

上海纳诺微新材料科技有限公司

Shanghai NNW New Materials Technology Co., Ltd.

Safety Data Sheet

Whiteboard ink

Version: 1.1

Creation Date: 2023/02/07

Revision Date: 2023/02/07

Color: black

Country of Destination: US

*Safety Data Sheet (US Regulations Relating to Labor 29 CFR 1910.1200, and is provided per attached)

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

1.1 Product identifier

Product Name	Whiteboard ink (Black)
Synonyms	—
CAS 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, Building 17, 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 OSHA Hazard Communication Standard (29 CFR 1910.1200)	 GHS02
Information concerning particular hazards for human and environment	H225 Flammable liquid and vapour; Category 2 The product has to be labeled due to the calculation procedure of OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification system	The classification is according to the latest edition of OSHA Hazard Communication Standard (29 CFR 1910.1200), and extended by company and literature data.

2.2 Label elements

Labelling according to OSHA Hazard Communication Standard (29 CFR 1910.1200)	The product is classified and labelled according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Hazard pictogram(s)	 GHS02
Signal word	Danger!
Hazard-determining components of labelling	Not Applicable
Hazard statements	H225 Highly flammable liquid and vapour.

2.3 Precautionary statements

➤ Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

➤ Precautionary statement(s) Response

P303+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P370+P378	In case of fire: Use ... to extinguish.

➤ Precautionary statement(s) Storage

P405	Store locked up.
P403+P235	Store in a well-ventilated place. Keep cool.

➤ Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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2.4 Other hazards

Hazards not otherwise classified (HNOC) :No further relevant information available.

SECTION 3 Composition/information on ingredients

3.1 Mixtures

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

CAS No	%[weight]	Name
25322-68-3	10.0	Polyethylene glycol
57-55-6	8.0	Propane-1,2-diol
9004-96-0	16.0	Polyethylene glycol monooleate
25168-73-4	14.0	Sucrose stearate
64-17-5	30.0	Ethanol
		 Flam Liquid Category 2; H225
63148-65-2	5.0	Poly(vinyl butyral)
1333-86-4	5.0	Carbon black

67-63-0	12.0	Isopropanol  Flam Liquid Category 2; H225  Eye irritation Category 2A; H319 STOT SE Category 3; H336
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SECTION 4 First aid measures

4.1 Description of first aid measures

General advice	Seek medical attention if necessary. Show this Safety Data Sheet (SDS) to the physician present.
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.

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

Treat symptomatically	Periodic medical surveillance should be carried out on persons in occupations exposed to the manufacture or bulk handling of the product and this should include hepatic function tests and urinalysis examination. [ILO Encyclopaedia]
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For acute or short term repeated exposures to ethanol

1	Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
2	Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
3	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	Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
5	Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
6	Fructose administration is contra-indicated due to side effects.

For acute or short term repeated exposures to isopropanol

1	Rapid onset respiratory depression and hypotension indicates serious ingestions that require careful cardiac and respiratory monitoring together with immediate intravenous access.
2	Rapid absorption precludes the usefulness of emesis or lavage 2 hours post-ingestion. Activated charcoal and cathartics are not clinically useful. Ipecac is most useful when given 30 mins. post-ingestion.
3	There are no antidotes. Management is supportive. Treat hypotension with fluids followed by vasopressors.
4	Watch closely, within the first few hours for respiratory depression; follow arterial blood gases and tidal volumes
5	Ice water lavage and serial haemoglobin levels are indicated for those patients with evidence of gastrointestinal bleeding.

SECTION 5 Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substrate or mixture

May form irritant vapor in 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.
4	Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which maybe toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

SECTION 6 Accidental release measures

6.1 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.
4	Avoid contact with skin and eyes.

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	Ensure adequate ventilation.

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	Prevent formation of aerosols.
5	Avoid contact with skin and eyes.

