

21179-XXXX

MSDS Report No. 70.431.17.11234.05R3**Dated** 2017-07-31**ORIGINAL**

Applicant: ZHAOQING STA STATIONERY CO.,LTD.
Address: INDUSTRIAL PARK, WEST, MA TOU GANG, DUANZHOU FIRST RD.,
 ZHAOQING, GD, P.R. CHINA
Product Name: Water-based dye ink
Manufacturer: ZHAOQING STA STATIONERY CO.,LTD.
Country of Origin: China
Country of Destination: USA, Canada
Sample Submitted: The sample(s) was (were) submitted by applicant and identified.
Test Result: Refer to the data listed in following pages
Test Request: **Material Safety Data Sheet (MSDS)**

Remark: This report supersedes the previous report 70.431.17.11234.05R2 dated on 2017-07-18.TÜV SÜD Certification and Testing (China) Co.,Ltd.
Shanghai Branch**Prepared by:**

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**Checked by:**

Derek Jiang
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Note: (1) General Terms & Conditions as mentioned overleaf,(2)The results relate only to the items tested,(3)The test report shall not be reproduced except in full without the written approval of the laboratory.

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 Shanghai Branch Testing Center
 No. 1999 Du Hui Road, Minhang District, Shanghai
 201108 P.R. China



Safety Data Sheet

Water-based dye ink

*Prepared according to UN GHS (the 6th revised edition)

1 Identification of the chemical and supplier

| Product identifier

Product Name	Water-based dye ink
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

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

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

| Details of the supplier of the Safety Data Sheet

Name of the company	Zhaoqing STA Stationery Co., Ltd.
Address of the company	Industrial Park, West, Ma Tou Gang, Duanzhou First Rd., Zhaoqing, GD, P.R. China
Post code	--
Telephone number	--
Fax number	--
E-mail address	--

| Emergency phone number

Emergency phone number	--
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2 Hazards identification

| Hazard classification according to GHS

Hazard classification according to GHS	Not applicable
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| Label elements

Hazard pictograms	Not applicable
Signal word	Not applicable

| Hazard statements

Hazard statements	Not applicable
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| Precautionary statements

◆ Prevention

Prevention	Not applicable
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◆ Response

Response	Not applicable
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◆ Storage

Storage	Not applicable
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◆ Disposal

Disposal	Not applicable
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| Hazard description

◆ Physical and chemical hazards

	Liquid, no harm in general situation, toxic smoke/fumes in a fire.
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◆ Health hazards

Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual.
Skin Contact	No harm in general situation. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Eye	This product may cause temporary discomfort following direct contact with the eye.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.
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3 Composition/information on ingredients

Component		Cas No.	EC No.	Concentration (weight percent, %)
Acid Yellow 3				
Ethylene glycol		107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-(trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
DYE		8004-92-0	-	Commercial secrets
Others		-	-	Commercial secrets
Acid Yellow 23				
Ethylene glycol		107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets

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	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
	DYE	1934-21-0	217-699-5	Commercial secrets
	Others	-	-	Commercial secrets
Acid Red 18				
	Ethylene glycol	107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
	DYE	2611-82-7	220-036-2	Commercial secrets
	Others	-	-	Commercial secrets
Acid Red 52				
	Ethylene glycol	107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
	DYE	3520-42-1	222-529-8	Commercial secrets
	Others	-	-	Commercial secrets
Acid Red 87				
	Ethylene glycol	107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
	DYE	17372-87-1	241-409-6	Commercial secrets

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Others		-	-	Commercial secrets
Acid Blue 9				
Ethylene glycol		107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
DYE		2650-18-2	220-168-0	Commercial secrets
Others		-	-	Commercial secrets
Acid Blue 104				
Ethylene glycol		107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
DYE		6505-30-2	229-390-2	Commercial secrets
Others		-	-	Commercial secrets
Direct Black mixture				
Ethylene glycol		107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
Black SP		-	-	Commercial secrets
Others		-	-	Commercial secrets
Acid Violet 17				
Ethylene glycol		107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	

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KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
	DYE	4129-84-4	223-942-6	Commercial secrets
	Others	-	-	Commercial secrets
Acid Red 92				
	Ethylene glycol	107-21-1	203-473-3	Commercial secrets
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	247-500-7	Commercial secrets
	2-Methyl-4-Isothiazolin-3-one	2682-20-4	220-239-6	
	Magnesium nitrate	10377-60-3	233-826-7	
	Magnesium chloride	7786-30-3	232-094-6	
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)disiloxanyl)propyl) ether	134180-76-0	-	Commercial secrets
	DYE	18472-87-2	242-355-6	Commercial secrets
	Others	-	-	Commercial secrets

