

Safety Data Sheet

Highlighter ink-dye (Blue)

Version: V1.0.0.1

Creation Date: 2020/03/24

Revision Date: 2020/03/24

*Prepared according to EU regulation No. 2015/830

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

Product identifier

Product Name	Highlighter ink-dye (Blue)
Cat No.	
CAS NO.	-
EC NO.	-
Molecular Formula	-

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	Shanghai NNW New Materials Technology Co., Ltd.
Address of the company	ROOM 402, Building 17, Lane 268, Lingxin Road, Changning District Shanghai 200335, CHINA
Post code	200335
Telephone number	021-64476059
Fax number	021-64476096
E-mail address	tech@nnwchina.com

Emergency phone number

Emergency phone number	13311812200
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2 Hazards identification

CLP classification according to Regulation (EC) No. 1272/2008

According to Regulation (EC) No 1272/2008 and its amendments. Not classified as a dangerous substance.

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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Other hazards

	Not applicable
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3 Composition/information on ingredients

Component	Cas No.	EC No.	Index No.	Hazard classification according to CLP	Concentration (weight percent, %)
Glycerol	56-81-5	200-289-5	-	Not Classified	15
Water	7732-18-5	231-791-2	-	Not Classified	82~84
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	2650-18-2	220-168-0	-	Not Classified	1~3

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	Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and 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	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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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

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in 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, mist, gas or dust.

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

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Keep away from heat/sparks/open flames/ hot surfaces.
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◆ Measures to prevent aerosol and dust generation

1	Not applicable.
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◆ Advice on general occupational hygiene

1	Wash hands and face after using of the substances.
2	Replace the contaminated clothing immediately.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed .
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

Specific end uses

1	In addition to use mentioned in the first parts, unforeseen other specific end uses.
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8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
	USA - OSHA	-	15	-	-
	South Korea	-	10	-	-

Glycerol mist 56-81-5	Ireland	-	10	-	-
	Germany (DFG)	-	50	-	100
	Belgium	-	10	-	-
	Australia	-	10	-	-

◆ 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) .

◆ Derived No effect level(DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects(local)	Acute effects(systemic)	Chronic effects(local)	Chronic effects(systemic)
Glycerol 56-81-5	Inhalation	No data available	No data available	56 mg/m ³	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Water 7732-18-5	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene)](3-sulphonatobenzyl)ammonium 2650-18-2	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Predicted No Effect Concentration (PNEC)	No information available
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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.

Personal protection equipment

General requirement	
Eye protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).
Hand protection	Wear protective gloves (such as butyl rubber) , passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.
Respiratory protection	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	Wear fire/flame resistant/retardant clothing and antistatic boots.

9 Physical and chemical properties

Appearance	Blue
Odor	No information available
Odor threshold	No information available
pH	7.00 (20°C,Water)

Melting point/freezing point(°C)	0 (Water)
Initial boiling point and boiling range(°C)	100 (Water)
Flash point(Closed cup,°C)	No information available
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit: No information available; Lower limit: No information available
Vapor pressure	2.33kPa (Water)
Vapor density(Air= 1)	>1 (Water)
Relative density(Water=1)	1 (Water)
Solubility(mg/L)	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Viscosity (mm ² /s)	No information available
Explosive properties	No information available
Oxidizing properties	No information available

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. Alkali, sodium, calcium, and other active metal, 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)
Glycerol	56-81-5	12600mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available

Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	56-81-5	Glycerol	Not Listed	Not Listed
2	7732-18-5	Water	Not Listed	Not Listed
3	2650-18-2	Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	Not Listed	Not Listed

Others

Highlighter ink-dye (Blue)	
Skin corrosion/irritation	No information available
Serious eye damage/irritation	No information available
Skin sensitization	No information available
Respiratory sensitization	No information available
Reproductive toxicity	No information available

STOT-single exposure	No information available
STOT-repeated exposure	No information available
Aspiration hazard	No information available
Germ cell mutagenicity	No information available
Reproductive toxicity(additional)	No information available

12 Ecological information

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	LC 50: 68100mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	No information available	No information available	No information available

Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
酸性兰 9	2650-18-2	High	High
水	7732-18-5	Low	Low

Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	Remarks
酸性兰 9	2650-18-2	Low	Log Kow=2.0459
水	7732-18-5	Low	Log Kow=-1.38

Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
酸性兰 9	2650-18-2	Low	10000000000
水	7732-18-5	Low	14.3

Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 2015/830)
甘油	56-81-5	not PBT/vPvB
水	7732-18-5	not PBT/vPvB
酸性兰 9	2650-18-2	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 waste chemicals and contaminated packaging.

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
Glycerol	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	√	√	√	√	√	√	√	√

- [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

European chemical inventory

Component	A	B	C	D	E	F	G
Glycerol	×	×	×	√	√	×	×
Water	×	×	×	√	×	×	×
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	×	×	×	√	×	×	×

- [A]** Candidate list of Substances of Very High Concern for authorization under EU REACH regulation
- [B]** Substances requiring authorisation under EU REACH regulation
- [C]** Substances restricted under EU REACH
- [D]** Pre-registered substances under EU REACH
- [E]** Registered substances under EU REACH
- [F]** Substance Evaluation – CoRAP under EU REACH
- [G]** List of priority substances under EU water policy (Directive 2455/2001/EC)

16 Others

Information on revision

Creation Date	2020/03/24
Revision Date	2020/03/24
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:ChemDplus, 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/>.

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
LC50-Lethal Concentration 50%	LD50-Lethal Dose 50%
NOEC-No Observed Effect Concentration	EC50-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 REACH Regulation. 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.



