

| I - PRODUCT IDENTIFICATION AND USE                                                                                                                                                    |              |                            |                                                      | MSDS ID: 2642                 |  |
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| <b>PRODUCT NAME:</b> X-CELL 419                                                                                                                                                       |              |                            |                                                      |                               |  |
| <b>USE:</b> Biocide for Pulp & Paper                                                                                                                                                  |              | <b>PCP #</b> 23182         |                                                      |                               |  |
| <b>SUPPLIER:</b><br>JohnsonDiversey Canada, Inc.<br>2401 Bristol Circle<br>Oakville Ontario, L6H 6P1, Canada                                                                          |              |                            | <b>EMERGENCY PHONE:</b><br><br><b>1-800-668-7171</b> |                               |  |
| <b>WHMIS CLASSIFICATION:</b> exempt                                                                                                                                                   |              |                            | <b>TRADE NAME / SYNONYMS:</b> not applicable         |                               |  |
| <b>CHEMICAL FAMILY:</b> not applicable                                                                                                                                                |              |                            | <b>CHEMICAL NAME:</b> not applicable                 |                               |  |
| <b>II - HAZARDOUS INGREDIENTS</b>                                                                                                                                                     |              |                            |                                                      |                               |  |
| <b>HAZARDOUS INGREDIENT</b>                                                                                                                                                           | <b>% w/w</b> | <b>CAS #</b>               | <b>LD50 / LC50</b>                                   | <b>Route / Species</b>        |  |
| Disodium ethylene bis dithiocarbamate                                                                                                                                                 | 10-30        | 000142-59-6                | LD50 395 mg/kg                                       | oral/rat                      |  |
| <b>III - HANDLING AND DISPOSAL PROCEDURES</b>                                                                                                                                         |              |                            |                                                      |                               |  |
| <b>PERSONAL PROTECTIVE EQUIPMENT:</b>                                                                                                                                                 |              |                            |                                                      |                               |  |
| <b>Gloves:</b> natural rubber or neoprene                                                                                                                                             |              | <b>Eye:</b> safety goggles |                                                      | <b>Footwear:</b> not required |  |
| <b>Respiratory:</b> If mists are generated, use NIOSH approved mask                                                                                                                   |              | <b>Other:</b> not required |                                                      |                               |  |
| <b>SPECIAL HANDLING PROCEDURES AND EQUIPMENT:</b> Avoid eye and skin contact. Do not breathe mist, spray or vapours.                                                                  |              |                            |                                                      |                               |  |
| <b>VENTILATION REQUIREMENTS:</b> general ventilation                                                                                                                                  |              |                            |                                                      |                               |  |
| <b>INCOMPATIBILITY (Material to Avoid):</b> Mineral Acid.                                                                                                                             |              |                            |                                                      |                               |  |
| <b>SPILL PROCEDURES:</b> Wear protective clothing. Contain the spill. Do not allow the spilled product to go to drain. Add large amounts of soda ash and place in drums for disposal. |              |                            |                                                      |                               |  |
| <b>WASTE DISPOSAL:</b> Dispose according to municipal, provincial, and federal regulations.                                                                                           |              |                            |                                                      |                               |  |
| <b>STORAGE / SHIPPING REQUIREMENT:</b> Store in a cool dry area in a closed container.                                                                                                |              |                            |                                                      |                               |  |
| <b>IV - PHYSICAL PROPERTIES</b>                                                                                                                                                       |              |                            |                                                      |                               |  |
| <b>APPEARANCE / ODOUR:</b> Yellow green liquid with sulphur odour                                                                                                                     |              |                            |                                                      |                               |  |
| <b>S.G. / BULK DENSITY(g/cc):</b> 1.18                                                                                                                                                |              |                            | <b>pH:</b> 10.5 - 12.4                               |                               |  |
