SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier:
Product Name : COBALT BIS (2-ETHYLHEXANOATE) IN PRINTING INK SOLVENT
Trade Name : COMMET: Co 10 PKWF

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Intended Use : Ink Additive

1.3 Details of Supplier of the safety data sheet:
Manufacturer & supplier
COMAR Chemicals (Pty) Ltd
Neil Hare Road
Atlantis Industrial
Cape Town
South Africa
Tel : (+27) 21 577-1333
Fax : (+27) 21 577-1343
e-mail: info@comarchem.co.za
www.comarchem.com

1.4 Emergency Telephone number:
Emergency number +27-827740071 / +27 21 5771333/ +27 825774766

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Classification : Acute Tox. 4, H302
Skin Sens. 1, H317
Asp. Tox. 1, H304
Aquatic Chronic 2, H319

Human health hazards : Maybe fatal if swallowed and enters airways. Irritating to skin.

2.2 Label Elements
Hazard pictograms :

GHS08
GHS07

Signal Word : Danger
Hazard Statements : H302 – Acute Tox. 4
H317 – Skin Sens 1
H319 – Eye Irrit. 2
H335 – Stot SE 3
H304 – Asp. Tox 1
Precautionary statements

**Prevention**
- P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
- P240: Ground/bond container and receiving equipment
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P243: Take precautionary measures against static discharge.
- P273: Avoid release to the environment.

**Response**
- P301+PP310: IF SWALLOWED: Immediately call a POISON CENTRE or physician.
- P331: Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

**Storage**
- P403+P235: Store in a well ventilated place. Keep cool.

**Disposal**
- P501: Dispose of contents and container in accordance with all local, regional, national and international regulations.

### 2.3 Other Hazards

Other hazards which do not result in classification : None known

#### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

**Product definition (REACH)** : Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt bis (2-ethylhexanoate)</td>
<td>(CAS No) 136-62-7 (EC no) 205-250-6</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Printing Ink Distillates</td>
<td>EINECS: 2651131CAS: 64742-13-8</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Glycol Ether</td>
<td>(CAS No) 111-76-2 (EC No) 203-905-0</td>
<td>1-5</td>
<td></td>
</tr>
</tbody>
</table>

See Section 16 for the full text of the H-phrases declared above.

Occasional exposure limits, if available, are listed in Section 8.
SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid measures

After Inhalation: Keep victim calm and remove to fresh air if safe to do so. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

After skin contact: Remove clothing and wash affected areas thoroughly with water and soap.

After eye contact: Rinse thoroughly with water until irritation stops. If irritation continues, consult a Doctor.

After Ingestion: If swallowed, do NOT induce vomiting. Transport to nearest medical facility for additional treatment.

4.2 Most important symptoms & effects, both acute & delayed
See Section 11 for more detailed information on health effects and symptoms

4.3 Indication of any immediate medical attention and special treatment needed
See Section 11 for more detailed information on health effects and symptoms

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media: Powder, foam, sand, or CO₂

Un-suitable extinguishing media: Do not use water-jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion product: Decomposition may include the following products: Metal oxides and Carbon oxides.

5.3 Advice for fire-fighters

Special precautions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk.

Special Protection Equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Remove sources of ignition.
Ground containers.
Ensure sufficient ventilation, or provide respiratory protection.
Protect eyes and skin.

6.2 Environmental precautions
Inform relevant local authorities.
Inform inhabitants of areas that will be affected of possible fire / explosion.

6.3 Methods and materials for containment and clean-up
Do not allow ingress into ground or surface water, or drainage systems.
Fill into containers and dispose at toxic waste disposal sites.
Local regulations must be observed.

6.4 Reference to other Sections
Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
COMMET Co-10 PKWF
Safety Data Sheet
according to Regulation (EU) 2015/830
Revision date: 23/05/2018

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Precautions for safe handling: Do not smoke. Remove sources of ignition. Avoid contact with skin, eyes and clothing. Handle material in adequately ventilated areas. Ensure proper use of recommended safety apparel. Do not use compressed air or compressed oxygen for transfer of product. Partially used drums must be securely closed after use.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry and ventilated area. Keep away from incompatible materials such as oxidising agents. Ensure material is kept in a closed container. Keep away from ignition sources.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Components with limit values that require monitoring at the workplace:
Relevant exposure limits are:

**Cobalt (Dust and Fumes):**
ACGIH (America)
TLV: 0.02 mg/m³ (TWA)
End of Shift: 15µg/l – urine
1µg/l – blood
OSHA PEL: 0.1 mg/m³ (TWA)
SAIOH (South Africa)
Occupational Exposure Limit – recommended limit 0.1 mg/m³