Technical Report: (6615)190-0087
Date Received: JUL.09, 2015
Mod. Date: /

JUL.13, 2015
Page 1 of 1

MS.SUJICHENG
SHANGHAI NNW NEW MATERIALS TECHNOLOGY CO.,LTD
ROOM106,NO.33 LE SHAN ROAD,SHANGHAI 200030,CHINA

Sample Description:	HIGHLIGHTER INK		
Manufacturer:	/	PO No.:	/
Buyer:	/	Style:	/
Country of Origin:		Country of Destination:	EU
Color:	GREEN	SKU:	/
Protocol No.:	/	Previous Report No.:	/

BVCPS (Shanghai) contact information for this report

Technical Questions:

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Concerns About Billing and General Inquires:

Primary Contact: Sunny Qi 24166742, E-mail: Sunny.Qi@cn.bureauveritas.com
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BUREAU VERITAS
CONSUMER PRODUCTS SERVICES DIVISION (SHANGHAI)

Operation Manager-Hardline Division

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 05.07.2015

05.07.2015

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

- **1.1 Product identifier**
- **Trade name:** *Highlighter ink(green)*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Writing
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SHANGHAI NNW NEW MATERIALS TECHNOLOGY CO.,LTD.
ROOM 106, NO.33 LE SHAN ROAD, SHANGHAI, CHINA
Post code: 200030
Tel: +86-13311812200
Fax: +86-21-64476096
Email: nnw609@126.com
- **1.4 Emergency telephone number:**
+86-21-64476059-609
9:00-17:30

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008.**
The product is not classified according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:** Void

· Non-dangerous components:		
CAS: 56-81-5 EINECS: 200-289-5	glycerol	15,0%
CAS: 1328-53-6 EINECS: 215-524-7	Phthalocyanine Green	1-3,0%
CAS: 6358-69-6	1,3,6-Pyrenetrisulfonic acid, 8-hydroxy-, trisodium salt	0,5-1,0%
CAS: 2650-18-2	diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl) ammonium	0,2-0,5%
CAS: 7732-18-5 EINECS: 231-791-2	water, distilled, conductivity or of similar purity	80,5-83,3%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.

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- **After swallowing:** *If symptoms persist consult doctor.*
- **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*
- **5.3 Advice for firefighters**
- **Protective equipment:** *No special measures required.*

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures:** *Not required.*
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** *No special measures required.*
- **Information about fire - and explosion protection:** *No special measures required.*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** *No further data; see item 7.*
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** *The lists valid during the making were used as basis.*
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** *Not required.*
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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

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- **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Goggles recommended during refilling

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Colour:	Green
· Odour:	Odourless
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition:	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not determined.
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Self-igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Miscible
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.

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- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **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.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** 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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number	
· ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name	
· ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	
· Marine pollutant:	No

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 05.07.2015

05.07.2015

Trade name: **Highlighter ink(green)**

(Contd. of page 4)

· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	-

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

This safety data sheet (6615)177-0811-3 is prepared upon applicant SHANGHAI NNW NEW MATERIALS TECHNOLOGY CO.,LTD.'s request. However, no SDS of ingredients was provided by the applicant. And no further testing data provided. Therefore, this document is compiled in accordance with what we obtained.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

Safety Data Sheet

Highlighter ink-dye (Green)

Version: V1.0.0.1

Creation Date: 2020/03/24

Revision Date: 2020/03/24

*Prepared according to EU regulation No. 2015/830

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

Product identifier

Product Name	Highlighter ink-dye (Green)
Cat No.	
CAS NO.	-
EC NO.	-
Molecular Formula	-

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	Shanghai NNW New Materials Technology Co., Ltd.
Address of the company	ROOM 402, Building 17, Lane 268, Lingxin Road, Changning District Shanghai 200335, CHINA
Post code	200335
Telephone number	021-64476059
Fax number	021-64476096
E-mail address	tech@nnwchina.com

Emergency phone number

Emergency phone number	13311812200
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2 Hazards identification

CLP classification according to Regulation (EC) No. 1272/2008

According to Regulation (EC) No 1272/2008 and its amendments. Not classified as a dangerous substance.

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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Other hazards

	Not applicable
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3 Composition/information on ingredients

Component	Cas No.	EC No.	Index No.	Hazard classification according to CLP	Concentration (weight percent, %)
Glycerol	56-81-5	200-289-5	-	Not Classified	15
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	6358-69-6	228-783-6	-	Not Classified	0.5~1
Water	7732-18-5	231-791-2	-	Not Classified	83.5~84.3
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	2650-18-2	220-168-0	-	Not Classified	0.2~0.5

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	Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and 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	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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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

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in 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, mist, gas or dust.

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

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Keep away from heat/sparks/open flames/ hot surfaces.
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◆ Measures to prevent aerosol and dust generation

1	Not applicable.
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◆ Advice on general occupational hygiene

1	Wash hands and face after using of the substances.
2	Replace the contaminated clothing immediately.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed .
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

Specific end uses

1	In addition to use mentioned in the first parts, unforeseen other specific end uses.
---	--

8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
	USA - OSHA	-	15	-	-

Glycerol. mist 56-81-5	South Korea	-	10	-	-
	Ireland	-	10	-	-
	Germany (DFG)	-	50	-	100
	Belgium	-	10	-	-
	Australia	-	10	-	-

◆ 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) .

◆ Derived No effect level(DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects(local)	Acute effects(systemic)	Chronic effects(local)	Chronic effects(systemic)
Glycerol 56-81-5	Inhalation	No data available	No data available	56 mg/m ³	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate 6358-69-6	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Water 7732-18-5	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium 2650-18-2	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Predicted No Effect Concentration (PNEC)	No information available
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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.

Personal protection equipment

General requirement	
Eye protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).
Hand protection	Wear protective gloves (such as butyl rubber) , passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.
Respiratory protection	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	Wear fire/flame resistant/retardant clothing and antistatic boots.

