1 Identification

- Product identifier
- Trade name: Series 420
- Article number: Series 420

Application of the substance / the mixture: Printing inks

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
DECO TECHNOLOGY GROUP INC.
PRINTCOLOR SCREEN AG
TEL (714) 639-3326
FAX (714) 639-2261

Information department: Product safety department
Emergency telephone number: 800-535-5053

2 Hazard(s) Identification

Classification of the substance or mixture

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Label elements

GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS08

Signal word: Warning

Hazard-determining components of labeling:
titanium dioxide
Carbon black

Hazard statements
Suspected of causing cancer.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Wear protective gloves.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA ratings (scale 0 - 4)

Health = 0
Fire = 1
Reactivity = 0

(Contd. on page 2)
Trade name: Series 420

· HMIS-ratings (scale 0 - 4)
  · HEALTH  Health = 0
  · FIRE     Fire = 1
  · REACTIVITY Reactivity = 0

· Other hazards
  · Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures
· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:
<table>
<thead>
<tr>
<th>CAS</th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>titanium dioxide</td>
<td>10-25%</td>
</tr>
<tr>
<td>34590-94-8</td>
<td>Dipropylene glycol monomethyl ether</td>
<td>2.5-10%</td>
</tr>
<tr>
<td>112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>2.5-10%</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
<td>1-2.5%</td>
</tr>
</tbody>
</table>

4 First-aid measures

· Description of first aid measures
· General information: No special measures required.
· After inhalation: Seek medical treatment in case of complaints.
· After skin contact: Generally the product does not irritate the skin.
· After eye contact: Rinse opened eye for several minutes under running water.
· After swallowing: If symptoms persist consult doctor.
· Information for doctor:
  · Most important symptoms and effects, both acute and delayed
    No further relevant information available.
  · Indication of any immediate medical attention and special treatment needed
    No further relevant information available.

5 Fire-fighting measures

· Extinguishing media
· Suitable extinguishing agents:
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· Special hazards arising from the substance or mixture
  No further relevant information available.
· Advice for firefighters
· Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Not required.
· Environmental precautions: Dilute with plenty of water.
· Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:

- CAS: 13463-67-7 titanium dioxide 30 mg/m³
- CAS: 34590-94-8 Dipropylene glycol monomethyl ether 150 ppm
- CAS: 112-34-5 2-(2-butoxyethoxy)ethanol 30 ppm
- CAS: 1333-86-4 Carbon black 9 mg/m³
- CAS: 124-68-5 2-amino-2-methylpropanol 17 mg/m³
- CAS: 121-44-8 triethylamine 1 ppm
- CAS: 107-98-2 1-methoxy-2-propanol 100 ppm
- CAS: 111-76-2 2-butoxyethanol 60 ppm
- CAS: 122-99-6 2-Phenoxyethanol 1.5 ppm

PAC-2:

- CAS: 13463-67-7 titanium dioxide 330 mg/m³
- CAS: 34590-94-8 Dipropylene glycol monomethyl ether 1700 ppm
- CAS: 112-34-5 2-(2-butoxyethoxy)ethanol 33 ppm
- CAS: 1333-86-4 Carbon black 99 mg/m³
- CAS: 124-68-5 2-amino-2-methylpropanol 190 mg/m³
- CAS: 121-44-8 triethylamine 170 ppm
- CAS: 107-98-2 1-methoxy-2-propanol 160 ppm
- CAS: 111-76-2 2-butoxyethanol 120 ppm
- CAS: 122-99-6 2-Phenoxyethanol 16 ppm

PAC-3:

- CAS: 13463-67-7 titanium dioxide 2,000 mg/m³
- CAS: 34590-94-8 Dipropylene glycol monomethyl ether 9900 ppm
- CAS: 112-34-5 2-(2-butoxyethoxy)ethanol 200 ppm
- CAS: 1333-86-4 Carbon black 590 mg/m³
- CAS: 124-68-5 2-amino-2-methylpropanol 570 mg/m³
- CAS: 121-44-8 triethylamine 1,000 ppm
- CAS: 107-98-2 1-methoxy-2-propanol 660 ppm
- CAS: 111-76-2 2-butoxyethanol 700 ppm
- CAS: 122-99-6 2-Phenoxyethanol 97 ppm

Handling and storage

Handling:
- Precautions for safe handling
  Prevent formation of aerosols.
  No special measures required.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions: Protect from frost.
- Specific end use(s) No further relevant information available.
8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**
  - **Components with limit values that require monitoring at the workplace:**
    The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
    At this time, the remaining constituent has no known exposure limits.

