# MIRAPAKON™

# SAFETY DATA SHEET

## MIRAPAKON WP100

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

| | |
|---|---|
| **1.1. Product identifier** | |
| **Product name** | MIRAPAKON WP100 |
| **Product code** | WP100 |
| **EC number** | Not available |
| **CAS number** | Not available |
| **REACH** | A registration number is not available for this substance or its uses are exempted from registration, the annual tonnage does not require a registration or a registration is envisaged for a later registration deadline. |
| **Product description** | Alcohol based washing product |
| **1.2. Relevant identified uses of the substance or mixture and uses advised against** | |
| Identified uses: | Surface washing, surface preparation, water removal |
| **1.3. Details of the supplier of the safety data sheet** | |
| **SiliCycle Inc.** 2500, Parc-Technologique Blvd<br>Quebec City, QC<br>Canada, G1P 4S6 | Tel: 418-874-0054<br>Fax: 418-874-0355 |
| Info@SiliCycle.com<br>www.SiliCycle.com | |
| **1.4. Emergency telephone number** | |
| **National advisory body/poison center**<br>Telephone number<br>Hours of operation | <br>CANUTEC: +1-613-996-6666 or *666 (cellular)<br>24 hours/day, 7 days/week |

## SECTION 2: Hazards identification

| | |
|---|---|
| **2.1. Classification of the substance or mixture** | |
| **Classification according to regulation (EC) No. 1272/2008 [CLP/GHS]:** | |
| Flammable liquid | (Category 2), H225 |
| Serious eye damage/eye irritation | (Category 2A), H319 |
| Skin corrosion/irritation | (Category 3), H316 |
| Specific target organ toxicity-single exposure, Central nervous system | (Category 3), H336 |
| | |
| **2.2. Label elements** | |
| **Labelling according Regulation (EC) No 1272/2008** | |
| **Pictogram** |  |
| **Signal word** | Danger |
| **Hazard statements** | |
| **H225** | Highly flammable liquid and vapour. |
| **H316** | Causes mild skin irritation. |
| **H319** | Causes serious eye irritation. |
| **H336** | May cause drowsiness or dizziness. |
| **Precautionary statements** | |
| **P210** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking |
| **P233** | Keep container tightly closed. |
| **P240** | Ground and bond container and receiving equipment. |
| **P241** | Use explosion-proof electrical/ ventilating/ lighting/ equipment. |
| **P242** | Use non-sparking tools. |
| **P243** | Take action to prevent static discharges. |
| **P261** | Avoid breathing vapours |
| **P264** | Wash skin thoroughly after handling. |
| **P271** | Use only outdoors or in a well-ventilated area. |
| **P303 + P361 + P353** | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. |
| **P304 + P340 + P312** | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. |
| **P305 + P351 + P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. Continue rinsing |
| **P332 + P313** | If skin irritation occurs: Get medical advice/ attention. |
| **P337 + P313** | If eye irritation persists: Get medical advice/ attention. |
| **P370 + P378** | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. |
| **P403 + P233 + P235** | Store in a well-ventilated place. Keep container tightly closed. Keep cool |
| **P405** | Store locked up. |
| **P501** | Dispose of contents/ container to an approved waste disposal plant |
| **According to European Directive 67/548/EEC as amended** | |
| **R11** | Highly flammable |
| **R36/R67** | Irritant **/** Vapours may cause drowsiness and dizziness. |
| **S26** | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| **S36/37/39** | Wear suitable protective clothing, gloves, and eye/face protection. |
| **S45** | In case of accident or if you feel unwell, seek medical advice immediately |
| | |
| **2.3. Other hazards** | |
| Other hazards which do not result in classification: none | |

## SECTION 3: Composition/information on ingredients

Substance/mixture: mixture

| Product/ingredient name | Identifiers CAS (EC) | % | Directive 1999/45/EC | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|---|---|---|---|---|
| Isopropanol | 67-63-0 | 75-99 | F, Xi, R11-R36-R67 | Flam.Liq.2; Eye Irrit.2; STOTSE 3; H225,H319,H336 | [A] |
| Azeotrope agent | Proprietary information | 0-5 | ND | ND | [A] |

There are no additional ingredients present which, whitin the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.
Type : **[A]** Constituent **[B]** Impurity **[C]** Stabilising additive

## SECTION 4: First aid measures

| **4.1 Description of first aid measures** | |
|---|---|
| **Eye contact** | Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if necessary |
| **Skin contact** | In case of contact, immediately flush skin with plenty of water for at least 20 minutes |
| **Inhalation** | Move exposed person to fresh air. If not breathing, give artificial respiration. Consult a physician. |
| **Ingestion** | Wash out mouth with water. Don't induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. |
| **4.2 Indication of any immediate medical attention and special treatment needed** | |
| **Notes to physician** | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| **Specific treatments** | No specific treatment |