9 Physical and chemical properties

Appearance	Green
Odor	No information available
Odor threshold	No information available
pH	7.00 (20°C, Water)
Melting point/freezing point(°C)	0 (Water)
Initial boiling point and boiling range(°C)	100 (Water)
Flash point(Closed cup, °C)	No information available
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit: No information available; Lower limit: No information available
Vapor pressure	2.33kPa (Water)
Vapor density(Air=1)	>1 (Water)
Relative density(Water=1)	1 (Water)
Solubility(mg/L)	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Viscosity (mm ² /s)	No information available
Explosive properties	No information available
Oxidizing properties	No information available

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. Alkali, sodium, calcium, and other active metal, 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)
Glycerol	56-81-5	12600mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available

Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	56-81-5	Glycerol	Not Listed	Not Listed
2	6358-69-6	Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	Not Listed	Not Listed
3	7732-18-5	Water	Not Listed	Not Listed
4	2650-18-2	Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	Not Listed	Not Listed

Others

Highlighter ink-dye (Green)	
Skin corrosion/irritation	No information available

Serious eye damage/irritation	No information available
Skin sensitization	No information available
Respiratory sensitization	No information available
Reproductive toxicity	No information available
STOT-single exposure	No information available
STOT-repeated exposure	No information available
Aspiration hazard	No information available
Germ cell mutagenicity	No information available
Reproductive toxicity(additional)	No information available

12 Ecological information

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	LC 50: 68100mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	No information available	No information available	No information available

Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
酸性兰 9	2650-18-2	High	High
溶剂绿7	6358-69-6	High	High
水	7732-18-5	Low	Low

Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	Remarks
酸性兰 9	2650-18-2	Low	Log Kow=2.0459
溶剂绿7	6358-69-6	Low	Log Kow=-0.6
水	7732-18-5	Low	Log Kow=-1.38

Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
酸性兰 9	2650-18-2	Low	10000000000
溶剂绿7	6358-69-6	Low	443600
水	7732-18-5	Low	14.3

Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 2015/830)
甘油	56-81-5	not PBT/vPvB
溶剂绿7	6358-69-6	not PBT/vPvB
水	7732-18-5	not PBT/vPvB
酸性兰 9	2650-18-2	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.
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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 waste chemicals and contaminated packaging.

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
Glycerol	√	√	√	√	√	√	√	√
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	√	√	√	√	√	√	√	√

[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

European chemical inventory

Component	A	B	C	D	E	F	G
Glycerol	×	×	×	√	√	×	×
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	×	×	×	√	×	×	×
Water	×	×	×	√	×	×	×
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	×	×	×	√	×	×	×

[A] Candidate list of Substances of Very High Concern for authorization under EU REACH regulation

[B] Substances requiring authorisation under EU REACH regulation

[C] Substances restricted under EU REACH

[D] Pre-registered substances under EU REACH

[E] Registered substances under EU REACH

[F] Substance Evaluation – CoRAP under EU REACH

[G] List of priority substances under EU water policy (Directive 2455/2001/EC)

16 Others

Information on revision

Creation Date	2020/03/24
Revision Date	2020/03/24
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.chemportal.org/chemportal/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/>.

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
LC50-Lethal Concentration 50%	LD50-Lethal Dose 50%
NOEC-No Observed Effect Concentration	EC50-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

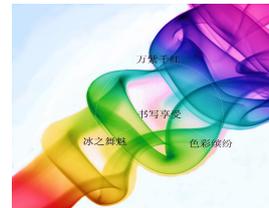
Disclaimer

This Safety Data Sheet (SDS) was prepared according to REACH Regulation 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.

the world of ink



Shanghai  University
Nano-Science & Technology Institute
Special Ink R&D Department
Tel: 021-56331532 Fax: 021-56331117
Web: <http://www.inksh.com>
E-mail: sales@inksh.com



Safety Data Sheet

(According to (EC)1272/2008)

1. Identification of the Substance/Preparation/Company

Product details

Trade name: **Highlighter Ink(CF5861)/red**

Substance/Mixture: Mixture/preparation

Form:Fluid

Relevant identified uses advised against

Identified uses: Laboratory chemicals, Manufacture of the substance/mixture

Product type: _

Manufacturer /Supplier:

Shanghai University Nano-Science & Technology Institute Special Ink R&D Department

No.149 Yanchang Road,Shanghai,China

Phone: 86-21-56331532

Fax: 86-21-56331117

Web: www.inksh.com

Further information obtainable from:

Technical service , Howard Young

Tel: 86-021-56331532

Mobile : 86-13761677741

Information in case of emergency:

Tel: 86-13761677741

2. Hazards identification

Classification of the mixture:

Classification: The mixture is not classified according European Regulation CLP N° 1272/2008 /EC with its adaptation.

Label elements:

No marking according Regulation CLP N°1272/2008/EC.

Others Hazard:

There is not having other hazard classification information about the mixture for present knowledge.

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3. Composition /information on ingredients

Chemical characterization

Mixture of the following substances: containing non-hazardous substances and coloring pigments.

Description: The following material classification according to 1999/45/EC and CLP N°1272/2008/EC

Components:					
EINECS/ELINCS	CAS	Common Name	1999/45/EC	CLP	Cone.
---	12221-86-2	C.I.basic yellow 40	Non-dangerous		0.7
---	3648-36-0	Astrazone pink FG	Non-dangerous		1.7

---	56-81-5	Glycerin Glycerol	Non-dangerous		15
	7732-18-5	water	Non-dangerous		82.6

Additional information: For the wording of the listed risk phrases refer to section 16.

4. First –aid measures

Inhalation: Move the affected person away from the contaminated area and into the fresh air

Skin contact: Immediately wash and rinse with plenty of water

Eye contact: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 min. minimum)
Always refer to an eye specialist, even if there are no mediate symptoms.

Ingestion: Never attempt to induce vomiting . Call a doctor immediately

5. Fire –fighting measures

Suitable extinguishing media: Carbon dioxide (CO₂). Foam. Powders

Not suitable extinguishing media: None to our knowledge. If there is a fire close by using suitable extinguishing agents

Specific hazards: During combustion:, toxic vapors may be released if product is heated to dryness.

Specific fire fighting methods: Do not attempt to fight the fire without suitable protective equipment may intervene

Protection of fire-fighters: Self-contained breathing apparatus Complete protective clothing

6. Accidental release measure

Personal precautions: Avoid contact with skin and eyes .Do not breathe vapour; Do not smoking..