4 First aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	No harm in general situation. Consult a physician if feel uncomfortable.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

1	Please see section 11.
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Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Firefighting measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media suitable for surrounding area.
Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

Specific hazards arising from the substance or mixture

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1	Not combustible, not considered a significant fire risk, however containers may burn.
2	May expansion or decompose explosively when heated or involved in fire.
3	Development of hazardous combustion gases or vapor possible in the event of fire.

| Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

| Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment. Avoid breathing vapours or gas.

| Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

| Methods and materials for containment and cleaning up

1	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
2	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
3	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7 Handling and storage

| Precautions for handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

| Precautions for storage

1	Keep containers in a dry, cool and well-ventilated place.
2	Keep away from heat/sparks/open flames/ hot surfaces.
3	Store away from incompatible materials and foodstuff containers.
4	Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8 Exposure controls/personal protection

| Control parameters

◆ Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours	Limit value - Short term
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		ppm	mg/m ³	ppm	mg/m ³
Ethylene glycol 107-21-1	South Korea	-	-	40	100
	New Zealand	-	-	50	127
	Ireland	20	52	40	104
	Germany (AGS)	10	26	20	52
	Denmark	10	26	20	52
	Australia	20	52	40	104

◆ Biological limit values

Biological limit values	No information available
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◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air (Series standard) .

| Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.
5	Handle in accordance with good industrial hygiene and safety practice.

| Personal protection equipment

General requirement	No special requirements, please see the description below.
Eye protection	In general situation, eye protection is not needed. In the production process, when contacting with dust, tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US).
Hand protection	In general situation, hand protection is not needed.
Respiratory protection	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.
Skin and body protection	In general situation, skin and body protection are not needed.

9 Physical and chemical properties

| Physical and chemical properties

Appearance	Colored liquids
Odor	No special odor
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	< 20
Initial boiling point and boiling range(°C)	>35

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Flash point(Closed cup, °C)	The flash point above 93 °C
Evaporation rate	No information available
Flammability	Not flammable
Upper/lower explosive limits[%(v/v)]	Upper limit : 15.3 (Ethylene glycol); Lower limit : 3.2 (Ethylene glycol)
Vapor pressure	7Pa (20°C, Ethylene glycol)
Relative vapour density(Air = 1)	2.1 (Ethylene glycol)
Relative density(Water=1)	1.11 (Ethylene glycol)
Solubility(mg/L)	Soluble in water
n-octanol/water partition coefficient	-1.93 (Ethylene glycol)
Auto-ignition temperature(°C)	398 (Ethylene glycol)
Decomposition temperature(°C)	> 100
Kinematic viscosity	No information available
Particle characteristics	Not applicable

10 Stability and reactivity

| Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	In contact with oxidants causes severe reactions, and may cause a fire or explosion. In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Oxidants, alkali metals, alkaline earth metals and aluminum. Halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

| Acute toxicity

Component	Cas No.	LD ₅₀ (oral)	LD ₅₀ (dermal)	LC ₅₀ (inhalation,4h)
DYE	18472-87-2	8400mg/kg(Rat)	No information available	No information available
DYE	1934-21-0	12750mg/kg(Mouse)	No information available	No information available
Ethylene glycol	107-21-1	4700mg/kg(Rat)	No information available	No information available
DYE	17372-87-1	2344mg/kg(Mouse)	No information available	No information available
DYE	2611-82-7	> 8000mg/kg(Rat)	No information available	No information available

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DYE	3520-42-1	10300mg/kg(Mouse)	No information available	No information available
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| Carcinogenicity

ID	Cas No.	Component	IARC	NTP
1	107-21-1	Ethylene glycol	Not Listed	Not Listed
2	-	FS-14D	Not Listed	Not Listed
3	-	KL 245	Not Listed	Not Listed
4	8004-92-0	DYE	Not Listed	Not Listed
5	1934-21-0	DYE	Not Listed	Not Listed
6	2611-82-7	DYE	Not Listed	Not Listed
7	3520-42-1	DYE	Not Listed	Not Listed
8	17372-87-1	DYE	Not Listed	Not Listed
9	2650-18-2	DYE	Not Listed	Not Listed
10	6505-30-2	DYE	Not Listed	Not Listed
11	-	Black SP	Not Listed	Not Listed
12	4129-84-4	DYE	Not Listed	Not Listed
13	18472-87-2	DYE	Not Listed	Not Listed

| Others

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Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

