

# Oil ball- pen ink

Project number: **WUXH000377702**

Version No:1.1  
Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

Issue Date:05/07/2018  
S.REACH.DEU.EN

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

### 1.1. Product Identifier

Product name	Oil ball- pen ink
Synonyms	Not Available
Other means of identification	Not Available

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

Relevant identified uses	For writing
Uses advised against	Not Applicable

### 1.3. Details of the supplier of the safety data sheet

Registered company name	Neon Orient (Shanghai) Co., Ltd.
Address	Room 516 – 518, No. 583, Lingling Road. (Offshore Oil Mansion) Shanghai 200030, P.R. China
Telephone	+(86) 21-64640878
Fax	
Emergency telephone	
Email	
Importer name	
Address	
Telephone	
Email	

### 1.4. Emergency telephone number


Association / Organisation	
Emergency telephone numbers	
Other emergency telephone numbers	-

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP]	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2
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### 2.2. Label elements

CLP label elements	
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SIGNAL WORD	<b>WARNING</b>
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### Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation

### Supplementary statement(s)

Not Applicable

### Precautionary statement(s) Prevention

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P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

## Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

## Precautionary statement(s) Storage

Not Applicable

## Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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## 2.3. Other hazards

Inhalation may produce health damage\*.

Cumulative effects may result following exposure\*.

May produce skin discomfort\*.

Repeated exposure potentially causes skin dryness and cracking\*.

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

## 3.1.Substances

See 'Composition on ingredients' in Section 3.2

## 3.2.Mixtures

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP]
1.122-99-6 2.204-589-7 3.603-098-00-9 4.Not Available	25	<u>ethylene glycol phenyl ether</u>	Acute Toxicity (Oral) Category 4, Eye Irritation Category 2; H302, H319
1.100-51-6 2.202-859-9 3.603-057-00-5 4.Not Available	15	<u>benzyl alcohol</u>	Acute Toxicity (Inhalation) Category 4, Acute Toxicity (Oral) Category 4; H332, H302
1.147-14-8 2.205-685-1 3.Not Available 4.Not Available	15	<u>BX</u>	Not Applicable
1.1328-51-4 2.215-523-1 3.Not Available 4.Not Available	15	<u>C.I. Solvent Blue 38</u>	Not Applicable
1.4254-14-2 2.Not Available 3.Not Available 4.Not Available	10	<u>R-(-)-propylene glycol</u>	Not Applicable
1.25054-06-2 2.Not Available 3.Not Available 4.Not Available	10	<u>keton resin</u>	Not Applicable
1.66070-88-0 2.Not Available 3.Not Available 4.Not Available	5	<u>castor oil/ phthalic anhydride/ glycerol alkyd resin</u>	Not Applicable

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1.102-71-6 2.203-049-8 3.Not Available 4.Not Available	4	<u>triethanolamine</u>	Not Applicable
1.90506-69-7 2.291-933-4 3.Not Available 4.Not Available	1	<u>phosphoric acid ester</u>	Skin Corrosion/Irritation Category 1B; H314

## SECTION 4 FIRST AID MEASURES

## 4.1. Description of first aid measures

General	<ul style="list-style-type: none"> <li>▶ <b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b></li> <li>▶ For advice, contact a Poisons Information Centre or a doctor.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.</li> <li>▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.</li> </ul> <p><b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b></p> <ul style="list-style-type: none"> <li>▶ <b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b>. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> </ul> <p><b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.</p> <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul> <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul> <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
Inhalation	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>
Ingestion	<ul style="list-style-type: none"> <li>▶ <b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b></li> <li>▶ For advice, contact a Poisons Information Centre or a doctor.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.</li> <li>▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.</li> </ul> <p><b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b></p> <ul style="list-style-type: none"> <li>▶ <b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b>. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> </ul> <p><b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.</p>

## 4.2 Most important symptoms and effects, both acute and delayed

See Section 11

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

Treat symptomatically.  
for copper intoxication:

- ▶ Unless extensive vomiting has occurred empty the stomach by lavage with water, milk, sodium bicarbonate solution or a 0.1% solution of potassium ferrocyanide (the resulting copper