Environmental precautions: Do not discharge into drains and rivers

Methods for cleaning up:

Neutralization: Absorb spillage with: inert absorbent material earth or sand

Cleaning/decontamination: Wash non-recoverable remainder with large amounts of water

Disposal: Dispose of contaminated materials in accordance with current regulations

the world of ink



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7. Handling and storage

HANDLING

Technical measures: Vapour extraction at source . Material and equipment suitable for use with
Strongly colored water based liquids.

Precautions: Avoid any direct contact with the product . Work in a well-ventilated area .Smoking is
forbidden .Avoid the build-up of electrostatic charge

STORAGE

Technical measures: The floor of the depot must be impermeable, noncombustible and designed to form a basin, in
order that stored liquids should not, under any circumstances, be released outside

Storage conditions:

Recommended: Store: in a cool, well-ventilated area, the container tightly closed away from any source of ignition

Incompatible materials: Strong oxidizing agents

Packaging materials:

Not suitable: Can cause some metals to rust

8. Exposure controls / personal protection

Engineering measures: Ensure good ventilation of the work station .Extraction to remove vapours at their source

Occupational exposure limits:

France: Ethylene Glycol

Personal protective equipment:

Respiratory protection: In the event of insufficient ventilation:.,Suitable breathing apparatus

Hand protection: Impermeable protective gloves

Eye protection: Safety spectacles

Skin and body protection: Suitable clothing

Collective emergency equipment: Eye fountain .Safety shower

Hygiene measures: Do not drink, eat or smoke in the workplace

the world of ink



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E-mail: sales@inksh.com



9. Physical and chemical properties

General Information
Form : Fluid
Colour : CF5861 RED
Odour : watery slightly
Ignition temperature : 287 °C
Self-igniting : Not determined
Danger of explosion : product does not present an explosion hazard
PH : 7.0-8.3
Vapour density (air=1): greater than 1
Solubility
in water : Miscible (in all proportions)
in organic solvents: Miscible (in all proportions) with: glycerol

10. Stability and reactivity

Stability: Stable at ambient temperature and under normal conditions of use

Hazardous reactions:

Conditions to avoid: May ignite on heating to dryness when all water is evaporated

Materials to avoid: Strong oxidizing agents

Hazardous decomposition

products: On combustion or on thermal decomposition

(pyrolysis) releases: Carbon oxides (CO, CO₂)

11. Toxicological information

Acute toxicity: Vapours may cause drowsiness and dizziness

Acute symptoms : On ingestion: Nausea., Vomiting., Central Nervous, System depressant ,

On inhalation: Dizziness, Headaches

Local effects: At high concentrations, the vapours can be irritating to the eyes, nose and throat .Repeated or prolonged contact may cause slight irritation to the skin,

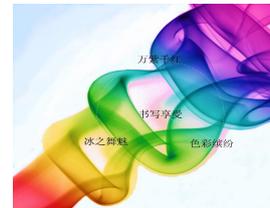
Eye contact: May cause severe ocular lesions

Further information: Above information is for the ink. The ink will be contained in the fibrous reservoir of a small capacity marker containing 3 grams or less which will limit considerably the exposure possibilities for the user.

the world of ink



Shanghai  University
Nano-Science & Technology Institute
Special Ink R&D Department
Tel: 021-56331532 Fax: 021-56331117
Web: <http://www.inksh.com>
E-mail: sales@inksh.com



12. Ecological information

ECOTOXICITY: Effects on the aquatic environment: Ethylene Glycol
May cause adverse effects to the aquatic environment.

13. Disposal considerations

WASTE FROM PRODUCT:

Destruction/Disposal: Dispose of in accordance with relevant local regulations

CONTAMINATED PACKAGING:

Destruction/disposal: Destroy at an authorized site

NOTE : The user's attention is drawn to the possible existence of specific European, national or
Local regulations regarding disposal

14. Transport information

International regulations: Not regulated

15. Regulatory information

The product is no classified in accordance with European Regulation on hazardous substance: Directive
67/548/CE 30ème adaptation and on hazardous preparations: Directive 2006/8/CE

National prescriptions:

France: Maladies professionnelles (tableaux (x) n° 84) concern

NOTE : The regulatory information given above only indicate the principal regulations specifically applicable
to the product described in the MSDS

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. This safety data sheet was prepared in accordance with Regulation (EC) 1272/2008 (Regulation on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006).

Safety Data Sheet

Highlighter ink (Orange)

Version: V1.0.0.1

Creation Date: 2020/03/24

Revision Date: 2020/03/24

*Prepared according to EU regulation No. 2015/830

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

Product identifier

Product Name	Highlighter ink (Orange)
Cat No.	
CAS NO.	-
EC NO.	-
Molecular Formula	-

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	Shanghai NNW New Materials Technology Co., Ltd.
Address of the company	ROOM 402, Building17, Lane 268, Lingxin Road, Changning District Shanghai 200335, CHINA
Post code	200335
Telephone number	021-64476059
Fax number	021-64476096
E-mail address	tech@nnwchina.com

Emergency phone number

Emergency phone number	13311812200
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2 Hazards identification

CLP classification according to Regulation (EC) No. 1272/2008

Eye Damage/Irritation	Category 2
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Label elements

Hazard pictograms	
Signal word	Warning

Hazard statements

H319	Causes serious eye irritation
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Precautionary statements

◆ Prevention

P264	Wash face and hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

◆ 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.

◆ Storage

Storage

Not applicable

◆ Disposal

Disposal

Not applicable

| Other hazards

Not applicable

3 Composition/information on ingredients

Component	Cas No.	EC No.	Index No.	Hazard classification according to CLP	Concentration (weight percent, %)
Glycerol	56-81-5	200-289-5	-	Not Classified	15
Water	7732-18-5	231-791-2	-	Not Classified	78.5~82.5
3,6-bis(ethylamino)-9-[2-(methoxycarbonyl)phenyl]-2,7-dimethylxanthylium chloride	3068-39-1	221-326-1	-	Acute Toxicity – Oral, Category 4, H302; Serious Eye Damage/Irritation, Category 1, H318	0.5~1.5
3-(5-chlorobenzoxazol-2-yl)-7-(diethylamino)-2-benzopyrone	35773-43-4	252-722-2	-	Not Classified	0.5~1.5
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	6358-69-6	228-783-6	-	Not Classified	0.5~2

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	Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and 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	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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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

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in 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, mist, gas or dust.

