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According to Commission Regulation (EU) No 453/2010

Printing date 03.03.2018

Version number 6

Revision date 03.03.2018

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

· 1.1 Product identifier

· Product name: Marker Ink Black

- · Product type/code: MD-8
- · Registration number: No registration number is given yet for this product.
- 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Used to marker-pen inks.

Use advised against: No information available.

- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Neon Orient (Shanghai) Co., Ltd.

Address: Room 516 – 518, No. 583, Lingling Road. (Offshore Oil Mansion) Shanghai, P.R. China Postcode: 200030

Tel: +(86) 21-64640878

2 SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture			
· Classification accor	rding to Regulation (EC) No 1272/2008 [CLP]		
Muta. 2	H341 Suspected of causing genetic defects.		
Eye Dam. 1	H318 Causes serious eye damage.		
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.		
STOT SE 3	H336 May cause drowsiness or dizziness.		

· Classification according to Directive 67/548/EEC [DSD] or Directive 1999/45/EC [DPD]

Muta. Cat. 3; R68

Xi: R41

R51/53-67

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008 [CLP]

The product is classified and labelled according to the CLP regulation.

 Printing date 03.03.201 Hazard pictogram(s): 		Commission Regulation (EU) N Version number 6	Revision date 03.03.2018		
GHS05 GHS07	GHS08	GHS09			
	011508	011307			
· Signal word: Danger					
· Hazard-determining c	components o	of labelling:			
propan-1-ol					
chrysoidine					
• Hazard statement(s):					
H318 Causes serious	eye damage.				
H341 Suspected of ca	ausing genetic	e defects.			
H336 May cause drow	wsiness or diz	zziness.			
H411 Toxic to aquation	c life with lor	ng lasting effects.			
· Precautionary stateme	ents:				
P101	If medical ad	vice is needed, have product con	tainer or label at hand.		
P102	Keep out of reach of children.				
P103	Read label be	efore use.			
P280	Wear protect	ive gloves/protective clothing/ey	e protection/face protection.		
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.					
P281	Use personal	protective equipment as require	d.		
P273	Avoid release	e to the environment.			
P305+P351+P338		Rinse cautiously with water for resent and easy to do. Continue	several minutes.Remove contact rinsing.		
P310	_	call a POISON CENTER or doc	-		
	2	r concerned: Get medical advice	1 2		
	Store locked				
		ll-ventilated place. Keep contain	er tightly closed.		
		ontents/container in accordance v			
	international		-		

2.5 Other hazards two information available.

 \cdot Results of PBT and vPvB assessment: Not applicable.

· PBT: Not applicable.

· vPvB: Not applicable.

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Printing date 03.03.20	018 Version n	number 6	Revision date	03.03.2018	
3 SECTION 3: Com	position/information on ing	redients			
· 3.1 Chemical charac	eterization: Mixtures				
· Description:					
Product: consisting of	of the following components.				
Ingredient	CAS No.	EC No.	Concentratio	n	
ethanol	64-17-5	200-578-6	50.0-60.0%		
propan-1-ol	71-23-8	200-746-9	10.0-25.0%		
phosphoric acid,	12645-31-7 235-741-0 2.5-10.0%				
2-ethylhexyl ester					
Laureth Phosphate	25852-45-3		3.0-10.0%		
Aniline Black	11099-03-9		5.0-10.0%		
additive	26266-58-0	247-569-3	0.5-2.0%		
· Dangerous compone					
CAS: 64-17-5	ethanol			50-60%	
EINECS: 200-578-6	F R11 Flam. Liq. 2, H225				
CAS: 71-23-8	propan-1-ol			10-25%	
EINECS: 200-746-9	Xi R41; F R11				
	R67				
Flam. Liq. 2, H225; Eye Dam. 1, H318; STOT SE 3, H336					

4 SECTION 4: First aid measures

- \cdot 4.1 Description of first aid measures
- \cdot General information: In all cases of doubt, or when symptoms persist, seek medical attention.
- \cdot Following inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing difficulties continue.

· Following skin contact:

Wash off immediately with plenty of water. Remove contaminated clothing and shoes. Get medical attention if any symptoms develop.

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· Following eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON Center or doctor/physician.

· Following ingestion:

Never give anything through mouth to an unconscious person. Get medical attention immediately.

- · Information for doctor: Symptomatic treatment is advised.
- \cdot 4.2 Most important symptoms and effects, both acute and delayed No information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed No information available.