## SECTION 5: Firefighting measures

| **5.1 Extinguishing media** | |
|---|---|
| **Suitable extinguishing media** | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide |
| **Unsuitable extinguishing media** | None known |
| **5.2 Special hazards arising from the substance or mixture** | |
| **Hazard from the substances or mixture** | Carbon oxides |
| **Hazardous combustion products** | No specific data |
| **5.3 Advice for firefighters** | |
| **Special protective equipment for fire-fighters** | Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode. Clothing for fire fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

## SECTION 6: Accidental release measures

| **6.1 Personal precautions, protective equipment and emergency procedures** | |
|---|---|
| **For non-emergency personnel** | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment |
| **For emergency responders** | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-emergency personnel". |
| **6.2 Environmental precautions** | |
| Avoid dispersal of split material and runoff and contact with soil, waterways, drain and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). | |
| **6.3 Methods and materials for containment and cleaning up** | |
| **Small spill** | Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. |
| **Large spill** | Use personal protective equipment. Move containers from spill area. Prevent entry into sewers, watercourses, basements and confined areas. Vacuum or sweep up materials and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal. |
| **6.4 Reference to other sections** | |
| See Section 1 for emergency contact information.<br>See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information. | |

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of identified uses in section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

| **7.1 Precautions for safe handling** | |
|---|---|
| **Protective measures** | Avoid contact with skin and eyes. (see Section 8). Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. |
| **Advice on general occupational hygiene** | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

| 7.2 Conditions for safe storage, including any incompatibilities | |
|---|---|
| Store in accordance with local regulations. Store in original container in cool place, dry and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination | |
| **7.3 Specific end use(s)** | |
| **Recommendations** | Not available |

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of identified uses in section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

| 8.1 Control parameters | |
|---|---|
| **Exposure limit values** | **Isopropanol** |
| TWAEV<br>400 ppm;  983 mg/m3 | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| TWA<br>200 ppm | Canada. British Columbia OEL |
| STEL<br>400 ppm | Canada. British Columbia OEL |
| TWAEV<br>200 ppm | Canada. Ontario OELs |
| STEV<br>400 ppm | Canada. Ontario OELs |
| STEL<br>400 ppm;  984 mg/m3 | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| TWA<br>200 ppm 492 mg/m3 | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| STEV<br>500 ppm 1,230 mg/m3 | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| TWA<br>200 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| STEL<br>400 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| **Exposure limit values** | **Other constituents and trace compounds** |
| | No exposure limit value knows.  Components with workplace control parameters |
| **8.2 Exposure controls** | |
| **Appropriate engineering controls** | Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits |
| **Individual protection measures** | |
| **Hygiene measures** | Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. |
| **Eye/face protection** | Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). |
| **Skin protection** | |
| **Hand protection** | Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. |
| **Body protection** | Impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| **Other skin protection** | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| **Respiratory protection** | Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| **Environmental exposure controls** | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. |

## SECTION 9: Physical and chemical properties

| 9.1 Information on basic physical and chemical properties | |
|---|---|
| **Physical state** | Liquid; colourless |
| **Melting point/freezing point** | -89°C |
| **Initial boiling point** | 81°C |
| **Flash point** | 12.0°C – closed cup |
| **Evaporation rate** | 3.0 |
| **Ignition temperature** | 425°C |
| **Vapour pressure** | 43.2 hPa (32.4 mmHg) at 20.0 °C (68.0 °F); 58.7 hPa (44.0 mmHg) at 25.0 °C (77.0 °F) |
| **Density** | 0.78 g/cm3 |
| **Vapour density** | No data available |
| **Water solubility** | Completely soluble |

| | |
|---|---|
| **Odour** | Alcohol-like |
| **9.2 Other safety information** | |
| No specific data available | |

## SECTION 10: Stability and reactivity

| | |
|---|---|
| **10.1 Reactivity** | Reacts with oxidizing agents, acid anhydrides. |
| **10.2 Chemical stability** | The product is stable under recommended storage conditions. |
| **10.3 Possibility of hazardous reactions** | Vapours may form explosive mixture with air. |
| **10.4 Conditions to avoid** | Heat, flames and sparks. |
| **10.5 Incompatible materials** | Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids. |
| **10.6. Hazardous decomposition products** | Hazardous decomposition products formed under fire conditions. - Carbon oxides. |

