SAFETY DATA SHEET (SDS)

Revision date: 05/18

SDS – 030
Revision number: 01
Rev. 05/18

SPOTCHEM™ II IP
Part Numbers: SE77118 and 77147

For use with the SPOTCHEM EZ Analyzer SP-4430

ARKRAY USA, Inc.
5182 West 76th Street
Minneapolis, Minnesota 55439

Technical Customer Service Phone:
1-855-646-3108
SAFETY DATA SHEET

SDS No. : 77414EU
Issue Date : 18 Mar. 1998
Revision Date : 31 Jan. 2017

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Product name : SPOTCHEM II IP

1.2 Relevant identified uses of the substance or mixture and uses advised against
The product is applicable for the following purpose of use only. Use exclusive reagents for SPOTCHEM analyzer.

1.3 Details of the supplier of the safety data sheet
ARKRAY FACTORY, Inc.
Address : 1480 Koji, Konan-cho, Koka-shi, Shiga 520-3306, JAPAN
Phone : +81-748-86-6901
Facsimile : +81-748-86-5347

European representative
ARKRAY Europe, B. V.
Address : Prof. J. H. Bavincklaan 2, 1183 AT Amstelveen, THE NETHERLANDS
Phone : +31-20-545-2450
Facsimile : +31-20-545-2459

1.4 Emergency telephone number
Emergency phone : +31-20-545-2450

2. Hazards Identification

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture according to REGULATION (EC) No 1272/2008.

2.2 Label elements
The product does not need to be labeled in accordance with EC directives or respective national laws.

2.3 Other hazards
May be harmful if ingested.
May cause eyes and skin irritation.

3. Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification Regulation(EC) 1272/2008(CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium molybdate tetrahydrate</td>
<td>&lt; 1.0</td>
<td>H$_{24}$Mo$_7$N$<em>6$O$</em>{24}$·4H$_2$O</td>
<td>—</td>
<td>12054-85-2</td>
<td>—</td>
</tr>
<tr>
<td>L(+)-Ascorbic acid</td>
<td>&lt; 1.0</td>
<td>C$_6$H$_8$O$_6$</td>
<td>200-066-2</td>
<td>50-81-7</td>
<td>—</td>
</tr>
</tbody>
</table>
4. First aid measures
   4.1 Description of first aid measures
      Inhalation
      Not applicable
      Skin contact
      Immediately wash thoroughly with water and soap. Immediately get medical attention if itchiness and inflammation occurs.
      Eye contact
      Immediately wash eyes with plenty of clean water for at least 15 minutes and get medical attention.
      Ingestion
      Rinse mouth. Give one or two glasses of water to drink
   4.2 Most important symptoms and effects, both acute and delayed
      No relevant information available
   4.3 Indication of any immediate medical attention and special treatment needed
      No relevant information available

5. Firefighting measures
   5.1 Extinguishing media
      Suitable extinguishing media
      Water
      Unsuitable extinguishing media
      No relevant information available
   5.2 Special hazards arising from the substance or mixture
      No relevant information available
   5.3 Advice for firefighters
      No relevant information available

6. Accidental release measures
   6.1 Personal precautions, protective equipment and emergency procedures
      For non-emergency personnel
      No information available
      For emergency responder
      Wear protective gloves.
   6.2 Environmental precautions
      No relevant information available
   6.3 Methods and material for containment and cleaning up
      Pick up the product and wipe the contaminated area with damp cloth. Rinse the used cloth.
   6.4 Reference to other sections
      Not available

7. Handling and storage
   7.1 Precautions for safe handling
      Preventive measures (Exposure Control for handling personnel)
7.2 **Conditions for safe storage, including any incompatibilities**
Store the product in a refrigerator at temperature of 2 - 8 °C.

7.3 **Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. **Exposure controls/personal protection**

8.1 **Control parameters**
No data available

8.2 **Exposure controls**
**Appropriate engineering controls**
No information available

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Use safety glasses, if necessary.