12 Ecological information

| Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Ethylene glycol	107-21-1	LC ₅₀ : 1000mg/L (96h)(Cyprinus carpio)	EC ₅₀ : >1000mg/L (48h)(Crustaceans)	ErC ₅₀ : >1100mg/L (72h)(Algae)

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| Chronic aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
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| Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
Ethylene glycol	107-21-1	Low(Half-life = 24 days)	Low(Half-life = 3.46 days)
DYE	17372-87-1	High	High
DYE	1934-21-0	High	High
DYE	2611-82-7	High	High
DYE	2650-18-2	High	High
DYE	4129-84-4	High	High

| Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	comments
Ethylene glycol	107-21-1	Low	BCF=200
DYE	17372-87-1	High	Log K _{OW} =4.8032
DYE	1934-21-0	Low	BCF=3
DYE	2611-82-7	Low	Log K _{OW} =1.6301
DYE	2650-18-2	Low	Log K _{OW} =2.0459
DYE	4129-84-4	Medium	Log K _{OW} =4.1531

| Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (K _{OC})
Ethylene glycol	107-21-1	High	1
DYE	17372-87-1	Low	18860
DYE	1934-21-0	Low	79.38
DYE	2611-82-7	Low	1572000
DYE	2650-18-2	Low	10000000000
DYE	4129-84-4	Low	10000000000

| Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 1907/2006)
Ethylene glycol	107-21-1	not PBT/vPvB
DYE	8004-92-0	not PBT/vPvB
DYE	1934-21-0	not PBT/vPvB
DYE	2611-82-7	not PBT/vPvB

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DYE	3520-42-1	not PBT/vPvB
DYE	17372-87-1	not PBT/vPvB
DYE	2650-18-2	not PBT/vPvB
DYE	6505-30-2	not PBT/vPvB
DYE	4129-84-4	not PBT/vPvB
DYE	18472-87-2	not PBT/vPvB

13 Disposal considerations

| Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section 13.1 and 13.2.

14 Transport information

| Label and Mark

Transporting Label	Not applicable
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| IMDG-CODE

IMDG-CODE	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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| ICAO/IATA-DG

ICAO/IATA-DG	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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| UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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15 Regulatory information

| International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Acid Yellow 3									
Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4-Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✗
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-	✗	✓	✗	✓	✓	✓	✓	✗

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	(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)di siloxanyl)propyl ether									
	DYE	×	✓	✓	✓	✓	✓	✓	✓	✓
Acid Yellow 23										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4-Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	×
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)di siloxanyl)propyl) ether	×	✓	×	✓	✓	✓	✓	✓	×
	DYE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acid Red 18										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4-Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	×
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)di siloxanyl)propyl) ether	×	✓	×	✓	✓	✓	✓	✓	×
	DYE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acid Red 52										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4-Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	×
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓

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	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)di siloxanyl)propyl) ether	✗	✓	✗	✓	✓	✓	✓	✓	✗
	DYE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acid Red 87										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4-Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)di siloxanyl)propyl) ether	✗	✓	✗	✓	✓	✓	✓	✓	✗
	DYE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acid Blue 9										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4-Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)di siloxanyl)propyl) ether	✗	✓	✗	✓	✓	✓	✓	✓	✗
	DYE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acid Blue 104										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓

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	2-Methyl-4- Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3- (1,3,3,3-tetramethyl- 1- ((trimethylsilyl)oxy)di siloxanyl)propyl) ether	✗	✓	✗	✓	✓	✓	✓	✓	✗
	DYE	✓	✓	✗	✓	✗	✗	✓	✗	✗
Direct Black mixture										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl- 2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4- Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3- (1,3,3,3-tetramethyl- 1- ((trimethylsilyl)oxy)di siloxanyl)propyl) ether	✗	✓	✗	✓	✓	✓	✓	✓	✗
	Black SP	✗	✗	✗	✗	✗	✗	✗	✗	✗
Acid Violet 17										
	Ethylene glycol	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl- 2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4- Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3- (1,3,3,3-tetramethyl- 1- ((trimethylsilyl)oxy)di siloxanyl)propyl) ether	✗	✓	✗	✓	✓	✓	✓	✓	✗
	DYE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acid Red 92										

