

## Safety Data Sheet (SDS) Report

Applicant: Ningbo Deli Imp & Exp Co.,Ltd.  
#301,Xu Xiake Rd ,Deli xingling Industrial Zone ,Ninghai ,Ningbo ,  
Zhejiang,China.

**SDS number: P2016111501 S1**

Issue Date: 2018-12-05

### Sample Description:

The sample information was submitted and identified on client's behalf to be:

Product Name : PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)  
Physical State : Solid  
Data Received : Dec 04, 2018  
Initial Version Date : Dec 08, 2016  
Data Reviewed : Dec 05, 2018

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### Service Requested:

Based on the information provided by the applicant, the Safety Data Sheet (SDS) was generated according to requirements of Regulation (EC) No 1907/2006 (REACH) with its amendment Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008, for details please refer to attached pages.

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### Authorized By:

On Behalf Of Regulatory Affairs in Intertek Testing Services Ltd., Shanghai



Anna Wang  
Regulatory Consultant

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# PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

Ningbo Deli Imp & Exp Co.,Ltd.

SDS number: P2016111501S1

Version No:1.1

Issue Date:05/12/2018

Safety Data Sheet (Conforms to Regulation (EC) No 1907/2006 and Regulation (EC) No 2015/830)

S.REACH.GBR.EN

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

### 1.1. Product Identifier

Product name	PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)
Synonyms	Not Available
Other means of identification	Not Available

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

Relevant identified uses	Bonds paper
Uses advised against	Not Applicable

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

Registered company name	Ningbo Deli Imp & Exp Co.,Ltd.
Address	#301,Xu Xiake Rd ,Deli xingling Industrial Zone ,Ninghai ,Ningbo ,Zhejiang,China.
Telephone	86-574-59976622
Emergency telephone	86-18367450523
Email	whp@nbdeli.com
Importer name	
Address	
Telephone	
Email	

### 1.4. Emergency telephone number

Association / Organisation	
Emergency telephone numbers	

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Not considered a hazardous mixture according to Reg. (EC) No 1272/2008 and their amendments. Not classified as Dangerous Goods for transport purposes.

Classification according to regulation (EC) No 1272/2008 [CLP]	Not Applicable
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### 2.2. Label elements

CLP label elements	Not Applicable
SIGNAL WORD	NOT APPLICABLE

#### Hazard statement(s)

Not Applicable

#### Supplementary statement(s)

Not Applicable

#### CLP classification (additional)

Not Applicable

#### Precautionary statement(s) Prevention

Not Applicable

#### Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

Continued...

## PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

### Precautionary statement(s) Disposal

Not Applicable

### 2.3. Other hazards

Cumulative effects may result following exposure\*.

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

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1.Substances

See 'Composition on ingredients' in Section 3.2

### 3.2.Mixtures

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP]
1.7732-18-5 2.231-791-2 3.Not Available 4.Not Available	60-65	<u>water</u>	Not Applicable
1.9003-39-8 2.Not Available 3.Not Available 4.Not Available	20-25	<u>polyvinyl pyrrolidone</u>	Not Applicable
1.56-81-5 2.200-289-5 3.Not Available 4.Not Available	3-7	<u>Glycerol</u>	Not Applicable
1.26264-14-2 2.Not Available 3.Not Available 4.Not Available	3-7	<u>Propanediol</u>	Not Applicable
1.822-16-2 2.212-490-5 3.Not Available 4.Not Available	3-7	<u>sodium stearate</u>	Not Applicable
1.147-14-8 2.205-685-1 3.Not Available 4.Not Available	0-1.5	<u>C.I. Pigment Blue 15</u>	Not Applicable
1.6358-85-6 2.228-787-8 3.Not Available 4.Not Available	0-1.5	<u>c.i. pigment yellow 12</u>	Not Applicable
1.1328-53-6 2.215-524-7 3.Not Available 4.Not Available	0-1.5	<u>c.i. pigment green 7</u>	Not Applicable
1.5280-68-2 2.226-103-2 3.Not Available 4.Not Available	0-1.5	<u>C.I. Pigment Red 146</u>	Not Applicable
1.596-27-0 2.209-881-8 3.Not Available 4.Not Available	0-0.5	<u>o-cresolphthalein</u>	Not Applicable
1.54351-85-8 2.Not Available 3.Not Available 4.Not Available	0-0.1	<u>Fluorescent Brightener</u>	Not Applicable
1.36457-20-2 2.253-049-7 3.Not Available 4.Not Available	0-0.06	<u>Sodium Butyl Paraben</u>	Acute Toxicity (Oral) Category 4, Serious Eye Damage Category 1; H302, H318