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- ▶ ferrocyanide is insoluble).
- ▶ Administer egg white and other demulcents.
- ▶ Maintain electrolyte and fluid balances.
- ▶ Morphine or meperidine (Demerol) may be necessary for control of pain.
- ▶ If symptoms persist or intensify (especially circulatory collapse or cerebral disturbances, try BAL intramuscularly or penicillamine in accordance with the supplier's recommendations.
- ▶ Treat shock vigorously with blood transfusions and perhaps vasopressor amines.
- ▶ If intravascular haemolysis becomes evident protect the kidneys by maintaining a diuresis with mannitol and perhaps by alkalising the urine with sodium bicarbonate.
- ▶ It is unlikely that methylene blue would be effective against the occasional methaemoglobinemia and it might exacerbate the subsequent haemolytic episode.
- ▶ Institute measures for impending renal and hepatic failure.

[GOSSELIN, SMITH & HODGE: Commercial Toxicology of Commercial Products]

- ▶ A role for activated charcoal or emesis is, as yet, unproven.
- ▶ In severe poisoning CaNa<sub>2</sub>EDTA has been proposed.

[ELLENHORN & BARCELOUX: Medical Toxicology]

Clinical experience of benzyl alcohol poisoning is generally confined to premature neonates in receipt of preserved intravenous salines.

- ▶ Metabolic acidosis, bradycardia, skin breakdown, hypotonia, hepatorenal failure, hypotension and cardiovascular collapse are characteristic.
- ▶ High urine benzoate and hippuric acid as well as elevated serum benzoic acid levels are found.
- ▶ The so-called 'gaspings syndrome' describes the progressive neurological deterioration of poisoned neonates.
- ▶ Management is essentially supportive.

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### 5.2. Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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### 5.3. Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Slight fire hazard when exposed to heat or flame.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▶ On combustion, may emit toxic fumes of carbon monoxide (CO).</li> </ul> <p>Combustion products include; carbon dioxide (CO<sub>2</sub>), aldehydes, nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>) other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes. <b>WARNING:</b> Long standing in contact with air and light may result in the formation of potentially explosive peroxides.</p>

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

### 6.2. Environmental precautions

See section 12

### 6.3. Methods and material for containment and cleaning up

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Remove all ignition sources.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> </ul>
<b>Major Spills</b>	<p>Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>

### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

<b>Safe handling</b>	<p>The tendency of many ethers to form explosive peroxides is well documented. Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT concentrate by evaporation, or evaporate extracts to dryness, as residues may contain explosive peroxides with DETONATION potential.</b></li> <li>▶ Any static discharge is also a source of hazard.</li> <li>▶ Before any distillation process remove trace peroxides by shaking with excess 5% aqueous ferrous sulfate solution or by percolation through a column of activated alumina.</li> </ul> <p>The substance accumulates peroxides which may become hazardous only if it evaporates or is distilled or otherwise treated to concentrate the peroxides. The substance may concentrate around the container opening for example.</p> <p>Purchases of peroxidisable chemicals should be restricted to ensure that the chemical is used completely before it can become peroxidised.</p> <ul style="list-style-type: none"> <li>▶ A responsible person should maintain an inventory of peroxidisable chemicals or annotate the general chemical inventory to indicate which chemicals are</li> </ul>
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	<ul style="list-style-type: none"> <li>▶ subject to peroxidation.</li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> </ul>
<b>Fire and explosion protection</b>	See section 5
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> </ul>

