Material Safety Data Sheet

Reagent Alcohol Blends (BDH1158-4LP, BDH1158-19L, BDH1160-4LP, BDH1160-19L, BDH1162-4LP, BDH1162-19L, BDH1164-4LP, BDH1164-19L)

000000011701

Version 1  Revision Date 06/20/2012  Print Date 06/20/2012

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Reagent Alcohol Blends (BDH1158-4LP, BDH1158-19L, BDH1160-4LP, BDH1160-19L, BDH1162-4LP, BDH1162-19L, BDH1164-4LP, BDH1164-19L)

MSDS Number : 000000011701

Product Use Description : Solvent

Manufacturer : Honeywell
1953 South Harvey Street
Muskegon, MI 49442

Manufactured for : VWR International LLC
Radnor Corporate Center
Building One
Suite 200
100 Matsonford Road
Radnor PA 19087

For more information call : (Monday-Friday, 8.00am-5.00pm)
1-800-932-5000

In case of emergency call : (24 hours/day, 7 days/week)
1-800-424-9300 (USA Only)

For Transportation Emergencies:
1-800-424-9300 (CHEMTREC - Domestic)
1-613-966-6666 (CANUTEC - Canada)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form : liquid, clear
Color : colourless
Odor : mild alcohol-like
Hazard Summary : Flammable. In use, may form flammable/explosive vapour-air mixture. May be fatal if swallowed. May be fatal if inhaled. May
Potential Health Effects

**Skin**
- Irritating to skin.
  - The product may be absorbed through the skin.
  - May cause systemic poisoning with symptoms paralleling those of inhalation.
  - Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

**Eyes**
- Irritating to eyes.
  - Causes itching, burning, redness and tearing.
  - May cause blindness.
  - May cause irreversible eye damage.

**Ingestion**
- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
  - May cause systemic poisoning with symptoms paralleling those of inhalation.
  - May cause blindness if swallowed.
  - Repeated or prolonged exposure to the substance can produce liver damage.
  - Repeated or prolonged exposure to the substance can produce kidney damage.

**Inhalation**
- Causes respiratory tract irritation.
  - Causes headache, drowsiness or other effects to the central nervous system.
  - Vapours may cause drowsiness and dizziness.
  - Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
  - May cause blindness.
  - Repeated or prolonged exposure to the substance can produce liver damage.
  - Repeated or prolonged exposure to the substance can produce kidney damage.

**Chronic Exposure**
- Causes damage to the kidneys/ liver/ eyes/ brain/ respiratory
system/ central nervous system through prolonged or repeated exposure. Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering. This product may cause adverse reproductive effects. Possible risk of harm to the unborn child.

Aggravated Medical Condition: Liver disorders
Eye disorders
Skin disorders
Neurological disorders
Kidney disorders
Do not use if pregnant.

Target Organs: Eyes
Skin
Liver
Kidney
Blood
Respiratory system
Central nervous system
Gastrointestinal tract

Carcinogenicity

ACGIH: Ethanol 64-17-5
A3: Confirmed animal carcinogen

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>60.00 - 85.00 %</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>10.00 - 30.00 %</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>3.00 - 5.00 %</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>2.00 - 5.00 %</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

Inhalation : Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.

Ingestion : Call a physician immediately. Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person.

Notes to physician

Treatment : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical
Cool closed containers exposed to fire with water spray.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during firefighting : Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashign back to vapor source.
In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO2)
### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions
- Wear personal protective equipment.
- Immediately evacuate personnel to safe areas.
- Keep people away from and upwind of spill/leak.
- Ensure adequate ventilation.
- Remove all sources of ignition.
- Do not swallow.
- Do not breathe vapours or spray mist.
- Avoid contact with skin, eyes and clothing.

#### Environmental precautions
- Prevent further leakage or spillage if safe to do so.
- Discharge into the environment must be avoided.
- Do not flush into surface water or sanitary sewer system.
- Prevent product from entering drains.
- Do not allow run-off from fire fighting to enter drains or water courses.

