spill area with inert material (sand). Remove and prevent contamination of soil, surface water and ground water.

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers closed. Do not get in eyes or on skin or clothing. Avoid breathing mist. Do not store near food. Keep out of reach of children. Do not cut, drill, grind or weld (or similar operations) on empty containers.

CONTAINERS ARE STRICTLY "SINGLE TRIP CONTAINERS." THEY ARE NOT TO BE USED FOR ANY REASON AFTER BEING EMPTIED.

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION

VENTILATION: PROVIDE GENERAL OR LOCAL EXHAUST

RESPIRATORY PROTECTION: GENERALLY NOT REQUIRED

PROTECTIVE CLOTHING: IMPERVIOUS GLOVES, APRON AND RUBBER BOOTS

EYE PROTECTION: CHEMICAL GOGGLES OR FULL FACE SHIELD.

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SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT.....NOT APPLICABLE; PRODUCT DECOMPOSES ABOVE 100°C / 212°F
FREEZE POINT 50 DEGREES F. / 10 DEGREES C.
VAPOR PRESSURE (30 mm HG) at 90°C.....<30
VAPOR DENSITY (AIR =1) 10 MAX.
SOLUBILITY IN WATER ~1%
SPECIFIC GRAVITY 25/25° C 1.1 MAX
PERCENT, VOLATILE BY VOLUME (%) NOT APPLICABLE
EVAPORATION RATE(n-Butyl Acetate-100)NOT APPLICABLE
APPEARANCEYELLOWISH-BROWN LIQUID
ODORFAINT AMINE ODOR
pH:..... 9.5 – 10.0

SECTION X - STABILITY AND REACTIVITY

STABLE YES
INCOMPATIBILITY (Materials to avoid)ACIDS, OXIDIZING MATERIALS
HAZARDOUS DECOMPOSITION PRODUCTSOXIDES OF CARBON AND NITROGEN
HAZARDOUS POLYMERIZATIONWILL NOT OCCUR
CONDITIONS TO AVOID:DECOMPOSITION BEGINS AT pH BELOW 6.5

SECTION XI – TOXICOLOGICAL INFORMATION

SKIN: The LD50 for skin absorption in rabbits is 420 mg/kg.
INGESTION: The oral LD50 for rats is 620 mg/kg.
INHALATION: The aerosol LC50 for male rats: 746 mg/L nominal concentration.
MUTAGENICITY: In vitro mutagenicity studies were negative.

SECTION XII – ECOLOGICAL INFORMATION

DEGRADATION & PERSISTENCE: Chemical degradation (hydrolysis) is expected in the environment within days to weeks.
ECOTOXICITY: Material is highly toxic to aquatic organisms on an acute basis (LC50 / EC50 between 0.1 and 1 mg/L in most sensitive species).
Acute LC50 in bluegill (*Lepomis macrochirus*) is 1.3 mg/L.
Acute LC50 in rainbow trout (*Oncorhynchus mykiss*) is 1.1 mg/L.
Acute LC50 in pink shrimp (*Penaeus duorarum*) is 2.2 mg/L.
Material is practically non-toxic to birds on an acute basis (LD50 >2000 mg/kg).

SECTION XIII – DISPOSAL CONSIDERATIONS

Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all Federal, State, Provincial and local laws and regulations. Contact the regulatory authority in your state for waste guidance or your Hazardous Waste representative.

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SECTION XIV – REGULATORY INFORMATION

Contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

Right to Know Tier II Reporting Information Section 311 - 312

Health Hazard: Immediate

Physical Hazard: Fire

Reactivity: None

Extremely Hazardous Substances: None

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned.

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>LIST</u>
1-Nitropropane	000108-03-2	NJ1 NJ3 PA1
Morpholine	000110-91-8	NJ1 NJ3 PA1

NJ1 = New Jersey Special Health Hazard Substance (present at greater than or equal to 0.1%)

NJ3 = New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%)

PA1 = Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%)

California Proposition 65: This product contains a chemical(s) known to the State of California to cause cancer.

SECTION XV - TRANSPORTATION INFORMATION

Part #9016, 9316 – 16-ounce

Part #9041 – 96-ounce

PROPER SHIPPING NAME: **Consumer Commodity**

HAZARD CLASS: **ORM-D**

I.D. NUMBER: **NONE**

PACKING GROUP: **III**

PLACARDING: **NONE**

Part #9055 – 55 gal. (drums)

PROPER SHIPPING NAME: **Disinfectant, Liquid, Toxic, n.o.s., (4-(2-Nitrobutyl)Morpholine)**

HAZARD CLASS: **6.1**

I.D. NUMBER: **UN 3142**

PACKING GROUP: **III**

PLACARDING: **TOXIC**

IATA:

Packaging not suitable to be shipped by Air.

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IMDG:

PROPER SHIPPING NAME: **Disinfectant, Liquid, Toxic, n.o.s., (4-(2-Nitrobutyl)Morpholine)**

HAZARD CLASS: **6.1**

I.D. NUMBER: **UN 3142**

PACKING GROUP: **III**

PLACARDING: **TOXIC**

SECTION XVI – HMIS CLASSIFICATION:

HEALTH: 2

FLAMMABILITY: 2

REACTIVITY: 0