<table>
<thead>
<tr>
<th>CAS: 34590-94-8 Dipropylene glycol monomethyl ether</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Skin</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 112-34-5 2-(2-butoxyethoxy)ethanol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td>*Inhalable fraction and vapor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 1333-86-4 Carbon black</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td>*0.1 in presence of PAHs; See Pocket Guide Apps.A+C</td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td>*inhalable fraction</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
  - **General protective and hygienic measures:**
    The usual precautionary measures for handling chemicals should be followed.
  - **Breathing equipment:** Not required.
  - **Protection of hands:** Not required.
  - **Material of gloves**
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - **Penetration time of glove material**
    The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
    Natural rubber, NR
  - **Eye protection:**
    Goggles recommended during refilling.
9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - **Form:** Fluid
    - **Color:** According to product specification
  - **Odor:** Characteristic
  - **Odor threshold:** Not determined.
- **pH-value at 20 °C (68 °F):** 8
- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** 100 °C (212 °F)
- **Flash point:** 101 °C (213.8 °F) (Abel Pensky)
- **Flammability (solid, gaseous):** Not applicable.
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)
- **Density:** Not determined.
  - **Relative density**
  - **Vapor density**
  - **Evaporation rate**
- **Solubility in / Miscibility with Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic:** Not determined.
  - **Kinematic:** Not determined.
  - **VOC content:** 40.7 %
    - 351.1 g/l / 2.93 lb/gal
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
  No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Irritating effect.
  - Sensitization: Sensitization possible through skin contact.
  - Additional toxicological information:
    The product shows the following dangers according to internally approved calculation methods for preparations:
    Irritant

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    CAS: 13463-67-7 titanium dioxide 2B
    CAS: 1333-86-4 Carbon black 2B
    CAS: 111-76-2 2-butoxyethanol 3
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - Ecotoxicological effects:
    - Remark: Harmful to fish
  - Additional ecological information:
  - General notes:
    Harmful to aquatic organisms
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.
Trade name: Series 420

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

### 14 Transport information

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th>Void</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>Void</td>
</tr>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>Void</td>
</tr>
<tr>
<td>DOT, ADR, ADN</td>
<td>Void</td>
</tr>
<tr>
<td>Class</td>
<td>Void</td>
</tr>
<tr>
<td>IMDG, IATA</td>
<td>Not restricted good</td>
</tr>
<tr>
<td>Class</td>
<td>Void</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>Void</td>
</tr>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>UN &quot;Model Regulation&quot;</strong></td>
<td>Void</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
  - **Section 355 (extremely hazardous substances):**
    None of the ingredient is listed.
  - **Section 313 (Specific toxic chemical listings):**
    - CAS: 112-34-5 2-(2-butoxyethoxy)ethanol
    - CAS: 121-44-8 triethylamine
    - CAS: 111-76-2 2-butoxyethanol
    - CAS: 122-99-6 2-Phenoxyethanol
  - **TSCA (Toxic Substances Control Act):**
    All ingredients are listed.
  - **Proposition 65**
  - **Chemicals known to cause cancer:**
    - CAS: 13463-67-7 titanium dioxide
    - CAS: 1333-86-4 Carbon black
  - **Chemicals known to cause reproductive toxicity for females:**
    None of the ingredients is listed.
  - **Chemicals known to cause reproductive toxicity for males:**
    None of the ingredients is listed.
48.0.4

- Chemicals known to cause developmental toxicity:
  None of the ingredients is listed.

- Cancerogenity categories

  - EPA (Environmental Protection Agency)
    CAS: 111-76-2 2-butoxyethanol

  - TLV (Threshold Limit Value established by ACGIH)
    CAS: 13463-67-7 titanium dioxide
    CAS: 1333-86-4 Carbon black
    CAS: 121-44-8 triethylamine
    CAS: 111-76-2 2-butoxyethanol

  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    CAS: 13463-67-7 titanium dioxide
    CAS: 1333-86-4 Carbon black

- GHS label elements
  The product is classified and labeled according to the Globally Harmonized System (GHS).

  - Hazard pictograms

    GHS08

  - Signal word Warning

  - Hazard-determining components of labeling:
    titanium dioxide
    Carbon black

  - Hazard statements
    Suspected of causing cancer.

  - Precautionary statements
    Obtain special instructions before use.
    Do not handle until all safety precautions have been read and understood.
    Wear protective gloves.
    IF exposed or concerned: Get medical advice/attention.
    Store locked up.
    Dispose of contents/container in accordance with local/regional/national/international regulations.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Product safety department
- Contact: hse@printcolor.ch
- Date of preparation / last revision 01/08/2019 / 2

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)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
Trade name: Series 420

HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Carc. 2: Carcinogenicity – Category 2