SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT IDENTIFIER: HR, Multiple Black DC

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE
General use: Ink for industrial ink jet printers

PRODUCT COLOR: Black

Manufacturer/Supplier:
PANNIER CORPORATION
207 SANDUSKY STREET
PITTSBURGH, PA 15212-5823 U.S.A.

24 Hr Emergency Telephone Number: INFOTRAC 1-800-535-5053

SECTION 2 - HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to EC regulation 1272/2008 (CLP)

Flam. Liq. 2; H225 Highly flammable liquid and vapour.
Eye Dam. 1; H318 Causes serious eye damage.
STOT SE 3; H336 May cause drowsiness or dizziness.
Aquatic Chronic 3; H412 Harmful to aquatic life with long lasting effects.

Label elements

Labelling (CLP)

Signal word: Danger

Hazard statements:
H225 Highly flammable liquid and vapour.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Text for labelling: Contains: Propan-1-ol, Acetone and Butan-1-ol.

Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided. Inhaling can lead to irritations of the respiratory tract and mucous membrane. Higher doses may have a narcotic effect.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances: not applicable

Mixtures

Hazardous ingredients:
### Section 4 - First Aid Measures

**Description of first aid measures**

**General information:** Seek medical treatment in case of troubles.

**In case of inhalation:** Move victim to fresh air, put at rest and loosen restrictive clothing. If you feel unwell, seek medical advice.

**Following skin contact:** Remove residues with water. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

**After eye contact:** Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently seek the immediate attention of an ophthalmologist.

**After swallowing:** If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Immediately get medical attention.

**Most important symptoms and effects, both acute and delayed**

May cause drowsiness or dizziness. Causes serious eye damage. Inhalating can lead to irritations of the respiratory tract and mucous membrane. Higher doses may have a narcotic effect.

**Indication of any immediate medical attention and special treatment needed** Treat symptomatically

### Section 5 - Fire Fighting Measures

**Extinguishing media**

**Suitable extinguishing media:** Water fog, alcohol resistant foam, extinguishing powder, carbon dioxide.

**Extinguishing media which must not be used for safety reasons:** High power water jet

**Special hazards arising from the substance or mixture**

Highly flammable liquid and vapour. Liquid evaporates quickly.
With air, vapours form potentially explosive mixtures, which are heavier than air. Vapours may proceed on the ground over great distances and cause fire and backflashes. In case of fire may be liberated: Carbon black, Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

Advice for firefighters
Special protective equipment for firefighters:

- Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:
- Hazchem-Code: •3YE
- Do not expose to high temperature. Danger of bursting and explosion. Use fine water spray to cool endangered containers.
- Move undamaged containers from immediate hazard area if it can be done safely. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
- Do not allow fire water to penetrate into surface or ground water.
- Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6 - ACCIDENTAL RELEASE MEASURES
Personal precautions, protective equipment and emergency procedures

- Do not breathe vapours. Avoid contact with the substance.
- Eliminate all ignition sources if safe to do so. Provide adequate ventilation.
- Wear protective equipment. Keep unprotected people away.
- Cordon off downwind area at risk and warn inhabitants.

Environmental precautions

- Do not allow to enter into ground-water, surface water or drains. Danger of explosion!
- In case of release, notify competent authorities.

Methods and material for containment and cleaning up

- Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculite, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).
- Beware of reignition. Thoroughly clean surrounding area.
- In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out).

Additional information:
- Use explosion-proof equipment and non-sparking tools/utensils.

Reference to other sections

- Refer additionally to section 8 and 13.

SECTION 7 - HANDLING AND STORAGE
Precautions for safe handling

- Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe vapours.
- Avoid contact with skin and eyes. Wear protective equipment.
- Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.

Precautions against fire and explosion:

- Keep away from sources of ignition. - No smoking.
- Take precautionary measures against static discharges. Use only explosion-protected equipment/instruments. Do not weld. In partially filled containers explosive mixtures may form.
Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
- Keep container tightly closed and in a well-ventilated place.
- Keep container dry. Keep only in the original container.
- Protect from heat and direct sunlight.
- Store containers in upright position. Explosion protection required. Protect from frost.