➤ Information about fire - and explosion protection

1	Keep ignition sources away - Do not smoke.
2	Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms	➤ Keep containers tightly closed . ➤ Keep containers in a dry,cool and well-ventilated place. ➤ Keep away from heat/sparks/open flames/hot surfaces. ➤ Store away from incompatible materials and food stuff containers.
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Storage incompatibility

Isopropanol:

- Forms ketones and unstable peroxides on contact with air or oxygen; the presence of ketones especially methyl ethyl ketone (MEK, 2 butanone) will accelerate the rate of peroxidation;
- Reacts violently with strong oxidisers, powdered aluminium (exothermic), crotonaldehyde, diethyl aluminium bromide (ignition), dioxygenyl tetrafluoroborate (ignition/ ambient temperature), chromium trioxide (ignition), potassium-tert-butoxide (ignition), nitroform (possible explosion), oleum (pressure increased in closed container), cobalt chloride, aluminium triisopropoxide, hydrogen plus palladium dust (ignition), oxygen gas, phosgene, phosgene plus iron salts (possible explosion), sodium dichromate plus sulfuric acid (exothermic/ incandescence), triisobutyl aluminium;
- Reacts with phosphorus trichloride forming hydrogen chloride gas;
- Attacks some plastics, rubber and coatings; reacts with metallic aluminium at high temperature;
- May generate electrostatic charges;
- Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates.

Ethanol:

- Are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents;
- Reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen;
- React with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs;
- Dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium;
- Should not be heated above 49 deg. C. when in contact with aluminium equipment;
- Toxic gases are formed by mixing azo and azido compounds with acids, aldehydes, amides, carbamates, cyanides, inorganic fluorides, Halogenated;organics, isocyanates, ketones, metals, nitrides, peroxides, phenols, epoxides, acyl halides, and strong oxidising or reducing agents;
- Flammable gases are formed by mixing azo and azido compounds with alkali metals;
- Explosive combination can occur with strong oxidising agents, metal salts, peroxides, and sulfides.

7.3 Specific end use(s)

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

SECTION 8 Exposure controls/personal protection

8.1 Components with limit values that require monitoring at the workplace

Ethanol

PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm

Isopropanol

PEL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
REL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
TLV (USA)	Short-term value: 200 ppm

Polyethylene glycol

WEEL (USA)	Long-term value: 10 mg/m ³ (H); MW>200
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Propane-1,2-diol

WEEL (USA)	Long-term value: 10 mg/m ³
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Carbon black

PEL (USA)	Long-term value: 3.5 mg/m ³
REL (USA)	Long-term value: 3.5* mg/m ³ *0.1 in presence of PAHs See Pocket Guide Apps.A+C
TLV (USA)	Long-term value: 3* mg/m ³ *inhalable fraction

***Regulatory information**

PEL (USA): Guide to Occupational Exposure Values (OSHA PELs)

REL (USA): Guide to Occupational Exposure Values (NIOSH RELs)

TLV (USA): Guide to Occupational Exposure Values (ACGIH)

WEEL (USA): Guide to Occupational Exposure Values (AIHA WEELs)

8.2 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.

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	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.
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	Black	Viscosity	Dynamic	Not determined
Physical state	Liquid		Kinematic:	Not determined
Odour	Odourless	Vapour density (Air = 1)		Not determined
Odour threshold	Not determined	Density/Relative density		Not determined
pH (as supplied)	Not determined	Decomposition temperature		Not determined
Melting point/freezing point(°C)	Not determined	Particle Size		Not determined
Flash point(Closed cup,°C)	20-22 °C	Vapour pressure (kPa)		Not determined
Flammability	Flammable liquid	Relative vapor density		Not determined
Evaporation rate	Not determined	Partition coefficient n-octanol/ water		Not determined
Upper Explosive Limit (%)	Not determined	Auto-ignition temperature(°C)		Not determined
Lower Explosive Limit (%)	Not determined	Explosive properties		Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
Self-igniting	Not determined	Oxidising properties		Not determined
Taste	Not determined	Surface Tension (dyn/cm or mN/m)		Not determined
Volatile Component (%vol)	Not determined	Gas group		Not determined
pH as a solution (1%)	Not determined	VOC g/L		Not determined

9.2 Other information

No further relevant information available

SECTION 10 Stability and reactivity

10.1 Stability and reactivity

Reactivity	No further relevant information available.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	No dangerous reactions known.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	See section 7.2

Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
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SECTION 11 Toxicological information