## 7.2. Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Polythene drum.</li> <li>▶ Packaging as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	<p>Benzyl alcohol:</p> <ul style="list-style-type: none"> <li>▶ may froth in contact with water</li> <li>▶ slowly oxidises in air, oxygen forming benzaldehyde</li> <li>▶ is incompatible with mineral acids, caustics, aliphatic amines, isocyanates</li> <li>▶ reacts violently with strong oxidisers, and explosively with sulfuric acid at elevated temperatures</li> <li>▶ corrodes aluminium at high temperatures</li> <li>▶ is incompatible with aluminium, iron, steel</li> <li>▶ attacks some nonfluorinated plastics; may attack, extract and dissolve polypropylene</li> </ul> <p>Benzyl alcohol contaminated with 1.4% hydrogen bromide and 1.2% of dissolved iron(II) polymerises exothermically above 100 deg. C.</p> <ul style="list-style-type: none"> <li>▶ Glycol ethers may form peroxides under certain conditions; the potential for peroxide formation is enhanced when these substances are used in processes such as distillation where they are concentrated or even evaporated to near-dryness or dryness; storage under a nitrogen atmosphere is recommended to minimise the possible formation of highly reactive peroxides</li> <li>▶ Nitrogen blanketing is recommended if transported in containers at temperatures within 15 deg C of the flash-point and at or above the flash-point - large containers may first need to be purged and inerted with nitrogen prior to loading</li> <li>▶ In the presence of strong bases or the salts of strong bases, at elevated temperatures, the potential exists for runaway reactions.</li> <li>▶ Contact with aluminium should be avoided; release of hydrogen gas may result- glycol ethers will corrode scratched aluminium surfaces.</li> <li>▶ May discolour in mild steel/ copper; lined containers, glass or stainless steel is preferred</li> <li>▶ Glycols and their ethers undergo violent decomposition in contact with 70% perchloric acid. This seems likely to involve formation of the glycol perchlorate esters (after scission of ethers) which are explosive, those of ethylene glycol and 3-chloro-1,2-propanediol being more powerful than glyceryl nitrate, and the former so sensitive that it explodes on addition of water .</li> <li>▶ Avoid strong bases.</li> <li>▶ Avoid reaction with oxidising agents</li> </ul>

## 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## 8.1. Control parameters

## DERIVED NO EFFECT LEVEL (DNEL)

Not Available

## PREDICTED NO EFFECT LEVEL (PNEC)

Not Available

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Germany Recommended Exposure Limits - MAK Values (English)	ethylene glycol phenyl ether	2-Phenoxyethanol	110 mg/m3 / 20 ppm	l (2) ppm	Not Available	Not Available
Germany TRGS 900 - Limit Values for the Workplace Atmosphere (German)	ethylene glycol phenyl ether	2-Phenoxyethanol	110 mg/m3 / 20 ppm	Not Available	Not Available	Not Available
Germany Recommended Exposure Limits - Substances for which no MAK value can be established at present	benzyl alcohol	Benzyl alcohol	Not Available	Not Available	Not Available	Not Available
Germany Recommended Exposure Limits - MAK Values (English)	triethanolamine	Triethanolamine	5 mg/m3	l(4) ppm	Not Available	Not Available

## EMERGENCY LIMITS


Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ethylene glycol phenyl ether	Phenoxyethanol, 2-; (Phenyl cellosolve)	20 ppm	20 ppm	44 ppm
benzyl alcohol	Benzyl alcohol	30 ppm	49 ppm	49 ppm

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triethanolamine	Triethanolamine; (Trihydroxytriethylamine)	15 mg/m3	51 mg/m3	1100 mg/m3
<b>Ingredient</b>	<b>Original IDLH</b>	<b>Revised IDLH</b>		
All ingredients	Not Available	Not Available		

## 8.2. Exposure controls

<b>8.2.1. Appropriate engineering controls</b>	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment.</p>
<b>8.2.2. Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical 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.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Suitability and durability of glove type is dependent on usage.</p>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>
<b>Thermal hazards</b>	Not Available

## Respiratory protection

Type ABK-P Filter of sufficient capacity, (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

## 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Blue Liquid		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	Not Available
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<b>Molecular weight (g/mol)</b>	Not Available
<b>Flash point (°C)</b>	Not Available	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Flammable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Not Available	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	Not Available

## 9.2. Other information

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Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>10.1.Reactivity</b>	See section 7.2
<b>10.2.Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>10.3. Possibility of hazardous reactions</b>	See section 7.2
<b>10.4. Conditions to avoid</b>	See section 7.2
<b>10.5. Incompatible materials</b>	See section 7.2
<b>10.6. Hazardous decomposition products</b>	See section 5.3

