

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

**SECTION 1. IDENTIFICATION**

Product name : 80/10/10 THF / Pyridine / Acetic Anhydride

Number : 000000011296

Product Use Description : Laboratory chemicals, Capping Reagent for DNA/RNA Synthesis

Manufacturer or supplier's details : Honeywell International Inc.  
1953 South Harvey Street  
Muskegon, MI 49442

For more information call : 1-800-368-0050  
+1-231-726-3171  
  
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**  
: **Transportation (CHEMTREC): 1-800-424-9300 or**  
: **+1-703-527-3887**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid, clear

Color : colourless

Odor : ether-like

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

**Classification of the substance or mixture**

Classification of the substance or mixture : Flammable liquids, Category 2  
Acute toxicity, Category 4, Oral  
Skin corrosion, Category 1B  
Serious eye damage, Category 1  
Carcinogenicity, Category 2  
Specific target organ toxicity - single exposure, Category 3,  
Respiratory system

**GHS Label elements, including precautionary statements**

Symbol(s)



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapour.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
May cause respiratory irritation.  
Suspected of causing cancer.

Precautionary statements

: **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.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Store locked up.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity**

|        |                                 |          |
|--------|---------------------------------|----------|
| ACGIH: | Tetrahydrofuran                 | 109-99-9 |
|        | A3: Confirmed animal carcinogen |          |
|        | Pyridine                        | 110-86-1 |
|        | A3: Confirmed animal carcinogen |          |

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical nature : Mixture

| Chemical name    | CAS-No.  | Concentration |
|------------------|----------|---------------|
| Tetrahydrofuran  | 109-99-9 | 80.00 %       |
| Acetic anhydride | 108-24-7 | 10.00 %       |
| Pyridine         | 110-86-1 | 10.00 %       |

**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 immediately.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Notes to physician**

Indication of immediate : Treat symptomatically.

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

medical attention and special treatment needed, if necessary

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
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 : Extremely 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/flashing back to vapor source.  
May form explosive peroxides.  
Reacts violently with water.  
In case of fire hazardous decomposition products may be produced such as:  
Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.  
Hydrogen cyanide (hydrocyanic acid)  
Ammonia
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : 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.

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

- Do not breathe vapours or spray mist.  
Do not get in eyes, on skin, or on clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains.  
Discharge into the environment must be avoided.  
Do not flush into surface water or sanitary sewer system.  
Do not allow run-off from fire fighting to enter drains or water courses.
- Methods and materials for containment and 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**

- Precautions for safe 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.  
Do not get in eyes, on skin, or on 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.

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

**Storage**

Conditions for safe storage, including any incompatibilities : Store in 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.  
Protect from exposure to air/oxygen (peroxide formation).  
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**

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures : Use with local exhaust ventilation.  
Prevent vapour buildup by providing adequate ventilation during and after use.

Eye protection : 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

Hand protection : Solvent-resistant gloves  
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

## 80/10/10 THF / Pyridine / Acetic Anhydride

### BR641-4X2.5L

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

- 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.  
Do not get in eyes, on skin, or on clothing.  
This material has an established AIHA ERPG exposure limit.  
The current list of ERPG exposure limits can be found at [http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook\\_table-only.pdf](http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook_table-only.pdf).

#### Exposure Guidelines

| Components      | CAS-No.  | Value                               | Control parameters                | Update | Basis                                  |
|-----------------|----------|-------------------------------------|-----------------------------------|--------|--|
| Tetrahydrofuran | 109-99-9 | SKIN_DES : Skin designation:        | Can be absorbed through the skin. | 2008   | ACGIH:US. ACGIH Threshold Limit Values |
| Tetrahydrofuran | 109-99-9 | TWA :<br>Time weighted average      | (50 ppm)                          | 2008   | ACGIH:US. ACGIH Threshold Limit Values |
| Tetrahydrofuran | 109-99-9 | STEL :<br>Short term exposure limit | (100 ppm)                         | 2008   | ACGIH:US. ACGIH Threshold Limit Values |