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

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Keep away from heat/sparks/open flames/ hot surfaces.
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◆ Measures to prevent aerosol and dust generation

1	Not applicable.
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◆ Advice on general occupational hygiene

1	Wash hands and face after using of the substances.
2	Replace the contaminated clothing immediately.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed .
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

Specific end uses

1	In addition to use mentioned in the first parts, unforeseen other specific end uses.
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8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values

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Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
Glycerol mist 56-81-5	USA - OSHA	-	15	-	-
	South Korea	-	10	-	-
	Ireland	-	10	-	-
	Germany (DFG)	-	50	-	100
	Belgium	-	10	-	-
	Australia	-	10	-	-

◆ 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) .

◆ Derived No effect level(DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects(local)	Acute effects(systemic)	Chronic effects(local)	Chronic effects(systemic)
Glycerol 56-81-5	Inhalation	No data available	No data available	56 mg/m ³	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Water 7732-18-5	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
3,6-bis(ethylamino)-9-[2-(methoxycarbonyl)phenyl]-2,7-dimethylxanthylium chloride 3068-39-1	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
3-(5-chlorobenzoxazol-2-yl)-7-(diethylamino)-2-benzopyrone 35773-43-4	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate 6358-69-6	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Predicted No Effect Concentration (PNEC)	No information available
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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.

Personal protection equipment

General requirement	
Eye protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).
Hand protection	Wear protective gloves (such as butyl rubber) , passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1

Respiratory protection	standard. 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	Wear fire/flame resistant/retardant clothing and antistatic boots.

9 Physical and chemical properties

Appearance	Orange
Odor	No information available
Odor threshold	No information available
pH	7.00 (20°C,Water)
Melting point/freezing point(°C)	0 (Water)
Initial boiling point and boiling range(°C)	100 (Water)
Flash point(Closed cup,°C)	No information available
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit: No information available; Lower limit: No information available
Vapor pressure	2.33kPa (Water)
Vapor density(Air= 1)	>1 (Water)
Relative density(Water=1)	1 (Water)
Solubility(mg/L)	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Viscosity (mm²/s)	No information available
Explosive properties	No information available
Oxidizing properties	No information available

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. Alkali, sodium, calcium, and other active metal, 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)
Glycerol	56-81-5	12600mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available

Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	56-81-5	Glycerol	Not Listed	Not Listed
2	7732-18-5	Water	Not Listed	Not Listed
3	3068-39-1	3,6-bis(ethylamino)-9-[2-(methoxycarbonyl)phenyl]-2,7-dimethylxanthylum chloride	Not Listed	Not Listed
		3-(5-chlorobenzoxazol-2-yl)-7-(diethylamino)-2-		

4	35773-43-4	benzopyrone	Not Listed	Not Listed
5	6358-69-6	Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	Not Listed	Not Listed

Others

Highlighter ink (Orange)	
Skin corrosion/irritation	No information available
Serious eye damage/irritation	Causes serious eye irritation(Category 2)
Skin sensitization	No information available
Respiratory sensitization	No information available
Reproductive toxicity	No information available
STOT-single exposure	No information available
STOT-repeated exposure	No information available
Aspiration hazard	No information available
Germ cell mutagenicity	No information available
Reproductive toxicity(additional)	No information available

12 Ecological information

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	LC 50: 68100mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	No information available	No information available	No information available

Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
溶剂绿7	6358-69-6	High	High
水	7732-18-5	Low	Low

Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	Remarks
溶剂绿7	6358-69-6	Low	Log Kow=-0.6
水	7732-18-5	Low	Log Kow=-1.38

Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
溶剂绿7	6358-69-6	Low	443600
水	7732-18-5	Low	14.3

Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 2015/830)
甘油	56-81-5	not PBT/vPvB
水	7732-18-5	not PBT/vPvB
碱性红1:1	3068-39-1	not PBT/vPvB
分散黄 232	35773-43-4	not PBT/vPvB
溶剂绿7	6358-69-6	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 waste chemicals and contaminated packaging.

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
Glycerol	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√
3,6-bis(ethylamino)-9-[2-(methoxycarbonyl)phenyl]-2,7-dimethylxanthylium chloride	√	√	√	√	√	√	√	√
3-(5-chlorobenzoxazol-2-yl)-7-(diethylamino)-2-benzopyrone	√	√	√	√	√	√	√	√
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	√	√	√	√	√	√	√	√

【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

European chemical inventory

Component	A	B	C	D	E	F	G
Glycerol	×	×	×	√	√	×	×
Water	×	×	×	√	×	×	×
3,6-bis(ethylamino)-9-[2-(methoxycarbonyl)phenyl]-2,7-dimethylxanthylium chloride	×	×	×	√	×	×	×
3-(5-chlorobenzoxazol-2-yl)-7-(diethylamino)-2-benzopyrone	×	×	×	√	×	×	×
Trisodium 8-hydroxypyrene-1,3,6-trisulphonate	×	×	×	√	×	×	×

- 【A】 Candidate list of Substances of Very High Concern for authorization under EU REACH regulation
- 【B】 Substances requiring authorisation under EU REACH regulation
- 【C】 Substances restricted under EU REACH
- 【D】 Pre-registered substances under EU REACH
- 【E】 Registered substances under EU REACH
- 【F】 Substance Evaluation – CoRAP under EU REACH
- 【G】 List of priority substances under EU water policy (Directive 2455/2001/EC)

16 Others

Information on revision

Creation Date	2020/03/24
Revision Date	2020/03/24
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:ChemDplus, 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/>.

