

# 上海纳诺微新材料科技有限公司

Shanghai NNW New Materials Technology Co., Ltd.

## Safety Data Sheet

### Water based dye ink

Version:1.1

Creation Date:2023/06/21

Revision Date:2023/06/21

Color: Bright pink

Country of Destination:EU

\*Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)

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

##### 1.1 Product identifier

Product Name	Water based dye ink (Bright pink)
Synonyms	—
CAS NO.	—
EC NO.	—
Chemical Formula	—

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

Relevant identified uses	To write
Uses advised against	—

##### 1.3 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, CHINA
Post code	200335
Telephone number	021-64476059
Fax number	021-64476096
Email	sales@nnwchina.com

##### 1.4 Emergency phone number

Emergency phone number	+8613311812200
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#### 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.
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##### 2.2 Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable
Hazard statements	Not Applicable

##### 2.3 Precautionary statements

<b>Prevention</b>	Not Applicable
<b>Response</b>	Not Applicable
<b>Storage</b>	Not Applicable
<b>Disposal</b>	Not Applicable

**2.4 Other hazards**

None of the ingredients (≥0.1%) is identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100.

**SECTION 3 Composition/information on ingredients**

**3.1 Substance**

Not Applicable

**3.2 Mixtures**

➤ **Description:**Mixture of substances listed.

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC)No 1272/2008 [CLP] and amendments	Nanoform Particle Characteristics	SCL/M-Factor/ATE
1.56-81-5 2.200-289-5 3.Not Available 4.Not Available	10.0	Glycerol	Not Classified	Not Applicable	Not Applicable
1.9003-39-8 2.Not Available 3.Not Available 4.Not Available	1.0	Polyvinyl pyrrolidone	Not Classified	Not Applicable	Not Applicable
1.2611-82-7 2.220-036-2 3.Not Available 4.Not Available	0.5	Acid Red 18	Not Classified	Not Applicable	Not Applicable
1.3520-42-1 2.222-529-8 3.Not Available 4.Not Available	1.5	C.I.Acid Red 52	Not Classified	Not Applicable	Not Applicable
1.7732-18-5 2.231-791-2 3.Not Available 4.Not Available	87.5	Water, distilled, conductivity or of similar purity	Not Classified	Not Applicable	Not Applicable

**SECTION 4 First aid measures**

**4.1 Description of first aid measures**

<b>General advice</b>	Seek medical attention if necessary. Show this Safety Data Sheet (SDS) to the physician present.
<b>Eye contact</b>	Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
<b>Skin contact</b>	Wash with water. If there are signs of irritation or other symptoms seek medical attention.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
<b>Inhalation</b>	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.

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

No known symptoms or effects, acute or delayed.

**4.3 Indication of any immediate medical attention and special treatment needed**

No special immediate medical attention or special treatment needed.

**SECTION 5 Firefighting measures**

**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	CO <sub>2</sub> , powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	Water with full jet.

**5.2 Special hazards arising from the substrate or mixture**

May form irritating fumes in the air under fire.

**5.3 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.

**SECTION 6 Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

1	Ensure adequate ventilation.
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.

**6.2 Environmental precautions**

1	Do not allow to enter sewers/ surface or ground water.
2	Discharge into the environment must be avoided.

**6.3 Methods and material for containment and cleaning up**

1	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
2	Dispose contaminated material as waste according to item 13.
3	Use respiratory protective device against the effects of fumes/dust/aerosol.

**6.4 Reference to other sections**

1	See section 7 for information on safe handling.
2	See section 8 for information on personal protection equipment.
3	See section 13 for disposal in formation.

**SECTION 7 Handling and storage**

**7.1 Precautions for handling**

➤ **Protective measure**

1	Ensure good ventilation/exhaustion at the workplace.
2	Keep receptacles tightly sealed.
3	Keep away from heat and direct sunlight.
4	Avoid contact with eyes.
5	Avoid breathing vapour.

➤ **Information about fire - and explosion protection**

Normal measures for preventive fire protection.

**7.2 Conditions for safe storage, including any incompatibilities**

1	Keep containers tightly closed .
2	Keep containers in a dry,cool and well-ventilated place.
3	Store away from incompatible materials and food stuff containers.
4	Store away from strong oxidants and strong acids.