**80/10/10 THF / Pyridine / Acetic Anhydride**
**BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

|                  |          |   |                        |            |  |
|------------------|----------|---|------------------------|------------|--|
| Tetrahydrofuran  | 109-99-9 | REL :<br>Recomm<br>ended<br>exposure<br>limit<br>(REL): | 590 mg/m3<br>(200 ppm) | 2005       | NIOSH/GUIDE:US.<br>NIOSH: Pocket<br>Guide to Chemical<br>Hazards                         |
| Tetrahydrofuran  | 109-99-9 | STEL :<br>Short<br>term<br>exposure<br>limit            | 735 mg/m3<br>(250 ppm) | 2005       | NIOSH/GUIDE:US.<br>NIOSH: Pocket<br>Guide to Chemical<br>Hazards                         |
| Tetrahydrofuran  | 109-99-9 | PEL :<br>Permissi<br>ble<br>exposure<br>limit           | 590 mg/m3<br>(200 ppm) | 02<br>2006 | OSHA_TRANS:US.<br>OSHA Table Z-1<br>Limits for Air<br>Contaminants (29<br>CFR 1910.1000) |
| Tetrahydrofuran  | 109-99-9 | STEL :<br>Short<br>term<br>exposure<br>limit            | 735 mg/m3<br>(250 ppm) | 1989       | Z1A:US. OSHA<br>Table Z-1-A (29<br>CFR 1910.1000)  |
| Tetrahydrofuran  | 109-99-9 | TWA :<br>Time<br>weighted<br>average                    | 590 mg/m3<br>(200 ppm) | 1989       | Z1A:US. OSHA<br>Table Z-1-A (29<br>CFR 1910.1000)  |
| Acetic anhydride | 108-24-7 | TWA :<br>Time<br>weighted<br>average                    | (1 ppm)                | 12<br>2010 | ACGIH:US. ACGIH<br>Threshold Limit<br>Values   |
| Acetic anhydride | 108-24-7 | STEL :<br>Short<br>term<br>exposure<br>limit            | (3 ppm)                | 12<br>2010 | ACGIH:US. ACGIH<br>Threshold Limit<br>Values   |

## 80/10/10 THF / Pyridine / Acetic Anhydride

## BR641-4X2.5L

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

|                  |          |  |                     |            |  |
|------------------|----------|--|---------------------|------------|--|
| Acetic anhydride | 108-24-7 | Ceil_Tim<br>e : Ceiling<br>Limit<br>Value<br>and Time<br>Period (if<br>specified)<br>: | 20 mg/m3<br>(5 ppm) | 2005       | NIOSH/GUIDE:US.<br>NIOSH: Pocket<br>Guide to Chemical<br>Hazards                         |
| Acetic anhydride | 108-24-7 | PEL :<br>Permissi<br>ble<br>exposure<br>limit  | 20 mg/m3<br>(5 ppm) | 02<br>2006 | OSHA_TRANS:US.<br>OSHA Table Z-1<br>Limits for Air<br>Contaminants (29<br>CFR 1910.1000) |
| Acetic anhydride | 108-24-7 | Ceiling :<br>Ceiling<br>Limit<br>Value:  | 20 mg/m3<br>(5 ppm) | 1989       | Z1A:US. OSHA<br>Table Z-1-A (29<br>CFR 1910.1000)  |
| Pyridine         | 110-86-1 | TWA :<br>Time<br>weighted<br>average   | (1 ppm)             | 2008       | ACGIH:US. ACGIH<br>Threshold Limit<br>Values   |
| Pyridine         | 110-86-1 | REL :<br>Recomm<br>ended<br>exposure<br>limit<br>(REL):                                | 15 mg/m3<br>(5 ppm) | 2005       | NIOSH/GUIDE:US.<br>NIOSH: Pocket<br>Guide to Chemical<br>Hazards                         |
| Pyridine         | 110-86-1 | PEL :<br>Permissi<br>ble<br>exposure<br>limit  | 15 mg/m3<br>(5 ppm) | 02<br>2006 | OSHA_TRANS:US.<br>OSHA Table Z-1<br>Limits for Air<br>Contaminants (29<br>CFR 1910.1000) |

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

|          |          |                                      |                     |      |   |
|----------|----------|--------------------------------------|---------------------|------|---|
| Pyridine | 110-86-1 | TWA :<br>Time<br>weighted<br>average | 15 mg/m3<br>(5 ppm) | 1989 | Z1A:US. OSHA<br>Table Z-1-A (29<br>CFR 1910.1000) |
|----------|----------|--------------------------------------|---------------------|------|---|

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|                             |   |
|-----------------------------|---|
| Physical state              | : liquid, clear   |
| Color                       | : colourless  |
| Odor                        | : ether-like  |
| Odor threshold              | : Note: no data available   |
| pH                          | : Note: not determined  |
| Melting point/range         | : -108.5 °C<br>Note: The physical data is that of the main component. |
| Boiling point/boiling range | : 66 °C<br>Note: The physical data is that of the main component.     |
| Flash point                 | : 5 °F (-15 °C)<br>Method: closed cup                                 |
| Evaporation rate            | : Note: no data available   |
| Lower explosion limit       | : 2 %(V)  |
| Upper explosion limit       | : 11.8 %(V)   |
| Vapor pressure              | : 189 hPa   |

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

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

Vapor density : Note: no data available

Density : 0.888 g/cm<sup>3</sup> at 20 °C  
Note: The physical data is that of the main component.