#### Methods for cleaning up
- Ventilate the area.
- No sparking tools should be used.
- Use explosion-proof equipment.
- Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

### SECTION 7. HANDLING AND STORAGE

#### Handling
- Wear personal protective equipment.
- Use only in well-ventilated areas.
- Keep container tightly closed.
- Do not smoke.
- Do not swallow.
- Do not breathe vapours or spray mist.
- Avoid contact with skin, eyes and clothing.
### Advice on protection against fire and explosion
- Keep away from fire, sparks, and heated surfaces.
- Take precautionary measures against static discharges.
- Ensure all equipment is electrically grounded before beginning transfer operations.
- Use explosion-proof equipment.
- Keep product and empty container away from heat and sources of ignition.
- No sparking tools should be used.
- No smoking.

### Storage
**Requirements for storage areas and containers**
- Store in an area designed for storage of flammable liquids. Protect from physical damage.
- Keep containers tightly closed in a dry, cool, and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Keep away from heat and sources of ignition.
- Keep away from direct sunlight.
- Store away from incompatible substances.
- Container hazardous when empty.
- Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Ensure that eyewash stations and safety showers are close to the workstation location.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering measures</td>
<td>Use with local exhaust ventilation. Prevent vapor buildup by providing adequate ventilation during and after use.</td>
</tr>
<tr>
<td>Eye protection</td>
<td>Do not wear contact lenses. Wear as appropriate: Safety glasses with side-shields If splashes are likely to occur, wear: Goggles or face shield, giving complete protection to eyes</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Solvent-resistant gloves</td>
</tr>
</tbody>
</table>
Gloves must be inspected prior to use. Replace when worn.

Skin and body protection: Wear as appropriate:
- Solvent-resistant apron
- Flame retardant antistatic protective clothing
If splashes are likely to occur, wear:
- Protective suit

Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment.
- For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
- Use NIOSH approved respiratory protection.

Hygiene measures: When using, do not eat, drink or smoke.
- Wash hands before breaks and immediately after handling the product.
- Keep working clothes separately.
- Remove and wash contaminated clothing before re-use.
- Do not swallow.
- Do not breathe vapours or spray mist.
- Avoid contact with skin, eyes and clothing.

### Exposure Guidelines

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>STEL: Short term exposure limit</td>
<td>(1,000 ppm)</td>
<td>2009</td>
<td>ACGIH:US. ACGIH Threshold Limit Values</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL: Recommended exposure limit (REL):</td>
<td>1,900 mg/m³ (1,000 ppm)</td>
<td>2005</td>
<td>NIOSH/GUIDE: US. NIOSH: Pocket Guide to Chemical Hazards</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

Reagent Alcohol Blends (BDH1158-4LP, BDH1158-19L, BDH1160-4LP, BDH1160-19L, BDH1162-4LP, BDH1162-19L, BDH1164-4LP, BDH1164-19L)

<table>
<thead>
<tr>
<th>Material</th>
<th>PEL: Permissible exposure limit</th>
<th>TWA: time weighted average</th>
<th>STEL: Short term exposure limit</th>
<th>TWA: time weighted average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td><strong>PEL</strong>: 1,900 mg/m3 (1,000 ppm)**</td>
<td><strong>TWA</strong>: 1,900 mg/m3 (1,000 ppm)</td>
<td><strong>STEL</strong>: (250 ppm)</td>
<td><strong>TWA</strong>: (200 ppm)</td>
</tr>
<tr>
<td></td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000)</td>
<td>ACGIHI: US. ACGIH Threshold Limit Values</td>
<td>ACGIHI: US. ACGIH Threshold Limit Values</td>
</tr>
<tr>
<td>Methanol</td>
<td><strong>PEL</strong>: 1,900 mg/m3 (1,000 ppm)**</td>
<td><strong>TWA</strong>: 1,900 mg/m3 (1,000 ppm)</td>
<td><strong>STEL</strong>: (250 ppm)</td>
<td><strong>TWA</strong>: (200 ppm)</td>
</tr>
<tr>
<td></td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000)</td>
<td>ACGIHI: US. ACGIH Threshold Limit Values</td>
<td>ACGIHI: US. ACGIH Threshold Limit Values</td>
</tr>
</tbody>
</table>
### STEL:
**Short term exposure limit**
- **Value:** 325 mg/m³ (250 ppm)
- **Source:** NIOSH/GUIDE: US. NIOSH: Pocket Guide to Chemical Hazards
- **Year:** 2005