**7.3 Specific end use(s)**

See section 1.2

**SECTION 8 Exposure controls/personal protection**

**8.1 Control parameters**

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
Glycerol	Inhalation 220 mg/m <sup>3</sup> (Local, Chronic) Inhalation 132 mg/m <sup>3</sup> (Local, Chronic) *	0.885mg/L (Water (Fresh)) 0.088 mg/L (Water - Intermittent release) 8.85 mg/L (Water (Marine)) 3.3 mg/kg sediment dw (Sediment (Fresh Water)) 0.33 mg/kg sediment dw (Sediment (Marine)) 1000 mg/L (STP) 0.141mg/kg soil dw (Soil)
Acid Red 18	Inhalation 24.7 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 7 mg/kg bw/day (Systemic, Chronic) Inhalation 3.7 mg/m <sup>3</sup> (Systemic, Chronic)* Dermal 2.5 mg/kg bw/day (Systemic, Chronic)* Oral 2.5 mg/kg bw/day (Systemic, Chronic)*	0.1 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.01 mg/L (Water (Marine)) 10 mg/L (STP) 0.392 mg/kg sediment dw (Sediment (Fresh Water)) 0.0392 mg/kg sediment dw (Sediment (Marine)) 0.0197 mg/kg soil dw (Soil)

\* Values for General Population

8.1.1 Occupational Exposure Limits (OEL)

➤ Ingredient data

Ingredient	Country	Limit value - Eight hours	Limit value - Short term
Glycerol, mist	Belgium	10mg/m <sup>3</sup>	Not data available
	VLEP (France)	10mg/m <sup>3</sup>	Not data available
	WELs(UK)	10mg/m <sup>3</sup>	Not data available
	Finland	20mg/m <sup>3</sup>	Not data available
	AGS(Germany)	200mg/m <sup>3</sup> <sup>[1]</sup>	400mg/m <sup>3</sup> <sup>[1][2]</sup>
	DFG(Germany)	200mg/m <sup>3</sup> <sup>[1]</sup>	400mg/m <sup>3</sup> <sup>[1][2]</sup>
	Ireland	10mg/m <sup>3</sup>	Not data available
	Poland	10mg/m <sup>3</sup>	Not data available
	Spain	10mg/m <sup>3</sup>	Not data available
	Switzerland	50mg/m <sup>3</sup> inhalable aerosol	100mg/m <sup>3</sup> inhalable aerosol

Remarks: 1. Inhalable fraction 2.15 minutes average value



➤ Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Glycerol	45mg/m <sup>3</sup>	180mg/m <sup>3</sup>	1100mg/m <sup>3</sup>
Polyvinyl pyrrolidone	51mg/m <sup>3</sup>	560mg/m <sup>3</sup>	20000mg/m <sup>3</sup>

8.2 Engineering controls

General protective and hygienic measures	The usual precautionary measures are to be adhered to when handling chemicals.
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8.3 Personal protection equipment

General requirement	 
Eye protection	Tightly fitting safety goggles (approved by EN166(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	Not required under normal conditions of use.
Skin and body protection	Not required under normal conditions of use.
Other protection	No special equipment needed when handling small quantities.

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Bright pink	Viscosity	Dynamic	Not determined
Physical state	Liquid		Kinematic:	Not determined

<b>Odour</b>	Odourless	<b>Vapour density (Air = 1)</b>	Not determined
<b>Odour threshold</b>	Not determined	<b>Density/Relative density</b>	Not determined
<b>pH (as supplied)</b>	Not determined	<b>Decomposition temperature</b>	Not determined
<b>Melting point/freezing point(°C)</b>	Not determined	<b>Particle Size</b>	Not determined
<b>Flash point(Closed cup,°C)</b>	Not determined	<b>Vapour pressure (kPa)</b>	Not determined
<b>Flammability</b>	Not flammable liquid	<b>Relative vapor density</b>	Not determined
<b>Evaporation rate</b>	Not determined	<b>Partition coefficient n-octanol/ water</b>	Not determined
<b>Upper Explosive Limit (%)</b>	Not determined	<b>Auto-ignition temperature(°C)</b>	Not determined
<b>Lower Explosive Limit (%)</b>	Not determined	<b>Explosive properties</b>	Product does not present anexplosion hazard
<b>Self-igniting</b>	Not determined	<b>Oxidising properties</b>	Not determined
<b>Taste</b>	Not determined	<b>Surface Tension (dyn/cm or mN/m)</b>	Not determined
<b>Volatile Component (%vol)</b>	Not determined	<b>Gas group</b>	Not determined
<b>pH as a solution (1%)</b>	Not determined	<b>VOC g/L</b>	Not determined

**9.2 Other information**

No further relevant information available.