| <b>VAPOUR PRESSURE (mmHg):</b> not available                                                                                                                                          |              |                            | <b>VAPOUR DENSITY (air=1):</b> not available         |                               |  |
| <b>ODOUR THRESHOLD:</b> not available                                                                                                                                                 |              |                            | <b>BOILING POINT:</b> Decomp >120°C                  |                               |  |
| <b>FREEZING POINT:</b> not available                                                                                                                                                  |              |                            | <b>PERCENT VOLATILE:</b> not applicable              |                               |  |
| <b>SOLUBILITY IN WATER:</b> soluble                                                                                                                                                   |              |                            | <b>EVAPORATION RATE (water=1):</b> not available     |                               |  |
| <b>V - TOXICOLOGICAL PROPERTIES</b>                                                                                                                                                   |              |                            |                                                      |                               |  |
| <b>EFFECTS OF ACUTE EXPOSURE TO MATERIAL:</b>                                                                                                                                         |              |                            |                                                      |                               |  |
| <b>EYES:</b> May cause severe irritation. May cause permanent damage if not treated promptly.                                                                                         |              |                            |                                                      |                               |  |
| <b>SKIN:</b> Repeated or prolonged contact may result in irritation. May cause temporary or permanent damage if not treated promptly.                                                 |              |                            |                                                      |                               |  |
| <b>INGESTION:</b> Harmful if swallowed.                                                                                                                                               |              |                            |                                                      |                               |  |
| <b>INHALATION:</b> Breathing spray or mist may cause respiratory irritation.                                                                                                          |              |                            |                                                      |                               |  |
| <b>LD50 (calculated):</b> 1400 mg/kg                                                                                                                                                  |              |                            | <b>LC50 (calculated):</b>                            |                               |  |

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| <b>OTHER TOXIC EFFECTS:</b> None known.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                            |
| <b>EFFECTS OF CHRONIC EXPOSURE TO MATERIAL:</b> None known.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                            |
| <b>VI - FIRST AID MEASURES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                            |
| <b>EYES:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Flush eyes with plenty of water for at least 15 minutes. Hold eyelids open while rinsing. Contact a physician immediately. |
| <b>SKIN:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Flush affected area thoroughly with water. If irritation develops, contact a physician.                                    |
| <b>INGESTION:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Induce vomiting. Contact a physician immediately.                                                                          |
| <b>INHALATION:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Remove patient to fresh air. Contact a physician.                                                                          |
| <b>VII - FIRE AND EXPLOSION DATA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                            |
| <b>FLAMMABLE:</b> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                            |
| <b>FLASH POINT, °C:</b> not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>AUTO IGNITION TEMPERATURE, °C:</b>                                                                                      |
| <b>EXTINGUISHING MEDIA:</b> Water [X]    Dry Chemical [X]    Carbon Dioxide [X]    Foam [X]    Other [ ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                            |
| <b>SPECIAL FIRE FIGHTING PROCEDURES:</b> Wear self-contained breathing apparatus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                            |
| <b>HAZARDOUS COMBUSTION PRODUCTS:</b> not applicable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                            |
| <b>EXPLOSIVE SENSITIVITY TO:</b> not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                            |
| <b>VIII - REACTIVITY DATA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                            |
| <b>STABILITY:</b> Stable [X]    Unstable [ ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                            |
| <b>CONDITIONS TO AVOID:</b> high temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                            |
| <b>INCOMPATIBILITY (Material to Avoid) :</b> Mineral acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                            |
| <b>HAZARDOUS DECOMPOSITION PRODUCTS:</b> Oxides of carbon, nitrogen and sulphur. Amines and carbon disulphide.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                            |
| <b>REACTIVITY:</b> not dangerously reactive.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                            |
| <b>IX - MSDS PREPARATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                            |
| <b>SOURCES USED:</b> Raw Materials MSDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>PREPARED BY:</b> JohnsonDiversey Canada, Inc.<br>Regulatory Department<br>Industrial Division<br>Phone (905) 829-1200   |
| <b>PREPARATION DATE:</b> April 15, 2003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                            |
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