## SECTION 11 TOXICOLOGICAL INFORMATION

## 11.1. Information on toxicological effects

<b>Inhaled</b>	<p>The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>Copper poisoning following exposure to copper dusts and fume may result in headache, cold sweat and weak pulse. Capillary, kidney, liver and brain damage are the longer term manifestations of such poisoning. Inhalation of freshly formed metal oxide particles sized below 1.5 microns and generally between 0.02 to 0.05 microns may result in 'metal fume fever'. Symptoms may be delayed for up to 12 hours and begin with the sudden onset of thirst, and a sweet, metallic or foul taste in the mouth.</p> <p>Inhalation of benzyl alcohol may affect breathing (causing depression and paralysis of breathing and lower blood pressure).</p>				
<b>Ingestion</b>	<p>Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>Ingestion of propylene glycol produced reversible central nervous system depression in humans following ingestion of 60 ml. Symptoms included increased heart-rate (tachycardia), excessive sweating (diaphoresis) and grand mal seizures in a 15 month child who ingested large doses (7.5 ml/day for 8 days) as an ingredient of vitamin preparation.</p> <p>Excessive repeated ingestions may cause hypoglycaemia (low levels of glucose in the blood stream) among susceptible individuals; this may result in muscular weakness, incoordination and mental confusion.</p> <p>Very high doses given during feeding studies to rats and dogs produce central nervous system depression (although one-third of that produced by ethanol), haemolysis and insignificant kidney changes.</p> <p>A metallic taste, nausea, vomiting and burning feeling in the upper stomach region occur after ingestion of copper and its derivatives. The vomitus is usually green/blue and discolours contaminated skin.</p> <p>Ingestion of large doses of benzyl alcohol may cause abdominal pain, nausea, vomiting, diarrhea. It may affect behavior/central nervous system and cause headache, somnolence, excitement, dizziness, ataxia, coma, convulsions, and other symptoms of central nervous system depression.</p> <p>Exposure to excessive amounts of benzyl alcohol has been associated with toxicity (hypotension, metabolic acidosis), particularly in neonates, and an increased incidence of kernicterus (a neurological condition that occurs in severe jaundice), particularly in small preterm infants. There have been rare reports of deaths, primarily in preterm infants, associated with exposure to excessive amounts of benzyl alcohol.</p>				
<b>Skin Contact</b>	<p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.</p> <p>Toxic effects may result from skin absorption</p> <p>Exposure to copper, by skin, has come from its use in pigments, ointments, ornaments, jewellery, dental amalgams and IUDs (intra-uterine devices), and in killing fungi and algae. Although copper is used in the treatment of water in swimming pools and reservoirs, there are no reports of toxicity from these applications.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>				
<b>Eye</b>	<p>This material can cause eye irritation and damage in some persons.</p> <p>Copper salts, in contact with the eye, may produce inflammation of the conjunctiva, or even ulceration and cloudiness of the cornea.</p>				
<b>Chronic</b>	<p>There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.</p> <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>Because of similarities in structure to thalidomide, concerns have been raised about the potential teratogenicity of all phthalimides (the basic building block of phthalocyanine). Animal studies, in part, appear to support this proposition.</p> <p>The phthalimide fungicides are typically teratogens. Captan, for example, is teratogenic, foetotoxic, and/or embryotoxic in a variety of rodent species and has caused stillbirths in dogs.</p> <p>Reactions to benzoic acid have been reported. It may worsen asthma, skin rash or skin disease (angio-oedema). Effect may be worse if exposed persons are also taking aspirin tablets.</p> <p>Copper has fairly low toxicity. Some rare hereditary conditions (Wilson disease or hepatolenticular degeneration) can lead to accumulation of copper on exposure, causing irreversible damage to a variety of organs (liver, kidney, CNS, bone, vision) and lead to death.</p> <p>Prolonged or repeated exposure to benzyl alcohol may cause allergic contact dermatitis.</p> <p>Prolonged or repeated ingestion may affect behavior/central nervous system with symptoms similar to acute ingestion. It may also affect the liver, kidneys, cardiovascular system, and metabolism (weight loss).</p> <p>Animal studies have shown this compound to cause lung, liver, kidney and CNS disorders.</p> <p>Ethylene glycol esters and their ethers cause wasting of the testicles, reproductive changes, infertility and changes to kidney function. Shorter chain compounds are more dangerous.</p> <p>Case studies indicate that ethylene glycol phenyl ether (EGPE) causes acute damage to the nervous system, and chronic solvent-induced brain syndrome with repeated exposure. Constant irritability, depression, impaired memory and mental function may occur after 1-2 years of occupational exposure (e.g. among constantly exposed fish hatchery workers). Other symptoms include alcohol intolerance, abnormal breathing and heart rate, motor imbalance and rash.</p> <p>Excessive exposure may cause breakdown of red blood cells.</p>				
<b>Oil ball- pen ink</b>	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Not Available</td> <td>Not Available</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	Not Available	Not Available
TOXICITY	IRRITATION				
Not Available	Not Available				

Continued...