### SKINDES:
**Skin designation:** Can be absorbed through the skin.
- **Source:** NIOSH/GUIDE: US. NIOSH: Pocket Guide to Chemical Hazards
- **Year:** 2005

### REL:
**Recommended exposure limit (REL):**
- **Value:** 260 mg/m³ (200 ppm)
- **Source:** NIOSH/GUIDE: US. NIOSH: Pocket Guide to Chemical Hazards
- **Year:** 2005

### PEL:
**Permissible exposure limit**
- **Value:** 260 mg/m³ (200 ppm)
- **Year:** 02 2006
- **Source:** OSHA_TRANS: US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

### SKIN_FINAL:
**Skin designation (Final Rule Limit applies):** Can be absorbed through the skin.
- **Year:** 1989
- **Source:** Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
### Reagent Alcohol Blends (BDH1158-4LP, BDH1158-19L, BDH1160-4LP, BDH1160-19L, BDH1162-4LP, BDH1162-19L, BDH1164-4LP, BDH1164-19L)

<table>
<thead>
<tr>
<th>Substance</th>
<th>STEL: Short term exposure limit</th>
<th>STEL Concentration (ppm)</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>325 mg/m³ (250 ppm)</td>
<td>1989</td>
<td>Z1A: US. OSHA Table Z-1-A (29 CFR 1910.1000)</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>STEL: Short term exposure limit</td>
<td>260 mg/m³ (200 ppm)</td>
<td>1989</td>
<td>Z1A: US. OSHA Table Z-1-A (29 CFR 1910.1000)</td>
</tr>
<tr>
<td></td>
<td>STEL: Short term exposure limit</td>
<td>(400 ppm)</td>
<td>2008</td>
<td>ACGIH: US. ACGIH Threshold Limit Values</td>
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<tr>
<td></td>
<td>TWA: Time weighted average</td>
<td>(200 ppm)</td>
<td>2008</td>
<td>ACGIH: US. ACGIH Threshold Limit Values</td>
</tr>
<tr>
<td></td>
<td>STEL: Short term exposure limit</td>
<td>1,225 mg/m³ (500 ppm)</td>
<td>2005</td>
<td>NIOSH/GUIDE: US. NIOSH Pocket Guide to Chemical Hazards</td>
</tr>
</tbody>
</table>
### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid, clear</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>mild alcohol-like</td>
</tr>
<tr>
<td>pH</td>
<td>Note: not applicable</td>
</tr>
</tbody>
</table>
Reagent Alcohol Blends (BDH1158-4LP, BDH1158-19L, BDH1160-4LP, BDH1160-19L, BDH1162-4LP, BDH1162-19L, BDH1164-4LP, BDH1164-19L)

Melting point/freezing point: -114.1 °C
  Note: The physical data is that of the main component.

Boiling point/boiling range: 78.32 °C
  Note: The physical data is that of the main component.

Flash point: 59 °F (15 °C)
  Method: closed cup
  Note: The physical data is that of the main component.

Evaporation rate: ca. 3
  Method: Compared to Butyl acetate.

Lower explosion limit: 3 %(V)
  Note: The physical data is that of the main component.

Upper explosion limit: 19 %(V)
  Note: The physical data is that of the main component.

Vapour pressure: 59.5 hPa
  at 20 °C(68 °F)
  Note: The physical data is that of the main component.

Vapour density: 1.6
  Note: (Air = 1.0), The physical data is that of the main component.

Density: 0.7890 g/cm³ at 20 °C
  0.7847 g/cm³ at 25 °C

Water solubility: Note: completely soluble
SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Heat, flames and sparks. Keep away from direct sunlight.

