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**MATERIAL SAFETY DATA SHEET**

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Revised 2/02/04  
Replaces 8/12/03  
Printed 2/03/04

**DUSHIELD 190****MSDS ID: 00187**

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**I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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PRODUCT NAME: DUSHIELD 190  
PRODUCT DESCRIPTOR: TREATMENT FOR COOLING WATER SYSTEMS  
MANUFACTURER: JOHNSON DIVERSEY, INC. EMERGENCY PHONE NUMBER: (800) 851-7145  
3630 E. KEMPER ROAD  
CINCINNATI, OH. 45241

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**II. COMPOSITION/INFORMATION ON INGREDIENTS**

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| INGREDIENT NAME(CAS NUMBER)                       | %   | EXPOSURE LIMITS                 | UNITS |
|---------------------------------------------------|-----|---------------------------------|-------|
| SODIUM NITRITE (7632-00-0)                        | <15 | LD 50 85                        | MG/KG |
| SODIUM MOLYBDATE (7631-95-0)                      | <20 | TLV 5, PEL 5<br>(AS MOLYBDENUM) | MG/M3 |
| PHOSPHONOBUTANE TRICARBOXYLIC ACID<br>(3797-36-1) | < 5 | NOT ESTABLISHED                 |       |
| POTASSIUM POLYACRYLATE<br>(25608-12-2)            | < 5 | NOT ESTABLISHED                 |       |

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**III. HAZARDS IDENTIFICATION**

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ROUTES OF ENTRY: INHALATION: YES  
SKIN: YES  
INGESTION: YES  
SIGNS AND SYMPTOMS OF EXPOSURE:  
ACUTE: CORROSIVE, CAUSES SEVERE IRRITATION OR BURNS TO SKIN, EYES  
AND RESPIRATORY TRACT. MAY BE FATAL IF SWALLOWED. MISTS MAY  
CAUSE IRRITATION OR BURNS TO RESPIRATORY SYSTEM.  
CHRONIC: SAME AS ACUTE  
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:  
SENSITIVE SKIN. RESPIRATORY CONDITIONS IF MIST OR SPRAY IS  
INHALED.

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**IV. FIRST AID MEASURES**

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EYES: FLUSH THOROUGHLY WITH FRESH WATER FOR AT LEAST 15 MINUTES. GET  
MEDICAL ATTENTION.  
SKIN: FLUSH WITH FRESH WATER FOR AT LEAST 15 MINUTES, WASH WITH SOAP AND  
WATER.  
INGESTION: DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION. NEVER GIVE  
ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.  
INHALATION: REMOVE TO FRESH AIR. IF SYMPTOMS OF OVER EXPOSURE EXIST, GET  
MEDICAL ATTENTION IMMEDIATELY.

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**V. FIRE FIGHTING MEASURES**

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FLASH POINT: NONE DEG F FLAME EXTENSION: N/A IN.  
FLAMMABLE LIMITS IN AIR BY VOLUME: LEL: NONE UEL: NONE  
UNUSUAL FIRE OR EXPLOSION HAZARDS: FORMS ALKALINE LIQUID WITH ADDITION OF WATER  
EXTINGUISHING MEDIA: CO2, FOAM, DRY CHEMICALS  
FIRE FIGHTING INSTRUCTIONS: WEAR PROTECTIVE FIREFIGHTING CLOTHING TO PREVENT SKIN CONTACT & WEAR SELF CONTAINED BREATHING APPARATUS.

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**VI. ACCIDENTAL RELEASE MEASURES**

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IF MATERIAL IS RELEASED OR SPILLED: SMALL SPILLS-COLLECT & RETURN TO PROCESS WHENEVER POSSIBLE. IF THIS IS NOT POSSIBLE, NEUTRALIZE WITH INERT MATERIAL SUCH AS CLAY OR SAND. LARGE SPILLS-CONTAIN MATERIAL, VACUUM UP OR ABSORB ON CLAY OR SAND. AVOID CONTACT WITH SKIN. CORROSIVE MATERIAL FOR SMALL AND LARGE SPILLS DISPOSE OF IN ACCORDANCE TO ALL LOCAL STATE, AND FEDERAL LAWS.