## Oil ball- pen ink

ethylene glycol phenyl ether	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: 14391 mg/kg <sup>[1]</sup>	Eye (rabbit): 250 ug/24h - SEVERE
	Oral (rat) LD50: 1386 mg/kg <sup>[1]</sup>	Eye (rabbit): 6 mg - moderate
		Skin (rabbit): 500 mg/24h - mild
benzyl alcohol	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: 1000000 ppm/90M <sup>[2]</sup>	Skin (man): 16 mg/48h-mild
	Inhalation (rat) LC50: >4.178 mg/L/4h <sup>[2]</sup>	Skin (rabbit):10 mg/24h open-mild
	Oral (rat) LD50: 1560 mg/kg <sup>[2]</sup>	
BX	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: >10000 mg/kg <sup>[2]</sup>	[Manuf. C.G.]
		Eye (human): non-irritant
		Skin (human): non-irritant
R-(-)-propylene glycol	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: 11890 mg/kgd <sup>[2]</sup>	Eye (rabbit): 100 mg - mild
	Oral (rat) LD50: 20000 mg/kgd <sup>[2]</sup>	Eye (rabbit): 500 mg/24h - mild
		Skin(human):104 mg/3d Intermitt Mod
		Skin(human):500 mg/7days mild
triethanolamine	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: >18080 mg/kg <sup>[2]</sup>	Eye (rabbit): 0.1 ml -
	Oral (rat) LD50: 5559.6 mg/kg(female) * <sup>[2]</sup>	Eye (rabbit): 10 mg - mild
		minor conjunctival irritation
		minor iritis,
		no corneal injury *
		no irritation *
		Skin (human): 15 mg/3d (int)-mild
		Skin (rabbit): 4 h occluded
		Skin (rabbit): 560 mg/24 hr- mild
	with significant discharge;	

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

Acute Toxicity	✓	Carcinogenicity	⊘
Skin Irritation/Corrosion	✓	Reproductivity	⊘
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	⊘
Respiratory or Skin sensitisation	⊘	STOT - Repeated Exposure	⊘
Mutagenicity	⊘	Aspiration Hazard	⊘

**Legend:** ✗ – Data available but does not fill the criteria for classification  
 ✓ – Data required to make classification available  
 ⊘ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## 12.1. Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
ethylene glycol phenyl ether	EC50	384	Crustacea	25.027mg/L	3
ethylene glycol phenyl ether	EC50	96	Algae or other aquatic plants	429.444mg/L	3
ethylene glycol phenyl ether	LC50	96	Fish	106.514mg/L	3
ethylene glycol phenyl ether	NOEC	24	Fish	5mg/L	2
ethylene glycol phenyl ether	EC50	48	Crustacea	460mg/L	2
benzyl alcohol	EC03	168	Algae or other aquatic plants	=16mg/L	4

Continued...



## Oil ball- pen ink

benzyl alcohol	LC50	96	Fish	10mg/L	4
benzyl alcohol	NOEC	336	Fish	5.1mg/L	2
benzyl alcohol	EC50	48	Crustacea	230mg/L	2
benzyl alcohol	EC50	72	Algae or other aquatic plants	500mg/L	2
BX	LC50	96	Fish	ca.46mg/L	2
BX	EC50	48	Crustacea	>100mg/L	2
BX	EC50	504	Crustacea	>1mg/L	2
BX	NOEC	504	Crustacea	>=1mg/L	2
BX	EC50	72	Algae or other aquatic plants	>100mg/L	2
R(-)-propylene glycol	EC50	384	Crustacea	311.145mg/L	3
R(-)-propylene glycol	EC50	96	Algae or other aquatic plants	10905.921mg/L	3
R(-)-propylene glycol	LC50	96	Fish	1382.810mg/L	3
triethanolamine	LC50	96	Fish	0.0011807mg/L	4
triethanolamine	EC10	96	Algae or other aquatic plants	7.1mg/L	1
triethanolamine	EC50	48	Crustacea	609.88mg/L	2
triethanolamine	NOEC	504	Crustacea	16mg/L	2
triethanolamine	EC50	72	Algae or other aquatic plants	>107- <260mg/L	2

**Legend:**

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

For Ethelene Glycol MonoalkylEthers and their Acetates:

log BCF: 0.463 to 0.732;

LC50 : 94 to > 5000 mg/L.(aquatic species).