**Distillates (Petroleum)**
TWA: 200 ppm, 1963 mg/m³

**Glycol Ether:**
ACGIH (America)
TLV-TWA: 20 ppm (8 hours)
OSHA PEL Z1: 240 mg/m³

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
5.2 Exposure Controls

Hand protection : Approved Dust Respirator recommended.
Eye protection : Full-cover goggles recommended
Skin protection : PVC/rubber gloves (impervious)

Hygiene measures : Keep away from food. Wash hands thoroughly with water and soap before breaks and at the end of a work day. Provide separate storage of work clothes and private clothes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear Liquid</td>
</tr>
<tr>
<td>Physical state</td>
<td>Clear Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Blue/Violet</td>
</tr>
<tr>
<td>Odour</td>
<td>Hydrocarbon smell</td>
</tr>
</tbody>
</table>

Important health, safety and environmental information:

- Boiling Point : >260 °C
- pH : not measurable
- Flash Point : >110 °C (as per ASTM D93)
- Solidification Temperature : <-20 °C
- Density : 980 kg/m³ (as per ASTM D 1298)

SOLVENT

- Boiling Point/Range : >260-290 °C
- Solubility : soluble in organic solvents such as white spirits, xylol, alcohol, glycol

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
The product is stable under normal conditions.

10.2 Chemical stability
The product is stable under normal conditions.

10.3 Possibility of hazardous reactions
Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible materials
Avoid strong oxidisers, inorganic acids, organic peroxides

10.6 Hazardous decomposition products
Metal oxides and carbon oxides. At pyrolysis temperature in excess of 1000 °C possible formation of metal oxides, CO, CO₂, and vapours of acid decomposition.
SECTION 11: TOXICOLOGICAL INFORMATION

Cobalt

<table>
<thead>
<tr>
<th>Product name / ingredient</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt</td>
<td>LD50</td>
<td>*Rat</td>
<td>6.17 g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- IARC status: 2B – possible carcinogen
- Exposure routes by inhalation or skin: May cause both dermal and respiratory sensitization.
- No data available for reproductive toxicity

Distillates (Petroleum): Practically non-toxic

Glycol Ether: (Rabbits) LD50: > 220mg/kg for acute dermal toxicity

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity
No data available.

12.2 Persistence and degradability:
No data available.

12.3 Mobility
No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Methods of disposal: Examine possibilities for re-utilisation. Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. Do not dispose into the environment, in drains or in water courses. Waste material should not be allowed to contaminate soil or water.

Packaging
Methods of disposal: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

LAND & INLAND WATERWAYS (ADR/RID)
- This product is not regulated for road or rail transport

INLAND WATERWAYS (ADNR)
- This product is not regulated for road or rail transport

SEA (IMDG)
- This product is not regulated for sea transport

AIR (IATA)
- This product is not regulated for air transport
SECTION 15: REGULATORY INFORMATION

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

<table>
<thead>
<tr>
<th>EC Symbol</th>
<th>Full Text of abbreviated H statements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H302: Harmful if swallowed</td>
</tr>
<tr>
<td></td>
<td>H317: May cause allergic skin reaction</td>
</tr>
<tr>
<td></td>
<td>H319: Causes serious eye irritation</td>
</tr>
<tr>
<td></td>
<td>H335: May cause respiratory irritation</td>
</tr>
<tr>
<td></td>
<td>H304: May be fatal if swallowed and enters airways</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE</td>
<td>Acute toxicity estimate</td>
</tr>
<tr>
<td>CLP</td>
<td>Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No Effect level</td>
</tr>
<tr>
<td>EUH statement</td>
<td>CLP-specific Hazard statement</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bio-accumulative and Toxic</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No Effect Concentration</td>
</tr>
<tr>
<td>RRN</td>
<td>REACH Registration number</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bio-accumulative</td>
</tr>
</tbody>
</table>

Full Text of abbreviated H statements

<table>
<thead>
<tr>
<th>H Statement</th>
<th>Description</th>
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DATE OF PREVIOUS VERSION: 01/10/2012

REVISION REASON: GHS Format

The information and recommendations contained herein are believed to be accurate and reliable at the time of issue. It is however the user’s responsibility to satisfy itself that the product is suitable for the intended use. No warranties, either implied or expressed, shall be extended as to the accuracy or completeness of the information contained herein, and we assume no responsibility regarding the suitability of the information for the user’s intended purposes or for the consequences of its use.