SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Item Number: HR, Multiple Black AP

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

General use: Ink for industrial ink jet printers

1.3 Details of the supplier of the safety data sheet

Company name: PANNIER CORPORATION
Street/POB-No.: 207 Sandusky Street
Postal Code, city: Pittsburgh, PA 15212
USA
WWW: www.pannier.com
E-mail: sales@pannier.com
Telephone: 412-232-4900

1.4 Emergency telephone number

Infotrac 24-Hour Emergency Response Number: 1-800-535-5053

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)
Flam. Liq. 2; H225 Highly flammable liquid and vapor.
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.

2.2 Label elements

Labelling (CLP)

Signal word: Danger

Hazard statements:
- H225 Highly flammable liquid and vapor. Causes serious eye damage.
- H318 May cause drowsiness or dizziness.
- H412 Harmful to aquatic life with long lasting effects.
SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No

HR, Multiple Black AP
Material number BLACKAP

Precautionary statements:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapors/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective 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.

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

2.3 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

3.2 Mixtures
Hazardous ingredients:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Designation</th>
<th>Content</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC No. 200-578-6</td>
<td>Ethanol</td>
<td>&lt; 65 %</td>
<td>Flam. Liq. 2; H225. Eye Irrit. 2; H319.</td>
</tr>
<tr>
<td>CAS 64-17-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. 200-746-9</td>
<td>Propan-1-ol</td>
<td>&lt; 25 %</td>
<td>Flam. Liq. 2; H225. Eye Dam. 1; H318. STOT SE 3; H336.</td>
</tr>
<tr>
<td>CAS 71-23-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. 403-720-7</td>
<td>Amines, C12-14-tert-alkyl, compounds with 1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenol 1-[[2-hydroxy-4(or 5)-nitrophenyl]azo]-2-naphthalenol chromium complex</td>
<td>&lt; 10 %</td>
<td>Aquatic Chronic 2; H411.</td>
</tr>
<tr>
<td>CAS 117527-94-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. 200-662-2</td>
<td>Acetone</td>
<td>&lt; 5 %</td>
<td>Flam. Liq. 2; H225. Eye Irrit. 2; H319. STOT SE 3; H336. (EUH066).</td>
</tr>
<tr>
<td>CAS 67-64-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. 200-751-6</td>
<td>Butan-1-ol</td>
<td>&lt; 3 %</td>
<td>Flam. Liq. 3; H226. Acute Tox. 4; H302. Skin Irrit. 2; H315. Eye Dam. 1; H318. STOT SE 3; H335, H336.</td>
</tr>
<tr>
<td>CAS 71-36-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 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. Call a physician or Poison Centre immediately.

4.2 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.

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

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media:
Water fog, alcohol resistant foam, foam, carbon dioxide.

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

5.2 Special hazards arising from the substance or mixture
Highly flammable liquid and vapor. Liquid evaporates quickly. With air, vapors form potentially explosive mixtures, which are heavier than air. Vapors may proceed on the ground over great distances and cause fire and back flashes. In case of fire may be liberated: Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

5.3 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

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapors. 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.
6.2 Environmental precautions

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

6.3 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.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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

7.2 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 feeding stuffs.

Storage class: 3 = Flammable liquids

7.3 Specific end use(s)

No information available.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits values:

<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>
</tr>
<tr>
<td>71-23-8</td>
<td>Propan-1-ol</td>
<td>Great Britain: WEL-STE L</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-STE L</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-STE L</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>

8.2 Exposure controls

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

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapors 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.

General protection and hygiene measures: Use only non-sparking tools. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Do not breathe vapor/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

9.1 Information on basic physical and chemical properties

Appearance: Physical state at 20 °C and 101.3 kPa: liquid
Color: black
Odor: like alcohol
Odor threshold: no data available
pH value: 4.9 - 6.9
Melting point/freezing point: no data available
Initial boiling point and boiling range: 75 °C
Flash point/flash point range: 16.5 °C (c.c.)
Evaporation rate: no data available
Flammability: Highly flammable liquid and vapor.
Explosion limits: no data available
Vapor pressure: no data available
Vapor density: no data available
Density: at 25 °C: 0.86 g/mL
Water solubility: insoluble
Partition coefficient: n-octanol/water: no data available
Auto-ignition temperature: no data available
Thermal decomposition: no data available
Viscosity, kinematic: no data available
Explosive properties: Vapors can form explosive mixtures with air. Product is not explosive.
Oxidizing characteristics: not oxidizing

9.2 Other information
Additional information: no data available

SECTION 10: Stability and reactivity

10.1 Reactivity
Highly flammable liquid and vapor.
Vapors can form explosive mixtures with air.

10.2 Chemical stability
Stable under recommended storage conditions.

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

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

10.5 Incompatible materials
Strong oxidizing agents, acids.

10.6 Hazardous decomposition products
In case of fire may be liberated: Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.
Thermal decomposition: no data available
11.1 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.

Sensitization to the respiratory tract: Lack of data.

Skin sensitization: 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

12.1 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

Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 3644 mg/L/48 h

EC50 Tetrahymena pyriformis: 4168 mg/L/48h

Fish toxicity:
LC50 Pimephales promelas (fathead minnow): 4480 - 4630 mg/L/96 h

Bacteria toxicity:
EC50 Photobacterium phosphoreum: 17700 mg/L/5 min

Information about Ethanol:

Fish toxicity:
LC50 Pimephales promelas (fathead minnow): > 804 mg/L/96 h
12.2. 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

Effects in sewage plants: Information about Propan-1-ol: EC50 Bacteria, in activated sludge: > 1000 mg/l (OECD 209)

Technically correct releases of minimal concentrations to adapted biological sewage treatment facility will not disturb the biodegradability of activated sludge. Do not allow to enter sewer prior to treatment. Dispose of in accordance with local, state, and federal regulations.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Waste key number: 07 01 04* = Other organic solvents, washing liquids and mother liquors
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

14.1 UN number
ADR/RID, IMDG, IATA-DGR:
1263

14.2 UN proper shipping name
ADR/RID, IMDG, IATA-DGR:
UN 1263, Paint
14.3 Transport hazard class(es)
ADR/RID: Class 3, Code: F1
IMDG: Class 3, Subrisk -
IATA-DGR: Class 3

14.4 Packing group
ADR/RID, IMDG, IATA-DGR:
II

14.5 Environmental hazards
Marine pollutant: No

14.6 Special precautions for user

Land transport (ADR/RID)
Warning board: ADR/RID: Kemmler-number 33, UN number 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

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No data available
SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No

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Material number BLACKAP

Revision date: 24/6/2015
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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain

Hazchem-Code: •3YE

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/protective 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.

15.2 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 vapor. H226
= Flammable liquid and vapor.
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.

Date of first version: 23/6/2015

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

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.