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**VII. HANDLING AND STORAGE**

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HANDLING AND STORAGE PRECAUTIONS: KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP FROM FREEZING. IF FROZEN, THAW AND MIX TO MAKE USABLE. WASH HANDS THOROUGHLY AFTER HANDLING PRODUCT. DO NOT PRESSURE CONTAINER TO EMPTY.

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**VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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EYE/FACE PROTECTION: GOGGLES, FACE SHIELD  
PROTECTIVE GLOVES: NON-ABSORBENT (RUBBER, PVC OR ALKALI RESISTANT  
RESPIRATORY PROTECTION: USE NIOSH APPROVED CARTRIDGE RESPIRATOR. IF SYMPTOMS IRRITATION TO TEST SHOW TLV IS EXCEEDED.  
OTHER PROTECTIVE CLOTHING/EQUIPMENT: CLOTHING AND FOOTWARE TO PREVENT SKIN CONTACT EYE WASH AND SAFETY SHOWER IS IN USE AREA.  
EXPOSURE GUIDELINES: SEE SECTION II FOR DETAILED INFORMATION.

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**IX. PHYSICAL AND CHEMICAL PROPERTIES**

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BOILIING POINT (F): 212 SPECIFIC GRAVITY: 1.2600  
VOLATILE BY VOLUME: 65 SOLUBILITY IN WATER: 100  
VAPOR PRESSURE (MMHG): 17.5 AT 20 C  
APPEARANCE AND ODOR: CLEAR YELLOW LIQUID; MILD ODOR

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**X. STABILITY AND REACTIVITY**

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CHEMICAL STABILITY: STABLE  
INCOMPATIBILITY WITH OTHER MATERIALS: CONCENTRATED MINERAL ACIDS, CHLORINATED CLEANER, BLEACHES & OXIDIZER AGENTS  
HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF NITROGEN WITH INCOMPLETE COMBUSTION.  
HAZARDOUS POLYMERIZATION: NONE

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XI. TOXICOLOGICAL INFORMATION

NO DATA AVAILABLE

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XII. ECOLOGICAL INFORMATION

NO DATA AVAILABLE

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XIII. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: PH ADJUSTMENT; SEPARATION OF INSOLUBLES; NO PHOSPHATES. USE UNTIL LESS THAN ONE INCH REMAINS IN CONTAINER, EMPTY CONTAINER. TRIPLE RINSE WITH WATER, ADD TO OPERATION. REMOVE OR DEFACE LABEL BEFORE SELLING CONTAINER OR DISPOSAL. DISPOSE OF IN ACCORDANCE TO LOCAL, STATE AND FEDERAL REGULATIONS.

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XIV. TRANSPORT INFORMATION

HAZARDOUS MATERIALS DESCRIPTION/PROPER SHIPPING NAME:  
Please refer to the Bill of Lading/receiving documents for up to date shipping information.

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XV. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA/EPCRA:SECTION 313 TOXIC CHEMICALS:

NONE

LISTED CARCINOGEN: NONE

NTP: NO

IARC: NO

OSHA: NO

HMIS RATINGS: HEALTH: 3 FIRE: 0 REACTIVITY: 0

PERSONAL PROTECTIVE EQUIPMENT: D

STATE RIGHT-TO-KNOW INFORMATION:

SODIUM NITRITE - CAS #7632-00-0

SODIUM MOLYBDATE - CAS #7631-95-0

WATER - CAS #7732-18-5

PHOSPHONOBUTANE TRICARBOXYLIC ACID - CAS #3797-36-1

POTASSIUM POLYACRYLATE - CAS #25608-12-2

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XVI. OTHER INFORMATION

THE INFORMATION IN THIS MSDS RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED OTHER THAN AS RECOMMENDED BY DIVERSEY LEVER OR IN COMBINATION WITH OTHER MATERIALS. IT IS THE USER'S RESPONSIBILITY TO EVALUATE THE APPLICABILITY OF THIS INFORMATION FOR HIS PARTICULAR CONDITIONS OF STORAGE, HANDLING AND USE.