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
LC50-Lethal Concentration 50%	LD50-Lethal Dose 50%
NOEC-No Observed Effect Concentration	EC50-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 REACH Regulation 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.

Safety Data Sheet

Highlighter ink-dye (Violet)

Version: V1.0.0.1

Creation Date: 2020/03/24

Revision Date: 2020/03/24

*Prepared according to EU regulation No. 2015/830

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

Product identifier

Product Name	Highlighter ink-dye (Violet)
Cat No.	
CAS NO.	-
EC NO.	-
Molecular Formula	-

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	Shanghai NNW New Materials Technology Co., Ltd.
Address of the company	ROOM 402, Building17, Lane 268, Lingxin Road, Changning District Shanghai 200335, CHINA
Post code	200335
Telephone number	021-64476059
Fax number	021-64476096
E-mail address	tech@nnwchina.com

Emergency phone number

Emergency phone number	13311812200
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2 Hazards identification

CLP classification according to Regulation (EC) No. 1272/2008

According to Regulation (EC) No 1272/2008 and its amendments. Not classified as a dangerous substance.

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
----------------	----------------

◆ Disposal

Disposal	Not applicable
-----------------	----------------

Other hazards

	Not applicable
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3 Composition/information on ingredients

Component	Cas No.	EC No.	Index No.	Hazard classification according to CLP	Concentration (weight percent, %)
Glycerol	56-81-5	200-289-5	-	Not Classified	15
Water	7732-18-5	231-791-2	-	Not Classified	80.5~83.5
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	2650-18-2	220-168-0	-	Not Classified	1~3
Hydrogen 3,6-bis(diethylamino)-9-(2,4-disulphonatophenyl)xanthylium, sodium salt	3520-42-1	222-529-8	-	Not Classified	0.5~1.5

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	Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and 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	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
---	--

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

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in 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, mist, gas or dust.

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

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Keep away from heat/sparks/open flames/ hot surfaces.
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◆ Measures to prevent aerosol and dust generation

1	Not applicable.
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◆ Advice on general occupational hygiene

1	Wash hands and face after using of the substances.
2	Replace the contaminated clothing immediately.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed .
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

Specific end uses

1	In addition to use mentioned in the first parts, unforeseen other specific end uses.
---	--

8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³

Glycerol, mist 56-81-5	USA - OSHA	-	15	-	-
	South Korea	-	10	-	-
	Ireland	-	10	-	-
	Germany (DFG)	-	50	-	100
	Belgium	-	10	-	-
Australia	-	10	-	-	

◆ Biological limit values

Biological limit values	No information available
--------------------------------	--------------------------

◆ 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) .

◆ Derived No effect level(DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects(local)	Acute effects(systemic)	Chronic effects(local)	Chronic effects(systemic)
Glycerol 56-81-5	Inhalation	No data available	No data available	56 mg/m ³	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Water 7732-18-5	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium 2650-18-2	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Hydrogen 3,6-bis(diethylamino)-9-(2,4-disulphonatophenyl)xanthylium, sodium salt 3520-42-1	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Predicted No Effect Concentration (PNEC)	No information available
---	--------------------------

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.

Personal protection equipment

General requirement	
Eye protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).
Hand protection	Wear protective gloves (such as butyl rubber) , passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.
Respiratory protection	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	Wear fire/ flame resistant/retardant clothing and antistatic boots.

9 Physical and chemical properties

Appearance	Violet
Odor	No information available
Odor threshold	No information available
pH	7.00 (20°C, Water)
Melting point/freezing point(°C)	0 (Water)
Initial boiling point and boiling range(°C)	100 (Water)
Flash point(Closed cup, °C)	No information available
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit: No information available; Lower limit: No information available
Vapor pressure	2.33kPa (Water)
Vapor density(Air=1)	>1 (Water)
Relative density(Water=1)	1 (Water)
Solubility(mg/L)	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Viscosity (mm ² /s)	No information available
Explosive properties	No information available
Oxidizing properties	No information available

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. Alkali, sodium, calcium, and other active metal, 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)
Glycerol	56-81-5	12600mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available
Hydrogen 3,6-bis(diethylamino)-9-(2,4-disulphonatophenyl)xanthylum, sodium salt	3520-42-1	10300mg/kg(Mouse)	No information available	No information available

Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	56-81-5	Glycerol	Not Listed	Not Listed
2	7732-18-5	Water	Not Listed	Not Listed
3	2650-18-2	Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	Not Listed	Not Listed
4	3520-42-1	Hydrogen 3,6-bis(diethylamino)-9-(2,4-disulphonatophenyl)xanthylum, sodium salt	Not Listed	Not Listed

Others

Highlighter ink-dye (Violet)	
Skin corrosion/irritation	No information available
Serious eye damage/irritation	No information available
Skin sensitization	No information available
Respiratory sensitization	No information available
Reproductive toxicity	No information available
STOT-single exposure	No information available
STOT-repeated exposure	No information available
Aspiration hazard	No information available
Germ cell mutagenicity	No information available
Reproductive toxicity(additional)	No information available

12 Ecological information

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	LC 50: 68100mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	No information available	No information available	No information available

Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
酸性兰 9	2650-18-2	High	High
水	7732-18-5	Low	Low

Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	Remarks
酸性兰 9	2650-18-2	Low	Log Kow=2.0459
水	7732-18-5	Low	Log Kow=-1.38

Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
酸性兰 9	2650-18-2	Low	10000000000
水	7732-18-5	Low	14.3

Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 2015/830)
甘油	56-81-5	not PBT/vPvB
水	7732-18-5	not PBT/vPvB
酸性兰 9	2650-18-2	not PBT/vPvB
酸性红52	3520-42-1	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 waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	Not applicable
---------------------------	----------------

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
---------------------	--

UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
---------------	--

15 Regulatory information

International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS
Glycerol	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	√	√	√	√	√	√	√	√
Hydrogen 3,6-bis(diethylamino)-9-(2,4-disulphonatophenyl)xanthylium, sodium salt	√	√	√	√	√	√	√	√