Water solubility : Note: completely soluble

Partition coefficient:  
n-octanol/water : Note: no data available

Ignition temperature : 321 °C  
Method: The physical data is that of the main component.

Decomposition temperature : Note: no data available

Viscosity, dynamic : Note: no data available

Viscosity, kinematic : Note: no data available

**SECTION 10. STABILITY AND REACTIVITY**

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : Heat, flames and sparks.  
Keep away from direct sunlight.  
Protect from exposure to air/oxygen (peroxide formation).  
Protect against light.

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

|                                  |   |
|----------------------------------|---|
| Incompatible materials           | : Protect against water.<br>Strong oxidizing agents<br>Strong acids and strong bases<br>May form explosive peroxides.<br>May attack many plastics, rubbers and coatings.<br>Water<br>Alcohols<br>Boric Acid<br>Chloroformates<br>Amines<br>Acid chlorides<br>Fluorine |
| Hazardous decomposition products | : Peroxides<br>In case of fire hazardous decomposition products may be produced such as:<br>Carbon dioxide (CO <sub>2</sub> ), carbon monoxide (CO), oxides of nitrogen (NO <sub>x</sub> ), dense black smoke.<br>Hydrogen cyanide (hydrocyanic acid)<br>Ammonia      |

**SECTION 11. TOXICOLOGICAL INFORMATION**

|                           |   |
|---------------------------|---|
| Acute oral toxicity       | : Acute toxicity estimate: 1,349 mg/kg<br>Method: Calculation method                              |
| Acute inhalation toxicity | : Acute toxicity estimate: > 40 mg/l , vapour<br>Exposure time: 4 h<br>Method: Calculation method |
| Acute dermal toxicity     | : Acute toxicity estimate: > 5,000 mg/kg<br>Method: Calculation method                            |

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

## Skin irritation

Tetrahydrofuran : Species: Rabbit  
Result: Irritating to skin.

Acetic anhydride : Species: human  
Result: Corrosive

## Eye irritation

Tetrahydrofuran : Species: Rabbit  
Result: Irritating to eyes.

Acetic anhydride : Species: human  
Classification: Corrosive

Pyridine : Species: Rabbit  
Result: Irritating to eyes.

## Repeated dose toxicity

Acetic anhydride : Species: Rat  
Application Route: Inhalation  
Dose: Intermittent – 40 ppm or 167.2 mg/m<sup>3</sup>  
Exposure time: (2 Weeks)  
Respiratory disorders  
Lachrymation  
Shortness of breath  
Fatality

Species: Rat  
Application Route: Inhalation  
Exposure time: (13 Weeks)  
NOEL: 1 ppm  
Local effects  
Respiratory irritation

Species: Rat  
Application Route: Inhalation  
Exposure time: (13 Weeks)  
Systemic toxicity  
No systemic toxicity was observed at 20 ppm (the highest level tested).

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

## Genotoxicity in vitro

Acetic anhydride : Test Method: Ames test  
Result: negative

Pyridine : Test Method: Ames test  
Result: negative

: Test Method: Chromosome aberration test in vitro  
Cell type: Chinese Hamster Ovary Cells  
Result: negative

: Test Method: Cell Transformation Test  
Result: negative

## Genotoxicity in vivo

Acetic anhydride : Species: Rat  
Cell type: Micronucleus  
Application Route: Inhalation  
Result: negative

## Further information

Tetrahydrofuran : Note:  
Confirmed animal carcinogen with unknown relevance to humans.

Pyridine : Note:  
Confirmed animal carcinogen with unknown relevance to humans.

**SECTION 12. ECOLOGICAL INFORMATION**

Toxicity to fish

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

Tetrahydrofuran : LC50: 2,160 mg/l  
Exposure time: 96 h  
Species: Pimephales promelas (fathead minnow)

LC50: 2,820 mg/l  
Species: Leuciscus idus (Golden orfe)

Acetic anhydride : LC50: 265 mg/l  
Exposure time: 48 h  
Species: Leuciscus idus (Golden orfe)

Pyridine : flow-through test  
LC50: 99 mg/l  
Exposure time: 96 h  
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates  
Acetic anhydride : LC50: 55 mg/l  
Exposure time: 24 h  
Species: Daphnia magna (Water flea)

Pyridine : EC50: 320 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 202

Toxicity to bacteria  
Tetrahydrofuran : LC50: > 580 mg/l  
Exposure time: 16 h  
Species: Bacteria

**Further information on ecology**

Additional ecological information : Harmful to aquatic organisms.