Materials to avoid : Strong oxidizing agents
Potassium superoxide
Bromine Pentafluoride
Acetyl bromide
Acetyl chloride
Platinum
Sodium

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO2)
Formaldehyde

Hazardous reactions : Hazardous polymerisation does not occur. Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: 7,060 mg/kg
Species: rat
Test substance: Ethanol

: LD50: 5,628 mg/kg
Species: rat
Test substance: Methanol

: LD50: 5,045 mg/kg
Species: rat
Test substance: Isopropanol
Acute inhalation toxicity
- LC50: 20000 ppm
  Exposure time: 10 h
  Species: rat
  Test substance: Ethanol
- LC50: 64000 ppm
  Exposure time: 4 h
  Species: rat
  Test substance: Methanol
- LC50: 16000 ppm
  Exposure time: 8 h
  Species: rat
  Test substance: Isopropanol

Acute dermal toxicity
- LD50: 15,800 mg/kg
  Species: rabbit
  Test substance: Methanol
- LD50: 12,800 mg/kg
  Species: rabbit
  Test substance: Isopropanol

Skin irritation
- Species: rabbit
  Result: irritating
  Exposure time: 24 h
  Test substance: Ethanol
- Species: rabbit
  Result: irritating
  Exposure time: 24 h
  Test substance: Methanol
- Species: rabbit
  Result: Mild skin irritation
  Test substance: Isopropanol

Eye irritation
- Species: rabbit
  Result: irritating
  Test substance: Ethanol
- Species: rabbit
Result: irritating
Test substance: Methanol

: Species: rabbit
Result: Severe eye irritation
Test substance: Isopropanol

Repeated dose toxicity
Methanol  : Species: rat
Application Route: Inhalation
Test substance: Methanol
Developmental Toxicity
NOAEL (maternal toxicity)
10,000 ppm
NOAEL (developmental toxicity)
5,000 ppm
Skeletal and visceral malformations.

Genotoxicity in vitro
Methanol  : Note: In vitro tests did not show mutagenic effects
Methanol  : Note: In vitro tests did not show mutagenic effects

Genotoxicity in vivo
Methanol  : Note: In vivo tests did not show mutagenic effects
Methanol  : Note: In vivo tests did not show mutagenic effects

Further information  : Note: Confirmed animal carcinogen with unknown relevance to humans.
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish

: LC0: 8,140 mg/l
  Exposure time: 48 h
  Species: Leuciscus idus (Golden orfe)
  Test substance: Ethanol

: flow-through test
  LC50: 12,900 mg/l
  Exposure time: 96 h
  Species: Oncorhynchus mykiss (rainbow trout)
  Test substance: Ethanol

: LC50: 14,200 mg/l
  Exposure time: 96 h
  Species: Pimephales promelas (fathead minnow)
  Test substance: Ethanol

: LC50: > 5,000 mg/l
  Exposure time: 24 h
  Species: Carassius auratus (goldfish)
  Test substance: Isopropanol

: LC50: 8,970 mg/l
  Exposure time: 48 h
  Species: Leuciscus idus (Golden orfe)
  Test substance: Isopropanol

: LC50: 10,400 mg/l
  Exposure time: 96 h
  Species: Pimephales promelas (fathead minnow)
  Test substance: Isopropanol

Toxicity to daphnia and other aquatic invertebrates.

: EC50: 9,268 mg/l
  Exposure time: 48 h
Species: Daphnia magna (Water flea)
Test substance: Ethanol

: EC50: 10,800 mg/l
Exposure time: 24 h
Species: Daphnia magna (Water flea)
Test substance: Ethanol

: LC50: 10,000 mg/l
Exposure time: 24 h
Species: Daphnia
Test substance: Methanol

: EC50: > 100 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Test substance: Isopropanol

Toxicity to algae

: LC0: 5,000 mg/l
Species: Scenedesmus quadricauda
Test substance: Ethanol

: LC50: > 2,000 mg/l
Exposure time: 72 h
Species: Desmodesmus subspicatus (green algae)
Test substance: Isopropanol

Toxicity to bacteria

: LC0: 6,500 mg/l
Species: Pseudomonas putida
Test substance: Ethanol

: EC50: 35,470 mg/l
Exposure time: 5 min
Species: Photobacterium phosphoreum
Test substance: Ethanol

: EC50: 34,634 mg/l
Exposure time: 30 min
Species: Photobacterium phosphoreum
Test substance: Ethanol

: EC50: 43,000 mg/l
Exposure time: 5 min
Species: Photobacterium phosphoreum
Test substance: Methanol

- EC50: 40,000 mg/l
- Exposure time: 15 min
- Species: Photobacterium phosphoreum
- Test substance: Methanol