**Skin protection**
**Hand protection**
Use rubber gloves, if necessary

**Other**
Not necessary

**Respiratory protection**
Not necessary

**Thermal hazards**
No information available

**Environmental exposure controls**
No relevant information available

9. **Physical and chemical properties**

9.1 **Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Partition coefficient: n-octanol/water  
No data available

Auto-ignition temperature  
No data available

Decomposition temperature  
No data available

Viscosity  
No data available

9.2 Other information
No further relevant information

10. Stability and reactivity

10.1 Reactivity
Stable under normal conditions

10.2 Chemical stability
Stable under normal conditions

10.3 Possibility of hazardous reactions
None

10.4 Conditions to avoid
Sunlight, heat, and humidity

10.5 Incompatible materials
No information available

10.6 Hazardous decomposition products
None

11. Toxicological information

11.1 Information on toxicological effects
Acute toxicity  No information available
Skin corrosion/irritation  No information available
Serious eye damage/irritation  No information available
Respiratory or skin sensitization  No information available
Germ cell mutagenicity  No information available
Carcinogenicity
Reproductive toxicity  No information available
STOT-single exposure  No information available
STOT-repeated exposure  No information available
Aspiration hazard  No information available

12. Ecological information

12.1 Toxicity
No information available

12.2 Persistence and degradability
No information available

12.3 Bioaccumulative potential
No information available
12.4 Mobility in soil
   No information available

12.5 Results of PBT and vPvB assessment
   No information available

12.6 Other adverse effects
   No information available

13. Disposal considerations
13.1 Waste treatment methods
   Product
   Dispose of the product in accordance with regulations.
   Contaminated packaging
   Dispose as of unused product.
   Others
   If used product, ask a licensed disposal company.
   Observe all federal, state, and local environmental regulation.

14. Transport information
14.1 UN number
   ADR/RID: —   IMDG: —   IATA: —

14.2 UN proper shipping name
   ADR/RID: —   IMDG: —   IATA: —

14.3 Transport hazard class(es)
   ADR/RID: —   IMDG: —   IATA: —

14.4 Packing group
   ADR/RID: —   IMDG: —   IATA: —

14.5 Environmental hazards
   ADR/RID: no   IMDG Marine pollutant: no   IATA: no

14.6 Special precautions for user
   No relevant information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
   No relevant information available

15. Regulatory information
   The safety datasheet compiles with the requirements of Regulation (EC) No. 1907/2006.
   15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture
   No information available

15.2 Chemical safety assessment
   No information available

16. Other information
   The date of preparation and revision of the SDS
Revised on 25 August 2000: Changed the Company name from “KDK corporation” to “ARKRAY, Inc.”

Revised on 10 December 2002: Modified in accordance with the requirements of Directive 2001/58/EC.

Revised on 22 October 2003: Changed the Manufacturer from “ARKRAY FACTORY” to “ARKRAY, Inc” in “Company information.”

Revised on 1 November 2004: Added to the European representative

Revised on 1 November 2005: Changed the Manufacturer from “ARKRAY, Inc” to “ARKRAY FACTORY” in “Company information.”

Revised on 8 January 2010: Changed Telephone number & Facsimile number of the Manufacturer in “Company information.”

Revised on 1 July 2010: Modified to fit with ISO11014-1.

Revised on 1 June 2015: Modified in accordance with the requirements of Regulation (EC) No. 1907/2006.

Revised on 1 December 2015: European representative’s address has changed.

Revised on 31 January 2017: Corrected the wording in 15.1.

Clarified concentration in Composition/Information on ingredients.

**Key literature references**

Insert

**Further information**

The above information contained herein is based on the data available to us and is believed to be correct. However, ARKRAY, Inc. bears no warranty expresses or implies regarding the accuracy of these data or the results to be obtained from the use thereof.

ARKRAY, Inc. assumes no responsibility for injury caused from the use of the product described herein.