## SECTION 11: Toxicological information

| | |
|---|---|
| **11.1. Information on toxicological effects** | |
| **Information on the likely routes of exposure** | Routes of entry anticipated: Oral, Dermal and Inhalation. |
| **Acute toxicity** | |
| **Inhalation LC50** | LC50 Inhalation - Rat - 8 h - 16000 ppm |
| **Oral LD50** | LD50 Oral - Rat - 5,045 mg/kg Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Somnolence (general depressed activity). |
| **Dermal LD50** | LD50 Dermal - Rabbit - 12,800 mg/kg |
| **Other** | No data available. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | |
| **Signs and Symptoms of Exposure** | Central nervous system depression, prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects., Aspiration may lead to:, Lung oedema, Pneumonia To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. |
| **Inhalation** | May cause drowsiness or dizziness, may cause respiratory tract irritation. |
| **Ingestion** | May cause drowsiness or dizziness. May be harmful if swallowed. |
| **Skin contact** | Mild skin irritation. May be harmful if absorbed through skin. |
| **Eye contact** | Eye irritation |
| **Delayed and immediate effects and also chronic effects from short and long term exposure Short term exposure** | |
| **Potential immediate effects** | Nausea, Headache, Vomiting, narcosis, Drowsiness. |
| **Potential delayed effects** | Not available. |
| **Long term exposure** | |
| **Potential immediate effects** | Not available. |
| **Potential delayed effects** | Overexposure may cause mild, reversible liver effects. |
| **General: Carcinogenicity** | This product is or contains a component that is not classifiable as to its carcinogenicity based on its OARC, ACGIH,NTP, or EPA classification. IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Isopropanol) |
| **Mutagenicity: Teratogenicity** | No data available |
| **Developmental effects** | No data available |
| **Fertility effects** | No data available |
| **Other information** | No data available |

## SECTION 12: Ecological information

| | |
|---|---|
| **12.1. Toxicity** | To Fish – LC50- Pimephales promelas 9 640,00 mg/l - 96h<br>To daphnia and other aquatic invertebrates – EC50- Daphnia magna (Water flea) – 5 102,00 mg/l - 24h<br>To algae EC50 – Desmodesmus subspicatus (green algae) > 2 000,00 mg/l - 72h |
| **12.2 Persistence and degradability** | Not available |
| **12.3 Bio accumulative potential** | No bioaccumulation is to be expected |
| **12.4 Mobility in soil** | |
| Soil/water partition coefficient (KOC) | Not available |
| Mobility | Not available |
| **12.5 Results of PBT and vPvB assessment** | |
| PBT | This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic. |
| vPvB | This substance/mixture contains no components considered to be very persistent and vary bio accumulative at levels of 0,1% or higher. |
| **12.6 Other adverse effects** | No data available |

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of identified uses in section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

| 13.1 Waste treatment methods | |
|---|---|
| **Product** | |
| **Methods of disposal** | The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste products residue should not be disposed of via the foul sewer, but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. |
| **Hazardous waste** | Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU directive 91/689/EEC |
| **Packaging** | |
| **Methods of disposal** | The generation of waste should be avoided or minimised wherever possible. Waste when packaging should be recycled. Incineration or landfill should only be considered. Recycling is not feasible. |
| **Special precautions** | This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waters, drains and sewers |

## SECTION 14: Transport information

| | ADR/RID | ADN/ADNR | IMDG | IATA |
|---|---|---|---|---|
| **14.1 UN number** | 1263 | 1263 | 1263 | 1263 |
| **14.2 UN proper shipping name** | Paint related | Paint related | Paint related | Paint related |
| **14.3 Transport hazard class(es)** | 3 | 3 | 3 | 3 |
| **14.4 Packing group** | II | II | II | II |
| **14.5 Environmental hazards** | No. | No. | No. | No. |
| **14.6 Special precautions for user** | Not available. | Not available. | Not available. | Not available. |
| **Additional information** | - | - | - | - |

PG* : Packing group; Exemption to the above classification may apply.

## SECTION 15: Regulatory information

| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture | |
|---|---|
| WHMIS Classification | B2 Flammable liquid.<br>D2B Toxic Material Causing Other Toxic Effects; Specific target organ toxicity - single exposure.<br>Moderate eye irritant. |
| **EU Regulation (EC) No. 1907/2006 (REACH)**<br>**Annex XIV - List of substances subject to authorisation**<br>**Substances of very high concern** | No data available |
| **Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** | Not applicable |
| **Other EU regulations** | |
| **Europe inventory** | Not determined. |
| **Black List Chemicals** | Not listed |
| **Priority List Chemicals** | Not listed |
| **Integrated pollution prevention and control list (IPPC) – Air** | Not listed |
| **Integrated pollution prevention and control list (IPPC) - Water** | Not listed |
| **15.2 Chemical Safety Assessment** | This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. |

## SECTION 16: Other information

Abbreviations and acronyms:
**ATE** = Acute Toxicity Estimate
**CLP**= Classification, Labelling and Packaging regulation (Regulation <EC> No. 1272/2008
**DNEL**= Derived No Effect Level
**EUH statement** = CLP-specific Hazard statement
**PNEC** = Predicted No Effect Concentration
**RRN** = Reach Registration Number

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

| Classification | |
|---|---|
| Full text of abbreviated H statements<br>Eye Irrit. ; Flam. Liq.<br>H225;H319;H336;STOT SE | <br>Eye irritation; Flammable liquids<br>Highly flammable liquid and vapour; Causes serious eye irritation;May cause drowsiness or dizziness; Specific target organ toxicity |
| Full text of classifications CLP/GHS<br>F;Xi;R11;R36;R67 | <br>Highly flammable, Irritant; Highly flammable; Irritating to eyes; Vapour may cause drowsiness and dizziness. |
| **History**<br>Date of issue (dd/mm/yyyy)<br>Version | <br>13/01/2017<br>1.1 |

**Notice to reader**
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.