[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

European chemical inventory

Component	A	B	C	D	E	F	G
Glycerol	×	×	×	√	√	×	×
Water	×	×	×	√	×	×	×
Diammonio(ethyl)[4-[[4-[ethyl(3-sulphonatobenzyl)amino]phenyl](2-sulphonatophenyl)methylene]cyclohexa-2,5-dien-1-ylidene](3-sulphonatobenzyl)ammonium	×	×	×	√	×	×	×
Hydrogen 3,6-bis(diethylamino)-9-(2,4-disulphonatophenyl)xanthylium, sodium salt	×	×	×	√	×	×	×

[A] Candidate list of Substances of Very High Concern for authorization under EU REACH regulation

[B] Substances requiring authorisation under EU REACH regulation

[C] Substances restricted under EU REACH

[D] Pre-registered substances under EU REACH

[E] Registered substances under EU REACH

[F] Substance Evaluation – CoRAP under EU REACH

【G】 List of priority substances under EU water policy (Directive 2455/2001/EC)

16 Others

Information on revision

Creation Date	2020/03/24
Revision Date	2020/03/24
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:ChemDplus, 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】 Gemany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

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
LC50-Lethal Concentration 50%	LD50-Lethal Dose 50%
NOEC-No Observed Effect Concentration	EC50-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

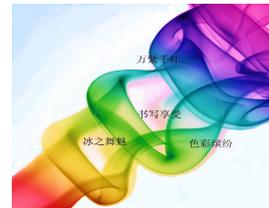
Disclaimer

This Safety Data Sheet (SDS) was prepared according to REACh Regulation 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.

the world of ink



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Nano-Science & Technology Institute
Special Ink R&D Department
Tel: 021-56331532 Fax: 021-56331117
Web: <http://www.inksh.com>
E-mail: sales@inksh.com



Safety Data Sheet

(According to (EC)1272/2008)

1. Identification of the Substance/Preparation/Company

Product details

Trade name: **Highlighter Ink(CF5861)/red**

Substance/Mixture: Mixture/preparation

Form:Fluid

Relevant identified uses advised against

Identified uses: Laboratory chemicals, Manufacture of the substance/mixture

Product type: _

Manufacturer /Supplier:

Shanghai University Nano-Science & Technology Institute Special Ink R&D Department

No.149 Yanchang Road,Shanghai,China

Phone: 86-21-56331532

Fax: 86-21-56331117

Web: www.inksh.com

Further information obtainable from:

Technical service , Howard Young

Tel: 86-021-56331532

Mobile : 86-13761677741

Information in case of emergency:

Tel: 86-13761677741

2. Hazards identification

Classification of the mixture:

Classification: The mixture is not classified according European Regulation CLP N° 1272/2008 /EC with its adaptation.

Label elements:

No marking according Regulation CLP N°1272/2008/EC.

Others Hazard:

There is not having other hazard classification information about the mixture for present knowledge.

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3. Composition /information on ingredients

Chemical characterization

Mixture of the following substances: containing non-hazardous substances and coloring pigments.

Description: The following material classification according to 1999/45/EC and CLP N°1272/2008/EC

Components:					
EINECS/ELINCS	CAS	Common Name	1999/45/EC	CLP	Cone.
---	12221-86-2	C.I.basic yellow 40	Non-dangerous		0.7
---	3648-36-0	Astrazone pink FG	Non-dangerous		1.7

---	56-81-5	Glycerin Glycerol	Non-dangerous		15
	7732-18-5	water	Non-dangerous		82.6

Additional information: For the wording of the listed risk phrases refer to section 16.

4. First –aid measures

Inhalation: Move the affected person away from the contaminated area and into the fresh air

Skin contact: Immediately wash and rinse with plenty of water

Eye contact: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 min. minimum)
Always refer to an eye specialist, even if there are no mediate symptoms.

Ingestion: Never attempt to induce vomiting . Call a doctor immediately

5. Fire –fighting measures

Suitable extinguishing media: Carbon dioxide (CO2). Foam. Powders

Not suitable extinguishing media: None to our knowledge. If there is a fire close by using suitable extinguishing agents

Specific hazards: During combustion:, toxic vapors may be released if product is heated to dryness.

Specific fire fighting methods: Do not attempt to fight the fire without suitable protective equipment may intervene

Protection of fire-fighters: Self-contained breathing apparatus Complete protective clothing

6. Accidental release measure

Personal precautions: Avoid contact with skin and eyes .Do not breathe vapour; Do not smoking..

Environmental precautions: Do not discharge into drains and rivers

Methods for cleaning up:

Neutralization: Absorb spillage with: inert absorbent material earth or sand

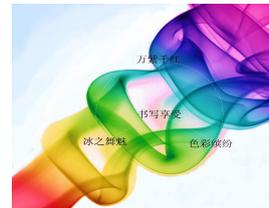
Cleaning/decontamination: Wash non-recoverable remainder with large amounts of water

Disposal: Dispose of contaminated materials in accordance with current regulations

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7. Handling and storage

HANDLING

Technical measures: Vapour extraction at source . Material and equipment suitable for use with
Strongly colored water based liquids.

Precautions: Avoid any direct contact with the product . Work in a well-ventilated area .Smoking is
forbidden .Avoid the build-up of electrostatic charge

STORAGE

Technical measures: The floor of the depot must be impermeable, noncombustible and designed to form a basin, in
order that stored liquids should not, under any circumstances, be released outside

Storage conditions:

Recommended: Store: in a cool, well-ventilated area, the container tightly closed away from any source of ignition

Incompatible materials: Strong oxidizing agents

Packaging materials:

Not suitable: Can cause some metals to rust

8. Exposure controls / personal protection

Engineering measures: Ensure good ventilation of the work station .Extraction to remove vapours at their source

Occupational exposure limits:

France: Ethylene Glycol

Personal protective equipment:

Respiratory protection: In the event of insufficient ventilation:.,Suitable breathing apparatus