## SECTION 4 FIRST AID MEASURES

### 4.1. Description of first aid measures

<b>General</b>	If skin or hair contact occurs: <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
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## PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

	<p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with water.</li> <li>▶ If irritation continues, seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>
<b>Eye Contact</b>	<p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with water.</li> <li>▶ If irritation continues, seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

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

See Section 11

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

Treat symptomatically.

for copper intoxication:

- ▶ Unless extensive vomiting has occurred empty the stomach by lavage with water, milk, sodium bicarbonate solution or a 0.1% solution of potassium ferrocyanide (the resulting copper ferrocyanide is insoluble).
- ▶ Administer egg white and other demulcents.
- ▶ Maintain electrolyte and fluid balances.
- ▶ Morphine or meperidine (Demerol) may be necessary for control of pain.
- ▶ If symptoms persist or intensify (especially circulatory collapse or cerebral disturbances, try BAL intramuscularly or penicillamine in accordance with the supplier's recommendations.
- ▶ Treat shock vigorously with blood transfusions and perhaps vasopressor amines.
- ▶ If intravascular haemolysis becomes evident protect the kidneys by maintaining a diuresis with mannitol and perhaps by alkalinising the urine with sodium bicarbonate.
- ▶ It is unlikely that methylene blue would be effective against the occasional methaemoglobinemia and it might exacerbate the subsequent haemolytic episode.
- ▶ Institute measures for impending renal and hepatic failure.

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

- ▶ A role for activated for charcoals or emesis is, as yet, unproven.
- ▶ In severe poisoning CaNa2EDTA has been proposed.

[ELLENHORN & BARCELOUX: Medical Toxicology]

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- ▶ foam.

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

<b>Fire Incompatibility</b>	None known.
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### 5.3. Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> </ul>
<b>Fire/Explosion Hazard</b>	<p>.....</p> <ul style="list-style-type: none"> <li>▶ Solid which exhibits difficult combustion or is difficult to ignite.</li> <li>▶ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion.</li> <li>▶ Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited; once initiated larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.</li> <li>▶ A dust explosion may release large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.</li> </ul> <p>Combustion products include:  carbon monoxide (CO)  carbon dioxide (CO2)  acrolein  other pyrolysis products typical of burning organic material.</p>

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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

See section 8

Continued...

## PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

### 6.2. Environmental precautions

See section 12

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

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Control personal contact with the substance, by using protective equipment and dust respirator.</li> <li>▶ Prevent spillage from entering drains, sewers or water courses.</li> </ul>

### 6.4. Reference to other sections

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

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Limit all unnecessary personal contact.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)</li> <li>▶ Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.</li> <li>▶ Establish good housekeeping practices.</li> <li>▶ Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.</li> </ul>
<b>Fire and explosion protection</b>	See section 5
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry area protected from environmental extremes.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> </ul>

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

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ PP tube.</li> <li>▶ Lined metal can, lined metal pail/ can.</li> <li>▶ Plastic pail.</li> <li>▶ Polyliner drum.</li> </ul>
<b>Storage incompatibility</b>	<p>Avoid contamination of water, foodstuffs, feed or seed.</p> <p>Glycerol:</p> <ul style="list-style-type: none"> <li>▶ reacts violently with strong oxidisers, acetic anhydride, alkali metal hydrides, calcium hypochlorite, calcium oxychloride, chlorine, chromic anhydride, chromium oxides, ethylene oxide, hydrogen peroxide, phosphorous triiodide, potassium chlorate, potassium permanganate, potassium peroxide, silver perchlorate, sodium hydride, sodium peroxide, sodium triiodide, sodium tetrahydroborate, is incompatible with strong acids, caustics, aliphatic amines, isocyanates, uranium fluoride</li> <li>▶ is able to polymerise above 145 C</li> </ul>