**SECTION 10 Stability and reactivity**

**10.1 Stability and reactivity**

<b>Reactivity</b>	No further relevant information available.
<b>Chemical stability</b>	Stable under proper operation and storage conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reactions known.
<b>Conditions to avoid</b>	No further relevant information available.
<b>Incompatible materials</b>	No further relevant information available.
<b>Hazardous decomposition products</b>	No dangerous decomposition products known.

**SECTION 11 Toxicological information**

**11.1 Information on toxicological effects**

<b>Inhaled</b>	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product.
<b>Ingestion</b>	The material has not been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
<b>Skin Contact</b>	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
<b>Eye</b>	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
<b>Chronic</b>	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

<b>Water based dye ink</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	No data available	No data available
<b>Glycerol</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: > 11500 mg/kg <sup>[1]</sup> Inhalation(rat) LC50: > 5.85mg/L 4h <sup>[1]</sup> Dermal (guinea pig) LD50: 45 ml/kg <sup>[1]</sup>	Skin (rabbit): non-irritating(Draize) Eye (rabbit): non-irritating (Draize)
<b>C.I.Acid Red 52</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: >5000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating)(Draize) Skin: no adverse effect observed (not irritating)(Draize)

<b>Polyvinyl pyrrolidone</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral(mouse) LD50:10000mg/kg <sup>21</sup>	No data available
<b>Acid Red 18</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50:>8000 mg/kg <sup>11</sup>	Eye: no adverse effect observed (not irritating)(Draize) Skin: no adverse effect observed (not irritating)(Draize)
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.Value obtained from manufacturer's SDS.	

**11.2 Carcinogenicity**

<b>Component</b>	<b>Cas No.</b>	<b>IARC</b>
<b>Glycerol</b>	56-81-5	Not listed
<b>Water</b>	7732-18-5	Not listed
<b>C.I.Acid red 52</b>	3520-42-1	Not listed
<b>Polyvinylpyrrolidone</b>	9003-39-8	Category 3
<b>Acid Red 18</b>	2611-82-7	Not listed

**11.2.1 Endocrine Disruption Properties**

None of the ingredients (≥0.1%) is considered to have endocrine-disrupting properties with respect to humans, as none of them meet the criteria set out in section A of Regulation (EU) No 2017/2100.

**11.3 Primary irritant effect**

<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met.
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met.
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

**SECTION 12 Ecological information**

**12.1 Toxicity**

<b>Water based dye ink</b>	<b>Endpoint</b>	<b>Test Duration (hr)</b>	<b>Species</b>	<b>Value</b>
	No data available	No data available	No data available	No data available
<b>Glycerol</b>	<b>Endpoint</b>	<b>Test Duration (hr)</b>	<b>Species</b>	<b>Value</b>
	LC50	96h	Fish	54000 mg/L
	EC50	48h	Aquatic invertebrates	1955mg/L
	EC50	192h	Aquatic algae and cyanobacteria	2900mg/L
<b>C.I.Acid red 52</b>	<b>Endpoint</b>	<b>Test Duration (hr)</b>	<b>Species</b>	<b>Value</b>
	EC50	48h	Aquatic invertebrates	120 mg/L
	EC50	168h	Aquatic plants other than algae	1000 mg/L
	EC10	168h	Aquatic plants other than algae	161.6-1000 mg/L
	BCF	672h	Fish	<=0.57 l/kg(conc.1690µg/L)
	BCF	672h	Fish	<=5.3 l/kg(conc.169µg/L)
<b>Acid Red 18</b>	<b>Endpoint</b>	<b>Test Duration (hr)</b>	<b>Species</b>	<b>Value</b>
	NOEC	168h	Aquatic plants other than algae	100 mg/L

EC50	48h	Aquatic invertebrates	>100 mg/L
EC0	48h	Aquatic invertebrates	100 mg/L
LC50	96h	Fish	>1000 mg/L
BCF	672h	Fish	<=0.55 l/kg(conc.0.474mg/L)
BCF	672h	Fish	<=5.6 l/kg(conc.0.0474mg/L)

**12.2 Persistence and degradability**

Component	Cas No.	Persistence (water/soil)
Glycerol	56-81-5	Readily biodegradable in water
C.I.Acid red 52	3520-42-1	Not readily biodegradable in water
Acid red 18	2611-82-7	Not readily biodegradable in water