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Ethylene glycol		✓	✓	✓	✓	✓	✓	✓	✓	✓
FS-14D	5-chloro-2-methyl-2H-isothiazol-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2-Methyl-4-Isothiazolin-3-one	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Magnesium nitrate	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Magnesium chloride	✓	✓	✓	✓	✓	✓	✓	✓	✓
KL 245	Oxirane, methyl-, polymer with oxirane, mono(3-(1,3,3,3-tetramethyl-1-((trimethylsilyl)oxy)di siloxanyl)propyl) ether	✗	✓	✗	✓	✓	✓	✓	✓	✗
DYE		✓	✓	✓	✓	✓	✓	✓	✓	✓

【EINECS】 European Inventory of Existing Commercial Chemical Substances

【TSCA】 United States Toxic Substances Control Act Inventory

【DSL】 Canadian Domestic Substances List

【IECSC】 China Inventory of Existing Chemical Substances

【NZIoC】 New Zealand Inventory of Chemicals

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances

【KECI】 Existing and Evaluated Chemical Substances

【AICS】 Australia Inventory of Chemical Substances

【ENCS】 Existing And New Chemical Substances

Note

"✓" Indicates that the substance included in the regulations

"✗" That no data or included in the regulations

16 Others

Information on revision

Creation Date	2017/04/24
Revision Date	2017/07/25
Reason for revision	-

Reference

[1]IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>.[2]IARC , website: <http://www.iarc.fr/>.

[3]OECD: The Global Portal to Information on Chemical Substances, website:

http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en.[4]CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.[5]NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.[6]EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.[7]U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.[8]Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

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| Abbreviations and acronyms

CAS –Chemical Abstracts Service	CMR - Carcinogens, mutagens or substances toxic to reproduction
PC-STEL- Short term exposure limit	PC-TWA - Time Weighted Average
DNEL - Derived No Effect Level	IARC - International Agency for Research on Cancer
RPE - Respiratory Protective Equipment	PNEC –Predicted No Effect Concentration
LC ₅₀ - Lethal Concentration 50%	LD ₅₀ - Lethal Dose 50%
NOEC -No Observed Effect Concentration	EC ₅₀ - Effective Concentration 50%
PBT - Persistent, Bioaccumulative, Toxic	POW - Partition coefficient Octanol: Water
BCF - Bioconcentration factor (BCF)	vPvB - very Persistent, very Bioaccumulative
IMDG-International Maritime Dangerous Goods	ICAO/IATA-International Civil Aviation Organization/International Air Transportation Association
UN-The United Nations	ACGIH-American Conference of Governmental Industrial Hygienists
NFPA-National Fire Protection Association	OECD-Organization for Economic Co-operation and Development

| Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 6th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user' s reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

General Terms and Conditions

of TÜV SÜD Certification and Testing (China) Co., Ltd. and its affiliated branch offices in the P.R.C.
MSDS for #21179 - JANE DAVENPORT (hereinafter referred to as the company)



1. General Information and Definitions

- (1.1) In the event that an order for any services is placed, the Client shall accept the General Terms and Conditions. The General Terms and Conditions shall be applicable to all orders, resulting contracts and other arrangements, including all offers made or services provided by the Company or any of its affiliated companies. They are not applicable if and as far as they are in conflict with the regulations on services performed on behalf of governments, government bodies or any other public entity, or they are in conflict with mandatory provisions of local law. The Client's placement of orders as well as the conclusion of contracts with the Company shall be regarded as awareness and acceptance of these General Terms and Conditions.
- (1.2) The Company strongly recommends any Client or potential Client to read the full text of these General Terms and Conditions prior to placement of any order to or conclusion of any contract with the Company. Ancillary agreements, promises and other statements made on the part of the Company staff or the experts called upon by them shall be binding only if they are expressly confirmed by the Company in writing. This shall also apply to any modifications of this clause.