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

#### DERIVED NO EFFECT LEVEL (DNEL)

Not Available

#### PREDICTED NO EFFECT LEVEL (PNEC)

Not Available

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	Glycerol	Glycerol, mist	10 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs)	C.I. Pigment Blue 15	Chromium (VI) compounds (as Cr)	0.05 mg/m <sup>3</sup>	Not Available	Not Available	Carc. sen, BMGV
UK Workplace Exposure Limits (WELs)	c.i. pigment green 7	Chromium (VI) compounds (as Cr)	0.05 mg/m <sup>3</sup>	Not Available	Not Available	Carc. sen, BMGV

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3


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polyvinyl pyrrolidone	Poly(1-vinyl-2-pyrrolidinone) homopolymer; (Polyvinylpyrrolidone; Plasdone)	51 mg/m <sup>3</sup>	560 mg/m <sup>3</sup>	20,000 mg/m <sup>3</sup>
Glycerol	Glycerine (mist); (Glycerol; Glycerin)	45 mg/m <sup>3</sup>	860 mg/m <sup>3</sup>	2,500 mg/m <sup>3</sup>
sodium stearate	Sodium stearate	0.17 mg/m <sup>3</sup>	1.8 mg/m <sup>3</sup>	11 mg/m <sup>3</sup>

Ingredient	Original IDLH	Revised IDLH
All ingredients	Not Available	Not Available

### 8.2. Exposure controls

<b>8.2.1. Appropriate engineering controls</b>	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:            Process controls which involve changing the way a job activity or process is done to reduce the risk.            Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment.</p>
<b>8.2.2. Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> <p>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</p> <ul style="list-style-type: none"> <li>▶ polychloroprene.</li> <li>▶ nitrile rubber.</li> <li>▶ butyl rubber.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<p>No special equipment needed when handling small quantities.</p> <p><b>OTHERWISE:</b></p> <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ Barrier cream.</li> <li>▶ Eyewash unit.</li> </ul>
<b>Thermal hazards</b>	Not Available

### Respiratory protection

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

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	White/red/green/blue/purple/yellow solid		
<b>Physical state</b>	Solid	<b>Relative density (Water = 1)</b>	Not Available
<b>Odour</b>	Odourless	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<b>Molecular weight (g/mol)</b>	Not Available
<b>Flash point (°C)</b>	Not Available	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not flammable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Applicable

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## PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Not Available	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	Not Available

### 9.2. Other information

Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>10.1.Reactivity</b>	See section 7.2
<b>10.2. Chemical stability</b>	Product is considered stable and hazardous polymerisation will not occur.
<b>10.3. Possibility of hazardous reactions</b>	See section 7.2
<b>10.4. Conditions to avoid</b>	See section 7.2
<b>10.5. Incompatible materials</b>	See section 7.2
<b>10.6. Hazardous decomposition products</b>	See section 5.3

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

<b>Inhaled</b>	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 Copper poisoning following exposure to copper dusts and fume may result in headache, cold sweat and weak pulse. Capillary, kidney, liver and brain damage are the longer term manifestations of such poisoning. Inhalation of freshly formed metal oxide particles sized below 1.5 microns and generally between 0.02 to 0.05 microns may result in 'metal fume fever'. Symptoms may be delayed for up to 12 hours and begin with the sudden onset of thirst, and a sweet, metallic or foul taste in the mouth.
<b>Ingestion</b>	The material has <b>NOT</b> 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. A metallic taste, nausea, vomiting and burning feeling in the upper stomach region occur after ingestion of copper and its derivatives. The vomitus is usually green/blue and discolours contaminated skin.
<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. Exposure to copper, by skin, has come from its use in pigments, ointments, ornaments, jewellery, dental amalgams and IUDs (intra-uterine devices), and in killing fungi and algae. Although copper is used in the treatment of water in swimming pools and reservoirs, there are no reports of toxicity from these applications.
<b>Eye</b>	Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. Copper salts, in contact with the eye, may produce inflammation of the conjunctiva, or even ulceration and cloudiness of the cornea.
<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. Copper has fairly low toxicity. Some rare hereditary conditions (Wilson disease or hepatolenticular degeneration) can lead to accumulation of copper on exposure, causing irreversible damage to a variety of organs (liver, kidney, CNS, bone, vision) and lead to death.

