1 Identification of substance:

Product details:

Product name: Phenolphthalein, 0.5% w/v in Alcohol
Stock number: 38703

Manufacturer/Supplier:
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHMTREC: (800) 424-9300
Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department
Emergency information:
During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:
Description: (CAS#)
Phenolphthalein (CAS# 77-09-8): 0.5%
Ethanol (CAS# 64-17-5): 90%
Methanol (CAS# 67-56-1): 9.5%

3 Hazards identification

Hazard description:

T Toxic
F Highly flammable

Information pertaining to particular dangers for man and environment
R 45 May cause cancer.
R 11 Highly flammable.
R 20/21/22 Also harmful by inhalation, in contact with skin and if swallowed.
R 68/20/21/22 Also harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

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

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE</td>
<td>3</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>1</td>
</tr>
</tbody>
</table>

GHS label elements

Danger
2.6/2 - Highly flammable liquid and vapour.

Danger
3.6/1A - May cause cancer.
3.8/2 - May cause damage to organs.

Warning
3.1/4 - Harmful if swallowed.
3.1/4 - Harmful in contact with skin.
3.1/4 - Harmful if inhaled.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.

(Contd. on page 2)
4 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.

5 Fire fighting measures

Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards caused by the material, its products of combustion or resulting gases:
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide

Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Person-related safety precautions:
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources

Measures for environmental protection:
Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Keep away from ignition sources.
Additional information:
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
Information 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:
Keep ignition sources away.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

Storage

Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility:
Do not store together with acids.
Store away from oxidizing agents.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

8 Exposure controls and 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.

Components with limit values that require monitoring at the workplace:

Ethyl alcohol

<table>
<thead>
<tr>
<th>ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV</td>
</tr>
<tr>
<td>Austria MAK</td>
</tr>
<tr>
<td>Belgium TWA</td>
</tr>
<tr>
<td>Denmark TWA</td>
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<tr>
<td>Finland TWA</td>
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<tr>
<td>France VME</td>
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<tr>
<td>Germany MAK</td>
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<tr>
<td>Korea TLV</td>
</tr>
<tr>
<td>Netherlands MAC-TGG</td>
</tr>
<tr>
<td>Norway TWA</td>
</tr>
<tr>
<td>Poland TWA</td>
</tr>
<tr>
<td>Russia</td>
</tr>
<tr>
<td>Sweden NGV</td>
</tr>
<tr>
<td>Switzerland MAK-W</td>
</tr>
<tr>
<td>United Kingdom TWA</td>
</tr>
<tr>
<td>OSHA PEL</td>
</tr>
</tbody>
</table>

Methyl alcohol

<table>
<thead>
<tr>
<th>ppm</th>
</tr>
</thead>
<tbody>
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<td>ACGIH TLV</td>
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<tr>
<td>Hungary TWA</td>
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<tr>
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<tr>
<td>United Kingdom TWA</td>
</tr>
<tr>
<td>OSHA PEL</td>
</tr>
</tbody>
</table>

Additional information: No data
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 and skin.
Breathing equipment: Use suitable respirator when high concentrations are present.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
Material of gloves
The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties:

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form: Liquid</td>
</tr>
<tr>
<td>Color: Colorless</td>
</tr>
<tr>
<td>Odor: Alcohol-like</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/Melting range: Not determined</td>
</tr>
<tr>
<td>Boiling point/Boiling range: Not determined</td>
</tr>
<tr>
<td>Sublimation temperature / start: Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash point: 17°C (63°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignition temperature: Not determined</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Explosion limits:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower: Not determined</td>
</tr>
<tr>
<td>Upper: Not determined</td>
</tr>
</tbody>
</table>

| Vapor pressure: Not determined |
| Density: Not determined |

| Solubility in / Miscibility with Water: Fully miscible |

10 Stability and reactivity
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Materials to be avoided:
Acids
Oxidizing agents
Dangerous reactions: No dangerous reactions known
Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information
Acute toxicity:
LD/LC50 values that are relevant for classification:
Methanol (CAS# 67-56-1)
ORL-RAT LD50: 5628 MG/KG
ORL-MUS LD50: 7300 MG/KG
SKN-RBT LD50: 15800 MG/KG
ORL-HMN LDLo: 143 MG/KG

Primary irritant effect:
on the skin: No irritant effect.
on the eye: Causes mild irritant effect.
Sensitization: No sensitizing effects known.
Subacute to chronic toxicity:
Ethyl alcohol is rapidly oxidized in the body and is less toxic than methyl alcohol. Exposure to high vapor concentrations may cause upper respiratory tract irritation and eye irritation. It is a central nervous system depressant and ingestion leads to drowsiness, lassitude, loss of appetite and inability to concentrate. Mutagenic and teratogenic data
Material Safety Data Sheet  
acc. to OSHA and ANSI

Printing date 09/03/2009  
Reviewed on 09/02/2009

**Product name:** Phenolphthalein, 0.5% w/v in Alcohol

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**12 Ecological information:**

**General notes:**
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Do not allow material to be released to the environment without proper governmental permits.

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**13 Disposal considerations**

**Product:**
- **Recommendation:** Consult state, local or national regulations to ensure proper disposal.

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

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

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**14 Transport information**

**DOT regulations:**

| Hazard class | 3 |
| Identification number | UN1987 |
| Packing group | II |
| Proper shipping name (technical name) | ALCOHOLS, N.O.S. (Ethanol/Methanol solution) |
| Label | 3 |

**Land transport ADR/RID (cross-border):**

| ADR/RID class | 3 (F1) Flammable liquids |
| Danger code (Kemler) | 33 |
| UN-Number | 1987 |
| Packaging group | II |
| Description of goods | 1987 ALCOHOLS, N.O.S. (Ethanol/Methanol solution) |

**Maritime transport IMDG:**

| IMDG Class | 3 |
| UN Number | 1987 |
| Label | 3 |
| Packaging group | II |
| Marine pollutant | No |
**Proper shipping name:** ALCOHOLS, N.O.S. (Ethanol/Methanol solution)

**Air transport ICAO-TI and IATA-DGR:**

<table>
<thead>
<tr>
<th>ICAO/IATA Class</th>
<th>UN/ID Number</th>
<th>Label</th>
<th>Packaging group</th>
<th>Proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1987</td>
<td>3</td>
<td>II</td>
<td>ALCOHOLS, N.O.S. (Ethanol/Methanol solution)</td>
</tr>
</tbody>
</table>

**UN "Model Regulation":** UN1987, ALCOHOLS, N.O.S., 3, II

## 15 Regulations

**Product related hazard informations:**

**Hazard symbols:**
- T Toxic
- F Highly flammable

**Risk phrases:**
- 45 May cause cancer.
- 11 Highly flammable.
- 20/21/22 Also harmful by inhalation, in contact with skin and if swallowed.
- 68/20/21/22 Also harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

**Safety phrases:**
- 53 Avoid exposure - obtain special instructions before use.
- 45 In case of accident or if you feel unwell, seek medical advice immediately.

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

This product contains a chemical known to the state of California to cause cancer or reproductive toxicity.

**Information about limitation of use:**

For use only by technically qualified individuals.

This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

## 16 Other information:

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 MSDS:** Health, Safety and Environmental Department.

**Contact:** Zachariah Holt

**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)
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- ICAO: International Civil Aviation Organization
- ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- HMIS: Hazardous Materials Identification System (USA)
- LCS: Lethal Concentration
- LD50: Lethal dose, 50 percent

USA