2. Provision of Services

- (2.1) With due care and skill, the Company will provide services according to Client's specific instructions as made available by the Client. In the absence of Client's specific instructions, the following is deemed as instructions given to the Company:
 - (a) The terms of any standard specification sheet or standard order form provided by the Company; and/or
 - (b) Any relevant usage, practice or trade custom; and/or
 - (c) Such methods the Company considers technically, operationally and/or on financial grounds appropriate.
- (2.2) No other party is entitled to give any instructions particularly on the scope and type of the services or the reports delivered, or on the resulting certificates (the "Reports of Findings"), unless the Company receives prior written instructions to the contrary from the Client. The Client hereby irrevocably authorizes the Company to deliver Reports of Findings to a third party where so instructed by the Client or, at the Company's discretion, where it implicitly follows from circumstances, trade custom, usage or practice.
- (2.3) The information stated in the Report of Findings is derived from the results of inspection or testing procedures carried out in accordance with the instructions and/or Company's assessment of such results on the basis of any technical standards, trade custom or practice, or other circumstances which should in Company's professional experience be taken into account.
- (2.4) Reports of Findings issued after the testing of samples refer the Company's opinion only on samples under testing and not to the lot from which the samples were drawn.
- (2.5) Client agrees that the Company's sole responsibility is to be present at the time of the third party's intervention and to forward the results, or confirm the occurrence of the intervention, in case Client requests the Company to witness any third party's intervention. Client agrees that the Company will use the test methods for analysis as requested in the request form, and if none is stated in the form, the Company will choose the appropriate test methods for analysis.
- (2.6) The Reports of Findings issued by the Company will reflect the facts as recorded by it at the time of its intervention only and within the limits of the instructions received or, in the absence of such instructions, within the limits of the alternative parameters applied as provided for in Clause 2.1. The Company is under no obligation to refer to, or report upon, any facts or circumstances, which are outside the specific instructions received or alternative parameters applied.
- (2.7) The performance of all or part of the services may be delegated to an agent or subcontractor by the Company. The Client authorizes the Company to disclose all information necessary for such performance to the agent or subcontractor.
- (2.8) Documents reflecting engagements contracted between the Client and third parties or third party documents, e.g. sales contract copies, letters of credit, bills of lading, etc. should be made available to the Company. These are considered to be for information only, and do not extend or restrict the scope of the services or the obligations accepted by the Company.
- (2.9) The Company agrees that, by providing the services to the Client, it neither takes the place of Client or any third party, nor otherwise assumes, abridges, abrogates or undertakes to discharge any duty of the Client to any third party or that of any third party to the Client. Also, it does not release the Client or any third party from any of their obligations.
- (2.10) Depending on the nature of each sample, all samples given to the Company shall be retained for a maximum of 3 months or for such other shorter time period as the nature of the sample permits, and then sent back to Client or otherwise disposed of at the Company's discretion. After that time the Company will not be responsible for the samples. Storage of samples for more than 3 months shall incur a storage fee payable by the Client. If samples are returned to the Client, the Client will be billed a handling and freight fees. Special disposal charges will be billed to the Client if incurred.

3. Client's Obligations

The Client shall:

- (3.1) ensure that all required supporting documents, information and instructions as submitted are accurate, truefull and complete. These information are to be submitted in a timely not later than 2 working days from the date of which the services are requested by the Client
- (3.2) ensure to give all necessary access for the Company's representatives to the premises where the services are to be performed and to take all necessary steps to eliminate or remedy any obstacles to, or interruptions in the performance of the services;
- (3.3) make available any special equipment and personnel necessary for the performance of the services, if required;
- (3.4) ensure that for the safety and security of working conditions, sites and installations, all necessary measures are taken during the performance of services. In this respect, the Client will not rely on the Company's advice whether required or not;
- (3.5) inform the Company of any known hazards or dangers, actual or potential, associated with any order, samples, testing or any other service rendered by the Company well in advance. Those are, but are not limited to the presence or risk of radiation, environmental pollution or poisons-toxic or noxious or explosive elements or materials;
- (3.6) fully exercise all its rights and discharge all its liabilities under any relevant sales or other contract with a third party.

4. Fees and Payment

- (4.1) All Fees not agreed on between the Company and Client at the time the order is placed or a contract is concluded shall be determined by the Company's Schedule of Fees (which are subject to change). All applicable taxes shall be paid by Client, as far as mandatory laws do not provide otherwise.
- (4.2) Unless a specific period is established in the invoice, the Client shall pay upon receiving the invoice, but not later than 30 days from the relevant invoice date or within such other period as may be established by the Company in the invoice (the "Due Date").
- (4.3) The Client shall not be entitled to retain or defer due payment of any sums to the Company on account of any dispute, counter claim or set-off against the Company. The Company reserves the right to retain or defer any due payments if any dispute arises with or it raises any counterclaim against the Client. The Company is entitled to set off due payments against payments of the Client.

- (4.4) For the collection of unpaid fees, the Company may decide to bring action in any court with competent jurisdiction. The corresponding collection costs, including attorney's fees and related costs, shall be borne by the Client, as far as the mandatory local law does not provide otherwise.
- (4.5) In case of any unforeseen problems or expenses arise while carrying out the services, the Company informs the Client. In such cases, the Company shall be entitled to charge additional fees to cover extra time and to invoice extra costs necessarily incurred to complete the services.
- (4.6) If the Company is unable to perform all or parts of the services for any cause whatsoever beyond the Company's control, including the failure by Client to comply with any of its obligations provided for in the foregoing Clause 3, the Company shall nevertheless be entitled to payments of:
 - (1) The amount of all non-refundable expenses incurred by the Company; and
 - (2) A proportion of the agreed fee equal to the proportion of the services actually carried out.