<b>PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>water</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: >90000 mg/kg <sup>[2]</sup>	Not Available
<b>polyvinyl pyrrolidone</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation (Rat) LC50: >5200 mg/m <sup>3</sup> /4h ** <sup>[2]</sup>	Eye (rabbit):non-irritating (Draize)*
	Oral (Rabbit) LD50: 1040 mg/kg <sup>[2]</sup>	Skin (rabbit):non-irritating(Draize)**
	Oral (rat) LD50: >100,000 mg/kg <sup>[2]</sup>	
<b>Glycerol</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Intraperitoneal (Mouse) LD50: 8700 mg/kg <sup>[2]</sup>	Not Available
	Intraperitoneal (Rat) LD50: 4420 mg/kg <sup>[2]</sup>	
	Intravenous (Mouse) LD50: 4250 mg/kg <sup>[2]</sup>	
	Intravenous (Rat) LD50: 5566 mg/kg <sup>[2]</sup>	
	Oral (Guinea pig) LD50: 7750 mg/kg <sup>[2]</sup>	

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## PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

	Oral (Mouse) LD50: 4090 mg/kg <sup>[2]</sup>	
	Oral (Rat) LD50: 12600 mg/kg <sup>[2]</sup>	
	Subcutaneous (Mouse) LD50: 91 mg/kg <sup>[2]</sup>	
	Subcutaneous (Rat) LD50: 100 mg/kg <sup>[2]</sup>	
C.I. Pigment Blue 15	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: >5000 mg/kg <sup>[1]</sup>	Eye (human): non-irritant
	Oral (rat) LD50: >10,000 mg/kg <sup>[2]</sup>	Skin (human): non-irritant
c.i. pigment yellow 12	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: >10800 mg/kg <sup>[2]</sup>	Not Available
c.i. pigment green 7	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (Mouse) LD50: 8400 mg/kg <sup>[2]</sup>	Not Available
	Oral (Rat) LD50: 14000 mg/kg <sup>[2]</sup>	
C.I. Pigment Red 146	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: 10000 mg/kg <sup>[2]</sup>	Not Available
o-cresolphthalein	<b>TOXICITY</b>	<b>IRRITATION</b>
	Intravenous (mouse) LD50: 320 mg/kg <sup>[2]</sup>	Not Available

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

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

**Legend:** ✘ – Data available but does not fill the criteria for classification  
✔ – Data required to make classification available  
☉ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## 12.1. Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
polyvinyl pyrrolidone	LC50	96	Fish	357.593mg/L	3
polyvinyl pyrrolidone	EC50	96	Algae or other aquatic plants	1952.714mg/L	3
polyvinyl pyrrolidone	EC50	384	Crustacea	82.393mg/L	3
Glycerol	LC50	96	Fish	>11mg/L	2
Glycerol	EC50	96	Algae or other aquatic plants	77712.039mg/L	3
Glycerol	EC0	24	Crustacea	>500mg/L	1
C.I. Pigment Blue 15	LC50	96	Fish	4610.012mg/L	3
C.I. Pigment Blue 15	EC50	96	Algae or other aquatic plants	30524.744mg/L	3
C.I. Pigment Blue 15	EC50	384	Crustacea	1049.064mg/L	3
c.i. pigment yellow 12	LC50	96	Fish	0.008mg/L	3
c.i. pigment yellow 12	EC50	96	Algae or other aquatic plants	0.011mg/L	3
c.i. pigment yellow 12	EC50	384	Crustacea	0.006mg/L	3
c.i. pigment green 7	EC0	24	Crustacea	=500mg/L	1
C.I. Pigment Red 146	LC50	96	Fish	>100mg/L	2
C.I. Pigment Red 146	EC50	48	Crustacea	>110mg/L	2
C.I. Pigment Red 146	EC50	504	Crustacea	>30mg/L	2

Continued...



## PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

C.I. Pigment Red 146	NOEC	504	Crustacea	30mg/L	2
o-cresolphthalein	LC50	96	Fish	3.602mg/L	3
o-cresolphthalein	EC50	96	Algae or other aquatic plants	0.310mg/L	3

**Legend:**

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

**12.2. Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW
polyvinyl pyrrolidone	LOW	LOW
Glycerol	LOW	LOW
C.I. Pigment Blue 15	HIGH	HIGH
c.i. pigment yellow 12	HIGH	HIGH
o-cresolphthalein	HIGH	HIGH

**12.3. Bioaccumulative potential**

Ingredient	Bioaccumulation
water	LOW (LogKOW = -1.38)
polyvinyl pyrrolidone	LOW (LogKOW = 0.2484)
Glycerol	LOW (LogKOW = -1.76)
C.I. Pigment Blue 15	LOW (BCF = 11)
c.i. pigment yellow 12	LOW (BCF = 5.4)
c.i. pigment green 7	LOW (BCF = 74)
o-cresolphthalein	MEDIUM (LogKOW = 4.153)

**12.4. Mobility in soil**

Ingredient	Mobility
water	LOW (KOC = 14.3)
polyvinyl pyrrolidone	LOW (KOC = 40.46)
Glycerol	HIGH (KOC = 1)
C.I. Pigment Blue 15	LOW (KOC = 10000000000)
c.i. pigment yellow 12	LOW (KOC = 79680)
o-cresolphthalein	LOW (KOC = 839300)

**12.5. Results of PBT and vPvB assessment**

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

**12.6. Other adverse effects**

No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Recycle wherever possible.</li> <li>▶ 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.</li> <li>▶ Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)</li> <li>▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul>
<b>Waste treatment options</b>	Not Available
<b>Sewage disposal options</b>	Not Available

## SECTION 14 TRANSPORT INFORMATION

**Labels Required**

<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	Not Applicable

Continued...

**PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)**

**Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

<b>14.1.UN number</b>	Not Applicable										
<b>14.2.UN proper shipping name</b>	Not Applicable										
<b>14.3. Transport hazard class(es)</b>	<table border="1"> <tr> <td>Class</td> <td>Not Applicable</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table>	Class	Not Applicable	Subrisk	Not Applicable						
Class	Not Applicable										
Subrisk	Not Applicable										
<b>14.4.Packing group</b>	Not Applicable										
<b>14.5.Environmental hazard</b>	Not Applicable										
<b>14.6. Special precautions for user</b>	<table border="1"> <tr> <td>Hazard identification (Kemler)</td> <td>Not Applicable</td> </tr> <tr> <td>Classification code</td> <td>Not Applicable</td> </tr> <tr> <td>Hazard Label</td> <td>Not Applicable</td> </tr> <tr> <td>Special provisions</td> <td>Not Applicable</td> </tr> <tr> <td>Limited quantity</td> <td>Not Applicable</td> </tr> </table>	Hazard identification (Kemler)	Not Applicable	Classification code	Not Applicable	Hazard Label	Not Applicable	Special provisions	Not Applicable	Limited quantity	Not Applicable
Hazard identification (Kemler)	Not Applicable										
Classification code	Not Applicable										
Hazard Label	Not Applicable										
Special provisions	Not Applicable										
Limited quantity	Not Applicable										

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

<b>14.1. UN number</b>	Not Applicable														
<b>14.2. UN proper shipping name</b>	Not Applicable														
<b>14.3. Transport hazard class(es)</b>	<table border="1"> <tr> <td>ICAO/IATA Class</td> <td>Not Applicable</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>Not Applicable</td> </tr> </table>	ICAO/IATA Class	Not Applicable	ICAO / IATA Subrisk	Not Applicable	ERG Code	Not Applicable								
ICAO/IATA Class	Not Applicable														
ICAO / IATA Subrisk	Not Applicable														
ERG Code	Not Applicable														
<b>14.4. Packing group</b>	Not Applicable														
<b>14.5. Environmental hazard</b>	Not Applicable														
<b>14.6. Special precautions for user</b>	<table border="1"> <tr> <td>Special provisions</td> <td>Not Applicable</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td>Not Applicable</td> </tr> <tr> <td>Cargo Only Maximum Qty / Pack</td> <td>Not Applicable</td> </tr> <tr> <td>Passenger and Cargo Packing Instructions</td> <td>Not Applicable</td> </tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td> <td>Not Applicable</td> </tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td> <td>Not Applicable</td> </tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td> <td>Not Applicable</td> </tr> </table>	Special provisions	Not Applicable	Cargo Only Packing Instructions	Not Applicable	Cargo Only Maximum Qty / Pack	Not Applicable	Passenger and Cargo Packing Instructions	Not Applicable	Passenger and Cargo Maximum Qty / Pack	Not Applicable	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable
Special provisions	Not Applicable														
Cargo Only Packing Instructions	Not Applicable														
Cargo Only Maximum Qty / Pack	Not Applicable														
Passenger and Cargo Packing Instructions	Not Applicable														
Passenger and Cargo Maximum Qty / Pack	Not Applicable														
Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable														
Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable														