Hand protection: Impermeable protective gloves

Eye protection: Safety spectacles

Skin and body protection: Suitable clothing

Collective emergency equipment: Eye fountain .Safety shower

Hygiene measures: Do not drink, eat or smoke in the workplace

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9. Physical and chemical properties

General Information
Form : Fluid Colour : CF5861 RED Odour : watery slightly
Ignition temperature : 287 °C
Self-igniting : Not determined
Danger of explosion : product does not present an explosion hazard
PH : 7.0-8.3
Vapour density (air=1): greater than 1
Solubility in water : Miscible (in all proportions) in organic solvents: Miscible (in all proportions) with: glycerol

10. Stability and reactivity

Stability: Stable at ambient temperature and under normal conditions of use

Hazardous reactions:

Conditions to avoid: May ignite on heating to dryness when all water is evaporated

Materials to avoid: Strong oxidizing agents

Hazardous decomposition

products: On combustion or on thermal decomposition

(pyrolysis) releases: Carbon oxides (CO, CO₂)

11. Toxicological information

Acute toxicity: Vapours may cause drowsiness and dizziness

Acute symptoms : On ingestion: Nausea., Vomiting., Central Nervous, System depressant ,

On inhalation: Dizziness, Headaches

Local effects: At high concentrations, the vapours can be irritating to the eyes, nose and throat .Repeated or prolonged contact may cause slight irritation to the skin,

Eye contact: May cause severe ocular lesions

Further information: Above information is for the ink. The ink will be contained in the fibrous reservoir of a small capacity marker containing 3 grams or less which will limit considerably the exposure possibilities for the user.

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12. Ecological information

ECOTOXICITY: Effects on the aquatic environment: Ethylene Glycol
May cause adverse effects to the aquatic environment.

13. Disposal considerations

WASTE FROM PRODUCT:

Destruction/Disposal: Dispose of in accordance with relevant local regulations

CONTAMINATED PACKAGING:

Destruction/disposal: Destroy at an authorized site

NOTE : The user's attention is drawn to the possible existence of specific European, national or
Local regulations regarding disposal

14. Transport information

International regulations: Not regulated

15. Regulatory information

The product is no classified in accordance with European Regulation on hazardous substance: Directive
67/548/CE 30ème adaptation and on hazardous preparations: Directive 2006/8/CE

National prescriptions:

France: Maladies professionnelles (tableaux (x) n° 84) concern

NOTE : The regulatory information given above only indicate the principal regulations specifically applicable
to the product described in the MSDS

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. This safety data sheet was prepared in accordance with Regulation (EC) 1272/2008 (Regulation on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006).



Technical Report: (6615)177-0811
Date Received: JUN.26, 2015
Mod. Date: JUL.08, 2015

JUL.13, 2015
Page 1 of 1

MS.SUJICHENG
SHANGHAI NNW NEW MATERIALS TECHNOLOGY CO.,LTD
ROOM106,NO.33 LE SHAN ROAD,SHANGHAI 200030,CHINA

Sample Description:	HIGHLIGHTER INK-DYE	PO No.:	/
Manufacturer:	/	Style:	/
Buyer:	/	Country of Destination:	E U
Country of Origin:		SKU:	/
Color:	YELLOW	Previous Report No.:	/
Protocol No.:	/		

BVCPS (Shanghai) contact information for this report

Technical Questions:

Primary Contact: Sonia He 24166789, E-mail: Sonia.He@cn.bureauveritas.com
Back-Up Contact: Roy Fan 24166758, E-mail: Roy.Fan@cn.bureauveritas.com

Concerns About Billing and General Inquires:

Primary Contact: Sunny Qi 24166742, E-mail: Sunny.Qi@cn.bureauveritas.com
Back-Up Contact: Sammy Ma 24166713, E-mail: Sammy.Ma@cn.bureauveritas.com

BUREAU VERITAS
CONSUMER PRODUCTS SERVICE DIVISION (SHANGHAI)

ANDY WANG
SENIOR OPERATION MANAGER (HARDLINE DIVISION)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.07.2015

06.07.2015

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

- **1.1 Product identifier**
- **Trade name:** *Highlighter ink-dye (yellow)*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** *Writing*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*SHANGHAI NNW NEW MATERIALS TECHNOLOGY CO.,LTD.
 ROOM 106, NO.33 LE SHAN ROAD, SHANGHAI, CHINA
 Post code: 200030
 Tel: +86-13311812200
 Fax: +86-21-64476096
 Email: nnw609@126.com*
- **1.4 Emergency telephone number:**
*+86-21-64476059-609
 9:00-17:30*

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008.**
The product is not classified according to the CLP regulation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** *Void*
- **Hazard pictograms** *Void*
- **Signal word** *Void*
- **Hazard statements** *Void*
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** *Mixture of substances listed below with nonhazardous additions.*
- **Dangerous components:** *Void*

- **Non-dangerous components:**

CAS: 56-81-5 EINECS: 200-289-5	<i>glycerol</i>	<i>15,0%</i>
CAS: 6358-69-6	<i>1,3,6-Pyrenetrisulfonic acid, 8-hydroxy-, trisodium salt</i>	<i>0,2-1,0%</i>
CAS: 7732-18-5 EINECS: 231-791-2	<i>water, distilled, conductivity or of similar purity</i>	<i>84-84,8%</i>

- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

SECTION 4: First aid measures

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

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.07.2015

06.07.2015

Trade name: **Highlighter ink-dye (yellow)**

(Contd. of page 1)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures:** Not required.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- **Eye protection:** Goggles recommended during refilling

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
· Form:	Fluid
· Colour:	Yellow
· Odour:	Odourless
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition:	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.
· Flash point:	Not determined.
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Self-igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Miscible
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

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

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SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **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.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** 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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, ADN, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class 	Void
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: 	No

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· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	-

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

This safety data sheet (6615)177-0203-7 is prepared upon applicant SHANGHAI NNW NEW MATERIALS TECHNOLOGY CO.,LTD.'s request. However, no SDS of ingredients was provided by the applicant. And no further testing data provided. Therefore, this document is compiled in accordance with what we obtained.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)