5 SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- \cdot Suitable extinguishing agents: CO2, dry chemical powder, water spray.
- \cdot Unsuitable extinguishing agents: No information available.

• 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide (CO), Carbon dioxide, Nitrogen oxide

Other irritating and toxic gases.

• 5.3 Advice for firefighters

Fire-fighters should wear appropriate breathing apparatus and protective equipment. Prevent

fire-fighting water from entering surface water or groundwater.

 \cdot Protective equipment: Wear self-contained respiratory protective device.

6 SECTION 6: Accidental release measures

 \cdot 6.1 Personal precautions, protective equipment and emergency procedures

Refer to Section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

Wear protective equipment. Keep unprotected persons away.

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ording to Commission Pagulation (EU) No 452/2

According to Commission Regulation (EU) No 453/2010

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· 6.2 Environmental precautions

Do not allow material to be released into the soil, sewerage systems and surface water.

Inform respective authorities in case of seepage into water course or sewage system.

Keep contaminated washing water and dispose of appropriately.

 \cdot 6.3 Methods and material for containment and cleaning up

Evacuate area of all unnecessary personnel. Shut off source, if possible. Absorb spillage with dry, inert absorbent material such as sand or clay. Transfer to containers using non-sparking equipment and recycle in the mill.

Dispose contaminated material as waste according to item 13.

· 6.4 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.

7 SECTION 7: Handling and storage

· 7.1 Handling

Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required.

- Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Use this material with adequate ventilation.
- · Precautions for safe handling:
- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.
- · Information about fire and explosion protection: Keep ignition sources away Do not smoke.
- · 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, dry and well-ventilated place. Keep away from heat and ignition sources. Store away from incompatible materials.

· 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 SECTION 8: Exposure controls/personal protection

· Information about design of technical facilities:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

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· 8.1 Control parameters						
· Ingredients with limi	· Ingredients with limit values that require monitoring at the workplace:					
64-17-5 ethanol						
PEL (USA)	1900 mg/m ³ , 1000 ppm					
REL (USA)	1900 mg/m³, 1000 ppm					
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm					
71-23-8 propan-1-ol						
OEL (EU)	Short-term value: 300 mg/m ³					
	Long-term value: 200 mg/m ³					
PEL (USA)	500 mg/m³, 200 ppm					
REL (USA) Short-term value: 625 mg/m ³ , 250 ppm						
	Long-term value: 500 mg/m ³ , 200 ppm					
	Skin					
TLV (USA)	246 mg/m ³ , 100 ppm					

· DNELs No information available.

· PNECs No information available.

· Additional information: The lists valid during the making were used as basis.

- · 8.2 Exposure controls
- · Appropriate engineering controls:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Provide local exhaust or process enclosure ventilation system. The work area set safety shower and eyewash equipment.

- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Skin protection:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· 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 break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eve and face protection:



Tightly sealed goggles

· Body protection: Protective work clothing

9 SECTION 9: Physical and chemical properties				
• 9.1 Information on basic physical and chemical properties				
Appearance:				
Form:	Liquid			
Colour:	Black			
Odour:	Not determined.			
pH-value:	Not determined.			
Melting point/Melting range:	Not determined.			

Boiling point/Boiling range:	Not determined.	
· Flash point:	Not determined.	
· Flammability (solid, gaseous):	Not applicable.	
· Auto-Ignition temperature:	Not determined.	
· Decomposition temperature:	Not determined.	
· Self-igniting:	Product is not selfigniting.	
· Danger of explosion:	Product does not present an explosion hazard.	
· Vapour pressure:	Not determined.	

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· Density:	Not determined.				
· Evaporation rate:	Not determined.				
· Solubility in/Miscibility with:					
Water:	Partly miscible.				
· Organic solvents:	Soluble in many organic solvents.				
· Partition coefficient (n-octanol/water): Not determined.					
· Viscosity:					
Dynamic:	Not determined.				
· 9.2 Additional information	No further relevant information available.				

10 SECTION 10: Stability and reactivity

• 10.1 Reactivity Stable under recommended storage and handling conditions (see section 7, handling and storage).

· 10.2 Chemical stability Stable under normal conditions of use, storage and transport.

• Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

 \cdot 10.3 Possibility of hazardous reactions No dangerous reactions known.

 \cdot 10.4 Conditions to avoid Strong heating, fire. Incompatible materials.