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

<b>14.1. UN number</b>	Not Applicable						
<b>14.2. UN proper shipping name</b>	Not Applicable						
<b>14.3. Transport hazard class(es)</b>	<table border="1"> <tr> <td>IMDG Class</td> <td>Not Applicable</td> </tr> <tr> <td>IMDG Subrisk</td> <td>Not Applicable</td> </tr> </table>	IMDG Class	Not Applicable	IMDG Subrisk	Not Applicable		
IMDG Class	Not Applicable						
IMDG Subrisk	Not Applicable						
<b>14.4. Packing group</b>	Not Applicable						
<b>14.5. Environmental hazard</b>	Not Applicable						
<b>14.6. Special precautions for user</b>	<table border="1"> <tr> <td>EMS Number</td> <td>Not Applicable</td> </tr> <tr> <td>Special provisions</td> <td>Not Applicable</td> </tr> <tr> <td>Limited Quantities</td> <td>Not Applicable</td> </tr> </table>	EMS Number	Not Applicable	Special provisions	Not Applicable	Limited Quantities	Not Applicable
EMS Number	Not Applicable						
Special provisions	Not Applicable						
Limited Quantities	Not Applicable						

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

<b>14.1. UN number</b>	Not Applicable		
<b>14.2. UN proper shipping name</b>	Not Applicable		
<b>14.3. Transport hazard class(es)</b>	<table border="1"> <tr> <td>Not Applicable</td> <td>Not Applicable</td> </tr> </table>	Not Applicable	Not Applicable
Not Applicable	Not Applicable		
<b>14.4. Packing group</b>	Not Applicable		
<b>14.5. Environmental hazard</b>	Not Applicable		

## PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)

## 14.6. Special precautions for user

Classification code	Not Applicable
Special provisions	Not Applicable
Limited quantity	Not Applicable
Equipment required	Not Applicable
Fire cones number	Not Applicable

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

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

## WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex IV - Exemptions from the Obligation to Register in Accordance with Article 2(7)(a) (English)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

## POLYVINYL PYRROLIDONE(9003-39-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

European Customs Inventory of Chemical Substances ECICS (English)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

## GLYCEROL(56-81-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

UK Workplace Exposure Limits (WELs)

## PROPANEDIOL(26264-14-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

## SODIUM STEARATE(822-16-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

## C.I. PIGMENT BLUE 15(147-14-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

UK Workplace Exposure Limits (WELs)

## C.I. PIGMENT YELLOW 12(6358-85-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2) Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Trade Union Confederation (ETUC) Priority List for REACH Authorisation

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31

European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances (updated by ATP: 31) - Carcinogenic Substances

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

## C.I. PIGMENT GREEN 7(1328-53-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

UK Workplace Exposure Limits (WELs)

## C.I. PIGMENT RED 146(5280-68-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

## O-CRESOLPHTHALEIN(596-27-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

## FLUORESCENT BRIGHTENER(54351-85-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

## SODIUM BUTYL PARABEN(36457-20-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments

Continued...

**PVP GLUE STICKS(WHITE/RED/BLUE/YELLOW/GREEN/PURPLE)****15.2. Chemical safety assessment**

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

**SECTION 16 OTHER INFORMATION****Full text Risk and Hazard codes**

<b>H302</b>	Harmful if swallowed.
<b>H318</b>	Causes serious eye damage.

**Other information****Ingredients with multiple cas numbers**

Name	CAS No
sodium stearate	822-16-2, 68309-30-8
C.I. Pigment Red 146	5280-68-2, 12225-01-3, 1001666-55-2

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

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

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

**Definitions and abbreviations**

PC – TWA: Permissible Concentration-Time Weighted Average

PC – STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit,

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL: No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index