**12.3 Bioaccumulative potential**

Component	Cas No.	Bioaccumulative potential	Remarks
Glycerol	56-81-5	No potential for bioaccumulation	LogKow=-0.244-0.046
C.I.Acid red 52	3520-42-1	No data available	LogKow=-2.2
Acid red 18	2611-82-7	No potential for bioaccumulation	LogKow=-2.267

**12.4 Mobility in soil**

Component	Cas No.	Soil Organic Carbon-WaterPartitioning Coefficient (Koc)
Glycerol	56-81-5	Koc=1
C.I.Acid red 52	3520-42-1	No data available
Acid red 18	2611-82-7	Koc=3.16

**12.5 Results of PBT and vPvB assessment**

<b>PBT</b>	Not Applicable
<b>vPvB</b>	Not Applicable

**12.6 Endocrine Disruption Properties**

None of the ingredients (≥0.1%) is considered to have endocrine-disrupting properties with respect to non-target organisms, as none of them meet the criteria set out in section B of Regulation (EU) No 2017/2100.

**12.7 Other adverse effects**

No further relevant information available.

**SECTION 13 Disposal considerations**

**13.1 Waste treatment methods**

<b>Product / Packaging disposal</b>	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. 1.Do not allow wash water from cleaning or process equipment to enter drains. 2.It may be necessary to collect all wash water for treatment before disposal. 3.Recycle wherever possible. 4.Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
<b>Waste treatment options</b>	No further relevant information available.
<b>Sewage disposal options</b>	No further relevant information available.

**SECTION 14 Transport information**

**14.1 UN-Number**

<b>ADR/RID/ADN, IMDG, IATA</b>	Not Applicable
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**14.2 UN proper shipping name**

<b>ADR/RID/ADN, IMDG</b>	Not Applicable
<b>IATA</b>	Not Applicable

**14.3 Transport hazard class(es)**

<b>ADR/RID/ADN, IMDG, IATA</b>	Not Applicable
<b>Class</b>	Not Applicable
<b>Label</b>	Not Applicable

**14.4 Packing group**

<b>ADR/RID/ADN, IMDG, IATA</b>	Not Applicable
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**14.5 Environmental hazards**

Not Applicable

**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

**14.8 Transport/Additional information**

Not dangerous according to the above specifications.

<b>UN "Model Regulation"</b>	Not Applicable
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**SECTION 15 Regulatory information**

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

<b>Directive 2012/18/EU</b>	
<b>Named dangerous substances -ANNEX I</b>	None of the ingredients is listed
<b>Other regulations, limitations and prohibitive regulations</b>	
<b>SVHC Candidate List of REACH Regulation Annex XIV Authorisation</b>	None of the ingredients is listed.
<b>REACH Regulation Annex XVII Restriction</b>	None of the ingredients is listed.
<b>REACH Regulation Annex XIV Authorization List</b>	None of the ingredients is listed.

**15.2 Chemical safety assessment**

A Chemical Safe Assessment has not been carried out.

**15.3 International chemical inventory**

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS
Glycerol	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
C.I.Acid Red 52	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Polyvinyl pyrrolidone	Not Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Water	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Acid red 18	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed

**【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

## SECTION 16 Other information

### 16.1 Information on revision

<b>Creation Date</b>	2023/06/21
<b>Revision Date</b>	2023/06/21
<b>Reason for revision</b>	—

### 16.2 Abbreviations and acronyms

**SCL:** Specific Concentration limits

**ATE:** Acute Toxicity Estimates

**Cas :** Chemical Abstracts Service

**PC—TWA:** Permissible Concentration-Time Weighted Average

**PC—STEL:** Permissible Concentration-Short Term Exposure Limit

**IARC:** International Agency for Research on Cancer

**STEL:** Short Term Exposure Limit

**TEEL:** Temporary Emergency Exposure Limit

**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

**NOEC:** No Observed Effect Concentration

**BCF:** BioConcentration Factors

**ELINCS:** European List of Notified Chemical Substances

**DNEL:** Derived No-Effect Level (REACH)

**PNEC:** Predicted No-Effect Concentration (REACH)

**LC50:** Lethal concentration, 50 percent

**LD50:** Lethal dose, 50 percent

**PBT:** Persistent, Bioaccumulative and Toxic

**vPvB:** very Persistent and very Bioaccumulative

### 16.3 Further information

The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, its amendment Regulation (EU) No 2020/878 and (EC) No 1272/2008.

#### **DISCLAIMER OF LIABILITY:**

This Safety Data Sheet (SDS) was prepared according to REACH Regulation. The data included was derived from international authoritative data base 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.