· 10.5 Incompatible materials Strong acids, strong bases or strong oxidizing agents.

 10.6 Hazardous decomposition products Nitrogen oxides
 Carbon monoxide and carbon dioxide
 Other irritating and toxic gases.

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11 SECTION 11: Toxicological information

· Acute toxicity						
· LD/LC50 values relevant for classification:						
64-17-5 ethanol						
Oral	LD50	7060 mg/kg (rat)				
Inhalative	lative LC50 20000 mg/l (rat)					
71-23-8 propan-1-ol						
Oral	LD50	1870 mg/kg (rat)				
Dermal LD50 5040 mg/kg (rabbit)						
Shin comprise limitation. No imitant officet						

· Skin corrosion/irritation: No irritant effect.

· Serious eye damage/irritation: Strong irritant with the danger of severe eye injury.

· Respiratory or skin sensitization: No sensitizing effects known.

· Specific target organ system toxicity: May cause drowsiness or dizziness.

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction): May cause genetic defects.

12 SECTION 12: Ecological information

· 12.1 Toxicity

· Acquatic toxicity: Toxic to aquatic life with long lasting effects.

· 12.2 Persistence and degradability No further relevant information available.

· 12.3 Bioaccumulative potential No further relevant information available.

· 12.4 Mobility in soil No further relevant information available.

· Additional ecological information:

· General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

· 12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

• 12.6 Other adverse effects Toxic to aquatic life with long lasting effects.

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13 SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

14.1 Land transpor		
AV	· ADR/RID class:	9 Miscellaneous dangerous substances and articles.
$\langle \mathbf{Y}_{\gamma} \rangle$	· UN-Number:	3082
	 Packaging group: 	III
\sim	· Special marking:	Symbol (fish and tree)
14.2 Maritime tran	sport	
\land	· IMDG Class:	9
1	· UN Number:	3082
	· Packaging group:	III
\sim		
Marine pollutant:	Yes	
	Symbol (fish and tre	e)
Proper shipping na	me: UN3082, ENVIRC	ONMENTALLY HAZARDOUS SUBSTANCE,
	LIQUID, N.O.S. (cor	ntains chrysoidine)
14.3 Air transport		
\sim	· ICAO/IATA Class:	9
W V	· UN/ID Number:	3082
	· Special marking:	Symbol (fish and tree)
\sim	· Packaging group:	III
Proper shipping na	me: UN3082, ENVIRC	ONMENTALLY HAZARDOUS SUBSTANCE,
	LIQUID, N.O.S. (con	
UN "Model Regula		
UN MOULINCEUR		LY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9
e		
e		
UN3082		. Missellaneous dengerous substaneos and articles
UN3082		g: Miscellaneous dangerous substances and articles.

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	According	to Commi	ssion Regul	ation (EU) l	No 453/201	0	
Printing date 03.03.2	018	Ve	ersion numb	er 6	F	Revision date 03.03.2018	
15 SECTION 15: R	egulatory in	formation					
· 15.1 Safety, health a	and environn	nental regu	lations/legis	lation speci	fic for the s	ubstance or mixture	
EU Regulation:							
Authorisations: No	information	available.					
Restrictions on use:	No informat	tion availab	ole.				
Regulatory information	tion:						
CAS No.	64-17-5	71-23-8	12645-31-7	25852-45-3	11099-03-9	26266-58-0	
EU-EINECS	Listed	Listed	Listed	Listed	Listed	Listed	
US-TSCA	Listed	Listed	Listed	Listed	Listed	Listed	
Canada-DSL	Listed	Listed	Listed	Listed	Listed	Listed	
Austrlia-AICS	Listed	Listed	Listed	Listed	Listed	Listed	
Korea-ECL	Listed	Listed	Listed	Listed	Listed	Listed	
China-IECSC	Listed	Listed	Listed	Listed	Listed	Listed	
· 15.2 Chemical safety assessment A Chemical Safety Assessment has not been carried out.							

16 SECTION 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.

· Relevant phrases:

R10: Flammable.

R11: Highly flammable.

R22: Harmful if swallowed.

R38: Irritating to skin.

R41: Risk of serious damage to eyes.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R67: Vapours may cause drowsiness and dizziness.

R68: Possible risk of irreversible effects.

H225: Highly flammable liquid and vapour.

H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

· Training hints: Provide adequate information, instruction and training for operators.