**SECTION 13. DISPOSAL CONSIDERATIONS**

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



**80/10/10 THF / Pyridine / Acetic Anhydride**
**BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

regulations.

**SECTION 14. TRANSPORT INFORMATION**

|             |  |  |
|-------------|--|--|
| <b>DOT</b>  | UN/ID No.                                | : UN 2924  |
|             | Proper shipping name                     | : FLAMMABLE LIQUID, CORROSIVE, N.O.S.<br>(Tetrahydrofuran, Acetic anhydride, Pyridine) |
|             | Class                                    | : 3  |
|             | Packing group                            | : II   |
|             | Hazard Labels                            | : 3 (8)  |
| <b>IATA</b> | UN/ID No.                                | : UN 2924  |
|             | Description of the goods                 | : FLAMMABLE LIQUID, CORROSIVE, N.O.S.<br>(Tetrahydrofuran, Acetic anhydride, Pyridine) |
|             | Class                                    | : 3  |
|             | Packaging group                          | : II   |
|             | Hazard Labels                            | : 3 (8)  |
|             | Packing instruction (cargo aircraft)     | : 363  |
|             | Packing instruction (passenger aircraft) | : 352  |
|             | Packing instruction (passenger aircraft) | : Y340   |
| <b>IMDG</b> | UN/ID No.                                | : UN 2924  |
|             | Description of the goods                 | : FLAMMABLE LIQUID, CORROSIVE, N.O.S.<br>(TETRAHYDROFURAN, ACETIC ANHYDRIDE, PYRIDINE) |
|             | Class                                    | : 3  |
|             | Packaging group                          | : II   |
|             | Hazard Labels                            | : 3 (8)  |
|             | EmS Number                               | : F-E, S-C   |
|             | Marine pollutant                         | : no   |

**SECTION 15. REGULATORY INFORMATION**
**Inventories**

**80/10/10 THF / Pyridine / Acetic Anhydride**
**BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

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

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

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

TSCA 12B : US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

Tetrahydrofuran

109-99-9

**National regulatory information**

US. Drug Enforcement Administration (DEA) Listed Precursor and Essential Chemicals (21 CFR 1310) : On the United States Drug Enforcement Authority (DEA) List of Precursors and Essential Chemicals

**80/10/10 THF / Pyridine / Acetic Anhydride**
**BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

US. EPA CERCLA Hazardous Substances (40 CFR 302) : Acetic anhydride 108-24-7  
 : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 1000 lbs  
 : Tetrahydrofuran 109-99-9  
 : Pyridine 110-86-1  
 :  
 Reportable quantity: 5000 lbs  
 : Acetic anhydride 108-24-7

**SARA 302 Components** : 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:  
 : Pyridine 110-86-1

**SARA 311/312 Hazards** : Fire Hazard  
 Acute Health Hazard  
 Chronic Health Hazard  
 Reactivity Hazard

**CERCLA Reportable Quantity** : 1250 lbs

**California Prop. 65** :



**WARNING:** This product can expose you to chemicals, listed below, known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Pyridine 110-86-1

**Massachusetts RTK** : Acetic anhydride 108-24-7  
 : Tetrahydrofuran 109-99-9  
 : Pyridine 110-86-1

**New Jersey RTK** : Acetic anhydride 108-24-7

**80/10/10 THF / Pyridine / Acetic Anhydride****BR641-4X2.5L**

Version 1.5

Revision Date 08/16/2018

Print Date 10/17/2019

|                         |                    |          |
|-------------------------|--------------------|----------|
|                         | : Tetrahydrofuran  | 109-99-9 |
|                         | : Pyridine         | 110-86-1 |
| <b>Pennsylvania RTK</b> | : Acetic anhydride | 108-24-7 |
|                         | : Tetrahydrofuran  | 109-99-9 |
|                         | : Pyridine         | 110-86-1 |

**SECTION 16. OTHER INFORMATION**

|                 | <b>HMIS III</b> | <b>NFPA</b> |
|-----------------|-----------------|-------------|
| Health hazard   | : 3*            | 3           |
| Flammability    | : 3             | 3           |
| Physical Hazard | : 1             |             |
| Instability     | :               | 1           |

\* - 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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 09/28/2017

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group