- EC50: 39,000 mg/l
- Exposure time: 25 min
- Species: Photobacterium phosphoreum
- Test substance: Methanol

- EC50: 35,390 mg/l
- Exposure time: 5 min
- Species: Photobacterium phosphoreum
- Test substance: Isopropanol

Elimination information (persistence and degradability)

Biodegradability: Biochemical Oxygen Demand (BOD)
- Biochemical oxygen demand within 5 days
- Value: 58 %
- Test substance: Isopropanol

Further information on ecology

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods: Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT: UN/ID No.: UN 1987
Proper shipping name: ALCOHOLS, N.O.S. (Ethanol, Methanol, Isopropanol)
Class: 3
Packing group: II
Hazard Labels: 3
Material Safety Data Sheet

Reagent Alcohol Blends (BDH1158-4LP, BDH1158-19L, BDH1160-4LP, BDH1160-19L, BDH1162-4LP, BDH1162-19L, BDH1164-4LP, BDH1164-19L)

000000011701

Version 1  Revision Date 06/20/2012  Print Date 06/20/2012

<table>
<thead>
<tr>
<th>IATA</th>
<th>UN/ID No.</th>
<th>UN 1987</th>
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<tbody>
<tr>
<td>Description of the goods</td>
<td>ALCOHOLS, N.O.S.</td>
<td>(Ethanol, Methanol, Isopropanol)</td>
</tr>
<tr>
<td>Class</td>
<td>3</td>
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<tr>
<td>Packaging group</td>
<td>II</td>
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<tr>
<td>Hazard Labels</td>
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<tr>
<td>Packing instruction (cargo aircraft)</td>
<td>364</td>
<td></td>
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<tr>
<td>Packing instruction (passenger aircraft)</td>
<td>353</td>
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<tr>
<td>Packing instruction (passenger aircraft)</td>
<td>Y341</td>
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<table>
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<th>UN 1987</th>
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<td>(ETHANOL, METHANOL, ISOPROPANOL)</td>
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<td>Class</td>
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<td></td>
</tr>
<tr>
<td>EmS Number</td>
<td>F-E</td>
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</tr>
<tr>
<td>Marine pollutant</td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 15. REGULATORY INFORMATION

Inventories

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL list.

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. The Toxic : On the inventory, or in compliance with the inventory
Substances and Hazardous and Nuclear Waste Control Act

China. Inventory of Existing Chemical Substances: On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand: On the inventory, or in compliance with the inventory

National regulatory information

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:
- Methanol 67-56-1
- Isopropanol 67-63-0

SARA 311/312 Hazards: Fire Hazard
- Acute Health Hazard
- Chronic Health Hazard

CERCLA Reportable Quantity: 100000 lbs

California Prop. 65: WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
- Methanol 67-56-1

Massachusetts RTK: Ethanol 64-17-5
- Methanol 67-56-1
- Isopropanol 67-63-0
Material Safety Data Sheet

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000000011701

Version 1  Revision Date 06/20/2012  Print Date 06/20/2012

New Jersey RTK  :  Ethanol  64-17-5  
                 :  Water    7732-18-5  
                 :  Methanol 67-56-1  
                 :  Isopropanol 67-63-0

Pennsylvania RTK :  Ethanol  64-17-5  
                  :  Water    7732-18-5  
                  :  Methanol 67-56-1  
                  :  Isopropanol 67-63-0

WHMIS Classification :  B2: Flammable liquid 
                       :  D1B: Toxic Material Causing Immediate and Serious Toxic Effects 
                       :  D2A: Very Toxic Material Causing Other Toxic Effects 
                       :  D2B: Toxic Material Causing Other Toxic Effects 
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>HMIS III</th>
<th>NFPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard</td>
<td>2*</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
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<tr>
<td>Physical Hazard</td>
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<td></td>
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<tr>
<td>Instability</td>
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</tr>
</tbody>
</table>

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.
Reagent Alcohol Blends (BDH1158-4LP, BDH1158-19L, BDH1160-4LP, BDH1160-19L, BDH1162-4LP, BDH1162-19L, BDH1164-4LP, BDH1164-19L)

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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Prepared by: Honeywell Performance Materials and Technologies  Product Stewardship Group