Hints on joint storage:
- Do not store together with strong oxidizing agents or strong acids.
- Do not store together with combustible or self-igniting materials or any highly flammable solids. Keep away from food, drink and animal feedingstuffs.

Storage class:
3 = Flammable liquids

Specific end use(s)
No information available.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Designation</th>
<th>Type</th>
<th>Limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethanol</td>
<td>Great Britain: WEL-TWA</td>
<td>1920 mg/m³; 1000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ireland: 15 minutes</td>
<td>1000 ppm</td>
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<tr>
<td>71-23-8</td>
<td>Propan-1-ol</td>
<td>Great Britain: WEL-TEIR</td>
<td>625 mg/m³; 250 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Great Britain: WEL-TWA</td>
<td>500 mg/m³; 200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ireland: 8 hours</td>
<td>100 ppm</td>
</tr>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>Europe: IOELV: TWA</td>
<td>1210 mg/m³; 500 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Great Britain: WEL-TEIR</td>
<td>3620 mg/m³; 1500 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Great Britain: WEL-TWA</td>
<td>1210 mg/m³; 500 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ireland: 8 hours</td>
<td>1210 mg/m³; 500 ppm</td>
</tr>
<tr>
<td>71-36-3</td>
<td>Butan-1-ol</td>
<td>Great Britain: WEL-TEIR</td>
<td>154 mg/m³; 50 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ireland: 8 hours</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.

Personal protection equipment

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

In case of handling larger quantities: Wear flame-resistant antistatic protective clothing.

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Use only non-sparking tools. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.
Do not breathe vapour/aerosol. Avoid contact with skin and eyes.
Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use.
When using do not eat, drink or smoke.
Wash hands before breaks and after work. Safety shower and eye wash station should be easily accessible to the work area.

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance: Physical state at 20 °C and 101.3 kPa:</td>
<td>liquid Colour: black</td>
</tr>
<tr>
<td>Odour:</td>
<td>like alcohol</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>no data available</td>
</tr>
<tr>
<td>pH value:</td>
<td>no data available</td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>no data available</td>
</tr>
<tr>
<td>Flash point/flash point range:</td>
<td>12 °C (c.c.)</td>
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<tr>
<td>Flammability:</td>
<td>Highly flammable liquid and vapour.</td>
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<tr>
<td>Explosion limits:</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour density:</td>
<td>no data available</td>
</tr>
<tr>
<td>Density:</td>
<td>no data available</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>insoluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water:</td>
<td>no data available</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>no data available</td>
</tr>
<tr>
<td>Thermal decomposition:</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity, dynamic:</td>
<td>at 25 °C: 2.4 mPa*s</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>Product is not explosive. Vapours can form explosive mixtures with air.</td>
</tr>
<tr>
<td>Oxidizing characteristics:</td>
<td>not oxidizing</td>
</tr>
</tbody>
</table>

### SECTION 10 - STABILITY AND REACTIVITY

**Reactivity**
Highly flammable liquid and vapour.
Vapours can form explosive mixtures with air.

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Do not expose to high temperature. Danger of bursting and explosion.

**Conditions to avoid**
Keep away from heat sources, sparks and open flames. Protect against direct sunlight. Protect from frost.

**Incompatible materials**
Strong oxidizing agents, acids.

**Hazardous decomposition products**
In case of fire may be liberated: Carbon black, Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

Thermal decomposition: no data available
SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met. ATEmix (calculated): ATE > 5000 mg/kg.

Acute toxicity (dermal): Lack of data.
Acute toxicity (inhalative): Lack of data.
Skin corrosion/irritation: Lack of data.
Eye damage/irritation: Eye Dam. 1; H318 = Causes serious eye damage.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Lack of data.
Germ cell mutagenicity/Genotoxicity: Lack of data.
Carcinogenicity: Lack of data.
Reproductive toxicity: Lack of data.
Effects on or via lactation: Lack of data.
Specific target organ toxicity (single exposure): STOT SE 3; H336 = May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.

Other information:
Information about Ethanol:
Acute oral toxicity LD50 Rat: 7060 mg/kg
Acute inhalation toxicity LC50 Rat: 63000 ppm/4h
Acute dermal toxicity LDLo Rabbit: 20000 mg/kg

Information about Propan-1-ol:
Acute oral toxicity LD50 Rat: 3830 mg/kg
Acute inhalation toxicity LC50 Rat: > 9.7 mg/L/4h
Acute dermal toxicity LDLo Rabbit: > 10000 mg/kg

Information about Butan-1-ol:
Acute oral toxicity LD50 Rat: 1227 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity: Harmful to aquatic life with long lasting effects.