Members of this category includeethylene glycol propyl ether (EGPE), ethylene glycol butyl ether (EGBE) andethylene glycol hexyl ether (EGHE).

Environmental Fate: Aquatic Fate -The ethers possess no functional groups that are readily subject to hydrolysisin the presence of waters.

For solvent dyes:

Environmental Fate: Solvent dyesare characterised as non-ionic or neutral dyes, and are hydrophobic incharacter and thus solubility in water is low, ranging from 0.2 mg/l to 34.3mg/l. Solvent dyes, like the disperse dyes, are hydrophobic. However, due totheir large, complex molecular structure, they have lower vapour pressures anddisperse dyes. The partition coefficients (Kow) are very high for the non-ionicdyes (in the range of 420 for Solvent Yellow 1 to 11,220 for Solvent Yellow 2).

NOTE: Because ofsimilarities in structure to thalidomide, concerns have been raised about thepotential of all phthalimides (the basic building block of phthalocyanine) tocause malformation of a foetus in animals exposed to it. Animal studies, inpart, appear to support this proposition. Phthalocyanine dyes are probably notbiodegradable. Reversible reduction and decolourisation occurs under anaerobicconditions.

For Glycol Ethers:

Environmental Fate: Several glycolethers have been shown to biodegrade however; biodegradation slows as molecularweight increases. No glycol ethers that have been tested demonstrate markedresistance to biodegradative processes. No glycol ethers that have been testeddemonstrate marked resistance to biodegradative processes.

Atmospheric Fate: Upon release tothe atmosphere by evaporation, high boiling glycol ethers are estimated toundergo photo-degradation (atmospheric half lives = 2.4-2.5 hr).

For Benzyl Alkyl Alcohols: Log Kow: 1.36 to 2.06; Vapor Pressure: 0.01 to 0.1 hPa (@ room temperature); Water Solubility: >5x10+3 mg/L.

Environmental Fate: Benzyl alkyl alcohols are liquids, under standard temperature and pressure conditions. These substances will partition primarily to the soil, secondarily to the water, and very slightly to the air.

Atmospheric Fate: Benzyl alcohol is expected to exist almost entirely in the vapor phase, in the ambient atmosphere.

For benzoates:

The environmental characteristicsfor benzoates is ultimately determined by the properties of counter-ions, andis assumed to be non-toxic.

Environmental Exposure and Fate:Distribution models indicate that water and soil are the main environmentalpathways of benzyl alcohol, benzoic acid, sodium and potassium benzoates.

Novolalization to the atmosphere or adsorption to sediments is expected. Physicalchemical properties and use patterns indicate water to be the main pathway forthese substances, however, based on the chemical structure and organicchemistry, no hydrolysis is expected at pH ranges of 4 – 11.

For copper:

Atmospheric Fate - Copper isunlikely to accumulate in the atmosphere due to a short residence time forairborne copper aerosols. Airborne coppers, however, may be transported overlarge distances. Air Quality Standards: no data available.

Aquatic Fate: Toxicity of copperis affected by pH and hardness of water.

For benzyl alcohol: log Kow :1.1Koc : <5Henry's atm m3 /mol: 3.91E-07BOD 5: 1.55-1.6,33-62%COD : 96%ThOD: 2.519BCF : 4

Bioaccumulation: Not significant

Anaerobic Effects: Significantdegradation.

Effects on algae and plankton:Inhibits degradation of glucose

Degradation Biological:Significant processes

Abiotic: RxnOH\*,no photochem

Ecotoxicity: Fish LC50 (48 h):fathead minnow 770 mg/l; (72 h): 480 mg/l; (96 h) 460 mg/l. Fish LC50 (96 h)/fathead minnow 10 ppm, bluegill sunfish 15 ppm; tidewater silverside fish 15ppm.

Products of Biodegradation: Possibly hazardous short term degradationproducts are not likely.

