1 Identification

Product identifier

Product name: *Wright's Stain*

Stock number: A17903, L14311

CAS Number: 68988-92-1

EC number: 273-541-5

Relevant identified uses of the substance or mixture and uses advised against.

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R22: Harmful if swallowed.

Xi; Irritant

R41: Risk of serious damage to eyes.

Information concerning particular hazards for human and environment: Not applicable

Hazard not otherwise classified No information known.

Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms

GHS05 GHS07

Signal word Danger

Hazard statements

H302 Harmful if swallowed.

H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(Contd. on page 2)
38.0.35
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
D2B - Toxic material causing other toxic effects

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>2</th>
<th>Health (acute effects) = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE</td>
<td>1</td>
<td>Flammability = 1</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>1</td>
<td>Physical Hazard = 1</td>
</tr>
</tbody>
</table>

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients
Chemical characterization: Substances
CAS# Description:
68988-92-1 Wright's Stain
Identification number(s):
EC number: 273-541-5

4 First-aid measures
Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing
Seek medical treatment.

Information for doctor
Most important symptoms and effects, both acute and delayed
No further relevant information available.

Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures
Extinguishing media
Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Sulfur oxides (SOx)
Sodium oxide
Nitrogen oxides (NOx)
Hydrogen chloride (HCl)
Hydrogen bromide (HBr)

Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
- Do not allow product to reach sewage system or any water course.
- Do not allow to penetrate the ground/soil.
Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.
Prevention of secondary hazards: No special measures required.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Precautions for safe handling
- Keep container tightly sealed.
- Store in cool, dry place in tightly closed containers.
- Ensure good ventilation at the workplace.
Information about protection against explosions and fires: No information known.
Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Store away from oxidizing agents.
Further information about storage conditions:
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed containers.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: No data
Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
- Keep away from foodstuffs, beverages and feed.
- Remove all soiled and contaminated clothing immediately.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with type N95 (USA) or FFP (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.
Eye protection: Tightly sealed goggles
Body protection: Protective work clothing.
9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
<td></td>
</tr>
<tr>
<td>Appearance:</td>
<td>Powder</td>
</tr>
<tr>
<td>Form:</td>
<td>Powder</td>
</tr>
<tr>
<td>Color:</td>
<td>Dark green</td>
</tr>
<tr>
<td>Odor:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH-value:</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in condition</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/Melting range:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Sublimation temperature / start:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gaseous):</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto igniting:</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

| Danger of explosion:                                  | Not determined. |
| Explosion limits:                                     |  |
| Lower:                                                | Not determined |
| Upper:                                                | Not determined |
| Vapor pressure:                                       | Not applicable. |
| Density:                                              | Not determined |
| Relative density:                                     | Not determined |
| Vapor density:                                        | Not applicable. |
| Evaporation rate:                                     | Not applicable. |
| Solubility in / Miscibility with                      | Insoluble |
| Water:                                                | Not determined. |
| Partition coefficient (n-octanol/water):             | Not determined. |
| Viscosity:                                            |  |
| dynamic:                                              | Not applicable. |
| kinematic:                                            | Not applicable. |
| Other information                                     | No further relevant information available. |

10 Stability and reactivity

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>No information known.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>Thermal decomposition / conditions to be avoided:</td>
<td>Decomposition will not occur if used and stored according to specifications.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Reacts with strong oxidizing agents</td>
</tr>
<tr>
<td>Incompatible materials:</td>
<td>Oxidizing agents</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td>Carbon monoxide and carbon dioxide</td>
</tr>
<tr>
<td>Sulfur oxides (SOX)</td>
<td></td>
</tr>
<tr>
<td>Nitrogen oxides</td>
<td></td>
</tr>
<tr>
<td>Hydrogen bromide</td>
<td></td>
</tr>
<tr>
<td>Sodium oxide</td>
<td></td>
</tr>
<tr>
<td>Hydrogen chloride (HCl)</td>
<td></td>
</tr>
</tbody>
</table>

11 Toxicological information

<table>
<thead>
<tr>
<th>Information on toxicological effects</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity:</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.</td>
<td></td>
</tr>
<tr>
<td>LD/LC50 values that are relevant for classification:</td>
<td>No data</td>
</tr>
<tr>
<td>Skin irritation or corrosion:</td>
<td>May cause irritation</td>
</tr>
<tr>
<td>Eye irritation or corrosion:</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Sensitisation:</td>
<td>No sensitizing effects known.</td>
</tr>
<tr>
<td>Germ cell mutagenicity:</td>
<td>The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.</td>
</tr>
<tr>
<td>Carcinogenicity:</td>
<td>No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.</td>
</tr>
<tr>
<td>The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.</td>
<td></td>
</tr>
</tbody>
</table>
Safety Data Sheet
per OSHA HazCom 2012

Product name: Wright's Stain

Reproductive toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.

Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.

Additional ecological information:
General notes: Do not allow product to reach ground water, water course or sewage system. Do not allow product to reach ground water, water course or sewage system. Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation: Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Class</td>
</tr>
<tr>
<td></td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td>DOT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine Pollutant (DOT):</td>
<td>No</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td></td>
<td>USA</td>
</tr>
</tbody>
</table>
Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings) Substance is not listed.

California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.
Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations
Substances of very high concern (SVHC) according to REACH, Article 57 Substance is not listed.

REACH - Pre-registered substances Substance is listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Health, Safety and Environmental Department.

Date of preparation / last revision 05/02/2014 / -

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
DOT: US Department of Transportation
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)
Acute Tox. 4: Acute toxicity, Hazard Category 4
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1