5. Suspension or Termination of Services

In any case mentioned below, the Company shall be entitled to either suspend or terminate the provision of the services immediately and without any liability:

- (5.1) Failure by the Client to comply with any of its obligations under these General Terms and Conditions and such failure is not remedied within 10 days after a notice of such failure has been delivered to the Client; or
- (5.2) Any suspension of payment, arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business by Client.

6. Liability and Indemnification

(6.1) Limitation of Liability:

- (1) Clients seeking a guarantee against loss or damage should obtain appropriate insurance. The Company is neither an insurer nor a guarantor and disclaims all liability in such capacity.
- (2) Reports of Findings are issued on the basis of the information, documents and/or samples provided by, or on behalf of the Client and solely for the benefit of the Client who is obliged to act on the basis of such Reports of Findings. Neither the Company nor any of its staff, agents or subcontractors shall be liable to the Client nor to any third party for any actions taken or not taken on the basis of such Reports of Findings, or for any incorrect results arising from unclear, erroneous, incomplete, misleading or false information provided to the Company.
- (3) For any delayed, total or partial non-performance of the services arising directly or indirectly from any event beyond the Company's control, including failure by Client to comply with any of its obligations hereunder, the Company shall not be liable.
- (4) The liability of the Company in respect of any claim for loss, damage or expense of any nature and howsoever arising shall in no circumstances exceed a total aggregate sum equal to 10 times the amount of the fee paid in respect of the specific service which gives rise to such claim, and shall in any case not exceed the equivalent of 25,000 EUR in CNY.
- (5) For any indirect or consequential loss (including loss of profits), the Company shall not have any liabilities.
- (6) In case of any claim, the Client must give written notice to the Company within 30 days of discovery of the facts with all necessary documents to justify such claim. In any case, the Company shall be discharged from all liability for all claims for loss, damage or expense unless a lawsuit is brought within two years from:
 - (i) the performance date of the Company for its services which refers to the claim; or
 - (ii) the date when the service should have been completed in the event of any alleged non-performance.

- (6.2) Indemnification: Against all claims (actual or threatened) by any third party for loss, damage or expenses of whatsoever nature including all legal expenses and related costs and howsoever arising relating to the performance, purported performance or non-performance of any services, the Client shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors.

7. Obligation of Confidentiality, Copyright, Data Privacy Protection

- (7.1) The Company shall be authorized to make file copies of written documents, which have been made available to it for review and which are important for processing the order.
- (7.2) Insofar as Reports of Findings are prepared in the course of processing the order and which are subject to the protection of copyright, then the Company shall grant the Client a simple, non-transferable right to use, insofar as this is necessary and in accordance with the contractually presupposed purpose. Other rights shall not be transferred; in particular, the customer shall not be entitled to modify and/or edit audit reports or to make use of such outside of his business premises.
- (7.3) The Company and its staff which may be called in shall not disclose or use trade and business matters about which they have gained knowledge during the performance of their work without proper authorization, or unless instructed by a court or authorized body (e.g. regulatory authority, accreditation body or certification scheme owner) or otherwise legally required.

8. Miscellaneous

- (8.1) The validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired, even if any one or more provisions of these General Conditions are found to be illegal or unenforceable in any respect.
- (8.2) Client shall not directly or indirectly entice, encourage or make any offer to Company's employees to leave their employment with the Company, during the course of providing the services and for a period of one year thereafter.
- (8.3) Use of the Company's corporate name or registered marks for advertising purposes is not permitted without the Company's prior written authorization.

9. Governing Law, Jurisdiction and Dispute Settlement

- (9.1) Unless specifically agreed otherwise, all disputes arising out of or in connection with contractual relationship(s) hereunder shall be governed by the applicable laws and regulations of the People's Republic of China.
- (9.2) Place of performance for any obligation arising out of this contract shall be Shanghai, the Place of the TÜV SÜD Certification and Testing (China) Co., Ltd., Shanghai branch, unless otherwise expressly agreed by the parties.

10. Languages

In the event of any discrepancy between the English and the Chinese version of these General Terms and Conditions, the English version shall prevail.