For copper: Ecotoxicity -Significant effects are expected on various species of microalgae, some speciesof macroalgae, and a range of invertebrates, including crustaceans, gastropodsand sea urchins. Copper is moderately toxic to crab and their larvae and ishightly toxic to gastropods (mollusks, including oysters, mussels and clams). Infish, the acute lethal concentrations of copper depends both on test speciesand exposure conditions. Waters with high concentrations of copper can havesignificant effects on diatoms and sensitive invertebrates, notably cladocerans(water fleas).

For Copper: Typical foliar levelsof copper are: Uncontaminated soils (0.3-250 mg/kg) ; Contaminated soils(150-450 mg/kg) ; Mining/smelting soils (6.1-25 mg/kg80 mg/kg300 mg/kg).

Terrestrial Fate: Plants -Generally, vegetation reflects soil copper levels in its foliage. This isdependent upon the bioavailability of copper and the physiological requirementsof species concerned.

Crops are often more sensitive to copper than the nativeflora.

**DO NOT discharge into sewer or waterways.**

**12.2. Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
ethylene glycol phenyl ether	LOW	LOW
benzyl alcohol	LOW	LOW
BX	HIGH	HIGH
R(-)-propylene glycol	LOW	LOW
triethanolamine	LOW	LOW

## Oil ball- pen ink

## 12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
ethylene glycol phenyl ether	LOW (LogKOW = 1.16)
benzyl alcohol	LOW (LogKOW = 1.1)
BX	LOW (BCF = 33)
R-(-)-propylene glycol	LOW (LogKOW = -0.782)
triethanolamine	LOW (BCF = 4)

## 12.4. Mobility in soil

Ingredient	Mobility
ethylene glycol phenyl ether	LOW (KOC = 12.12)
benzyl alcohol	LOW (KOC = 15.66)
BX	LOW (KOC = 10000000000)
R-(-)-propylene glycol	HIGH (KOC = 1)
triethanolamine	LOW (KOC = 10)

## 12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT Criteria fulfilled?	Not Available	Not Available	Not Available

## 12.6. Other adverse effects

No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

## 13.1. Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> Otherwise: <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: <ul style="list-style-type: none"> <li>▶ Reduction</li> <li>▶ Reuse</li> <li>▶ Recycling</li> <li>▶ Disposal (if all else fails)</li> </ul> This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. <ul style="list-style-type: none"> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Authority for disposal.</li> <li>▶ Bury or incinerate residue at an approved site.</li> <li>▶ Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul>
	Waste treatment options
Sewage disposal options	Not Available

## SECTION 14 TRANSPORT INFORMATION

## Labels Required

Marine Pollutant	NO
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## Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1.UN number	Not Applicable
14.2.Packing group	Not Applicable
14.3.UN proper shipping name	Not Applicable
14.4.Environmental hazard	Not Applicable
14.5. Transport hazard class(es)	Class Not Applicable
	Subrisk Not Applicable

## Oil ball- pen ink

14.6. Special precautions for user	Hazard identification (Kemler)	Not Applicable
	Classification code	Not Applicable
	Hazard Label	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable

## Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. Packing group	Not Applicable	
14.3. UN proper shipping name	Not Applicable	
14.4. Environmental hazard	Not Applicable	
14.5. Transport hazard class(es)	ICAO/IATA Class	Not Applicable
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	Not Applicable
14.6. Special precautions for user	Special provisions	Not Applicable
	Cargo Only Packing Instructions	Not Applicable
	Cargo Only Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Packing Instructions	Not Applicable
	Passenger and Cargo Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

## Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. Packing group	Not Applicable	
14.3. UN proper shipping name	Not Applicable	
14.4. Environmental hazard	Not Applicable	
14.5. Transport hazard class(es)	IMDG Class	Not Applicable
	IMDG Subrisk	Not Applicable
14.6. Special precautions for user	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

## Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. Packing group	Not Applicable	
14.3. UN proper shipping name	Not Applicable	
14.4. Environmental hazard	Not Applicable	
14.5. Transport hazard class(es)	Not Applicable	Not Applicable
14.6. Special precautions for user	Classification code	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Equipment required	Not Applicable
	Fire cones number	Not Applicable

## Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
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## Oil ball- pen ink

IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	ethylene glycol phenyl ether	Z
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	benzyl alcohol	Y
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	BX	X
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	triethanolamine	Z