Information about Propan-1-ol:
Algae toxicity:
EC50 Pseudokirchneriella subcapitata (green algae): 9170 mg/L/48 d
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 3644 mg/L/48 h
EC50 Tetrahymena pyriformis: 4168 mg/L/48 h
Enhanced toxicity: Photobacterium phosphoreum: 17700 mg/L/5 min

Information about Ethanol:
Fish toxicity:
LC50 Pimephales promelas (fathead minnow): > 804 mg/L/96 h

Persistence and degradability

Further details:
Information about Propan-1-ol:
Biodegradation: 73 %/20 d.
Product is readily biodegradable.

Oxygen demand:
BOD: (Propan-1-ol) 1630 mgO2/L/5d
COD: (Propan-1-ol) 2300 mg/g


Bioaccumulative potential
Partition coefficient: n-octanol/water: no data available

Mobility in soil
no data available
Results of PBT and vPvB assessment
no data available

Other adverse effects
General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13 - DISPOSAL CONSIDERATIONS
Waste treatment methods
Product
Waste key number: 07 01 04* = Other organic solvents, washing liquids and mother liquors * = Evidence for disposal must be provided.
Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations. Do not dispose of with household waste.
Do not empty into drains.
Contaminated packaging
Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

SECTION 14 - TRANSPORT INFORMATION
UN number ADR/RID, IMDG, IATA-DGR: UN 1263
UN proper shipping name ADR/RID, IMDG, IATA-DGR: UN 1263, Paint
Transport hazard class(es) ADR/RID: Class 3, Code: F1
IMDG: Class 3, Subrisk -
IATA-DGR: Class 3
Packing group ADR/RID, IMDG, IATA-DGR: II
Environmental hazards Marine pollutant: No
Special precautions for user
Land transport (ADR/RID) Warning board: ADR/RID: Kemmler-number 33, UN number UN 1263
Hazard label: 3
Special provisions: 163 367 640D 650
Limited quantities: 5 L
EQ: E2
Contaminated packaging - Instructions: P001 - IBC02 - R001
Contaminated packaging - Special provisions: PP1
Special provisions for packing together: MP19
Portable tanks - Instructions: T4
Portable tanks - Special provisions: TP1 - TP8 - TP28
Tank coding: LGBF
Tunnel restriction code: D/E
Sea transport (IMDG) EmS: F-E, S-E
Special provisions: 163, 367
Limited quantities: 5 L
EQ: E2
Contaminated packaging - Instructions: P001
Contaminated packaging - Provisions: PP1
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP1, TP8, TP28
Stowage and handling: Category B.
Properties and observations: Miscibility with water depends upon the composition.
Segregation group: none
Air transport (IATA)

Hazard: Flamm. liquid
EQ: E2
Passenger Ltd. Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special Provisioning: A3 A72 A192
ERG: 3L
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
no data available

SECTION 15 - REGULATORY INFORMATION
Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain
Hazchem-Code: •3YE
No data available

National regulations - EC member states
Volatile organic compounds (VOC):
maximum 98 % by weight = 842.8 g/L

Labelling of packaging with <= 125mL content

Signal word: Danger

Hazard statements:
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:
P280 Wear protective gloves/protection clothing/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Chemical Safety Assessment For this mixture a chemical safety assessment is not required.

SECTION 16 - OTHER INFORMATION
Further information
Wording of the H-phrases under paragraph 2 and 3:
H225 = Highly flammable liquid and vapour.
H226 = Flammable liquid and vapour.
H302 = Harmful if swallowed.
H315 = Causes skin irritation.
H318 = Causes serious eye damage. H319 = Causes serious eye irritation.
H335 = May cause respiratory irritation.
H336 = May cause drowsiness or dizziness.
H411 = Toxic to aquatic life with long lasting effects.
H412 = Harmful to aquatic life with long lasting effects.
EUH066 = Repeated exposure may cause skin dryness or cracking.
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.