## SECTION 15 REGULATORY INFORMATION

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

## ETHYLENE GLYCOL PHENYL ETHER(122-99-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English)	Germany Recommended Exposure Limits - MAK Values - Pregnancy Risk Group Classifications & Germ Cell Mutagens
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)	Germany Recommended Exposure Limits - MAK Values (English)
European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31	Germany TRGS 900 - Limit Values for the Workplace Atmosphere (German)
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

## BENZYL ALCOHOL(100-51-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances	European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31
European Customs Inventory of Chemical Substances ECICS (English)	European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)	Germany Recommended Exposure Limits - Substances for which no MAK value can be established at present

## BX(147-14-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Germany Recommended Exposure Limits - MAK Values - Carcinogens
European Customs Inventory of Chemical Substances ECICS (English)	Germany Recommended Exposure Limits - MAK Values - Pregnancy Risk Group Classifications & Germ Cell Mutagens
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

## C.I. SOLVENT BLUE 38(1328-51-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)
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## R-(-)-PROPYLENE GLYCOL(4254-14-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English)
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## KETON RESIN(25054-06-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable
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## CASTOR OIL/ PHTHALIC ANHYDRIDE/ GLYCEROL ALKYD RESIN(66070-88-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable
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## TRIETHANOLAMINE(102-71-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances	Germany Recommended Exposure Limits - MAK Values - Pregnancy Risk Group Classifications & Germ Cell Mutagens
European Customs Inventory of Chemical Substances ECICS (English)	Germany Recommended Exposure Limits - MAK Values (English)
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

## PHOSPHORIC ACID ESTER(90506-69-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)
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This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - :98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

## 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

## 15.3. Classification of Substances and Mixtures into Water Hazard Classes

## PREPARATION IS WGK NON-HAZARDOUS TO WATERS

Name	WGK	Score	Source
ETHYLENE GLYCOL PHENYL ETHER	non-hazardous to waters		W: VwVwS
BENZYL ALCOHOL	non-hazardous to waters		W: VwVwS

Continued...

## Oil ball- pen ink

BX	non-hazardous to waters		W: VwVwS
C.I. SOLVENT BLUE 38	non-hazardous to waters	0	W: VwVwS
R-(-)-PROPYLENE GLYCOL	non-hazardous to waters	0	W: VwVwS
keton resin	non-hazardous to waters	0	W: VwVwS
CASTOR OIL/ PHTHALIC ANHYDRIDE/ GLYCEROL ALKYD RESIN	non-hazardous to waters	0	W: VwVwS
TRIETHANOLAMINE	non-hazardous to waters		W: VwVwS
phosphoric acid ester	non-hazardous to waters	0	W: VwVwS

National Inventory	Status
Australia - AICS	N (R-(-)-propylene glycol; phosphoric acid ester; C.I. Solvent Blue 38)
Canada - DSL	N (phosphoric acid ester)
Canada - NDSL	N (benzyl alcohol; R-(-)-propylene glycol; keton resin; castor oil/ phthalic anhydride/ glycerol alkyd resin; triethanolamine; phosphoric acid ester; ethylene glycol phenyl ether; BX; C.I. Solvent Blue 38)
China - IECSC	N (R-(-)-propylene glycol)
Europe - EINEC / ELINCS / NLP	N (R-(-)-propylene glycol; keton resin; castor oil/ phthalic anhydride/ glycerol alkyd resin)
Japan - ENCS	N (R-(-)-propylene glycol; castor oil/ phthalic anhydride/ glycerol alkyd resin; phosphoric acid ester)
Korea - KECI	N (R-(-)-propylene glycol; phosphoric acid ester)
New Zealand - NZIoC	N (R-(-)-propylene glycol; castor oil/ phthalic anhydride/ glycerol alkyd resin; phosphoric acid ester; C.I. Solvent Blue 38)
Philippines - PICCS	N (phosphoric acid ester)
USA - TSCA	N (R-(-)-propylene glycol; phosphoric acid ester; C.I. Solvent Blue 38)
<b>Legend:</b>	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

## SECTION 16 OTHER INFORMATION

## Full text Risk and Hazard codes

<b>H314</b>	Causes severe skin burns and eye damage
<b>H332</b>	Harmful if inhaled

## Other information

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection  
EN 340 Protective clothing  
EN 374 Protective gloves against chemicals and micro-organisms  
EN 13832 Footwear protecting against chemicals  
EN 133 Respiratory protective devices

## Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average  
PC – STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit,  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index