11.1 Information on toxicological effects

Whiteboard ink	TOXICITY Not data available
Propane-1,2-diol	TOXICITY Oral (rat) LD50:>20000 mg/kg Dermal ((rabbit) LD50:20800 mg/kg
Ethanol	TOXICITY Oral (mouse) LD50:3450 mg/kg Oral (rat) LD50:7060 mg/kg Oral (rabbit) LD50:6300 mg/kg Inhalation(rat) LC50:20000 mg/l(4h)
Polyethylene glycol	TOXICITY Oral (rat) LD50:22,000 mg/kg Oral (mouse) LD50:28,915 mg/kg Oral (rabbit) LD50:14000 mg/kg
Polyethylene glycol monooleate	TOXICITY Oral (mouse) LD50:> 25,000 mg/kg
Isopropanol	TOXICITY Oral(mouse)LD50:5500 mg/kg Oral(rat)LD50:5030 mg/kg Oral (rabbit) LD50:7900 mg/kg Inhalation(rat) LC50:51.045mg/l(8h)
Carbon black	TOXICITY Oral(rat)LD50:15400 mg/kg Dermal ((rabbit) LD50:3000 mg/kg

11.2 Carcinogenicity

Component	Cas No.	IARC	NTP
Propane-1,2-diol	57-55-6	Not Listed	Not Listed
Ethanol	64-17-5	I	Not Listed
Polyethylene glycol	25322-68-3	Not Listed	Not Listed
Polyethylene glycol monooleate	9004-96-0	Not Listed	Not Listed
Isopropanol	67-63-0	Not Listed	Not Listed
Sucrose stearate	25168-73-4	Not Listed	Not Listed
Poly(vinyl butyral)	63148-65-2	Not Listed	Not Listed
Carbon black	1333-86-4	2B	Not Listed

SECTION 12 Ecological information

12.1 Toxicity

Aquatic toxicity	No further relevant information available
Persistence and degradability	No further relevant information available
Bioaccumulative potential	No further relevant information available
Mobility in soil	No further relevant information available
Other adverse effects	No further relevant information available

12.2 Results of PBT and vPvB assessment

PBT	Not Available
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vPvB

Not Available

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Product / Packaging disposal	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.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

14.1 UN-Number

ADR/RID/ADN, IMDG, IATA	UN1170 (Ethanol)
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14.2 UN proper shipping name

ADR/RID/ADN, IMDG	Ethanol (ethyl alcohol) mixture Isopropanol mixture
IATA	Ethanol mixture Isopropanol mixture

14.3 Transport hazard class(es)

ADR/RID/ADN, IMDG, IATA	
Class	3 Flammable liquids.
Label	3

14.4 Packing group

ADR/RID/ADN, IMDG, IATA	II
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14.5 Environmental hazards

Not Applicable

14.6 Special precautions for user

Warning	Flammable liquids
Hazard identification number (Kemler code)	33
EMS Number:	F-E,S-D
Stowage Category	A

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not Applicable

14.8 Transport/Additional information

UN "Model Regulation"	UN 1170 Ethanol (ethyl alcohol) mixture, 3, II UN1219 Isopropanol mixture, 3, II
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SECTION 15 Regulatory information

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

➤ SARA

Section 355 (extremely hazardous substances)	None of the ingredient is listed
Section 313 (Specific toxic chemical listings)	None of the ingredient is listed

➤ TSCA (Toxic Substances Control Act)

Propane-1,2-diol	ACTIVE
Ethanol	ACTIVE
Polyethylene glycol	ACTIVE
Polyethylene glycol monooleate	ACTIVE
Poly(vinyl butyral)	ACTIVE
Isopropanol	ACTIVE
Carbon black	ACTIVE

➤ Proposition 65

Chemicals known to cause cancer	Carbon black
Chemicals known to cause reproductive toxicity for females	None of the ingredient is listed
Chemicals known to cause reproductive toxicity for males	None of the ingredient is listed
Chemicals known to cause developmental toxicity	None of the ingredient is listed

➤ Cancerogenity categories

EPA (Environmental Protection Agency)	None of the ingredient is listed
TLV (Threshold Limit Value established by ACGIH) reproductive toxicity for females	Carbon black(A4)
NIOSH-Ca (National Institute for Occupational Safety and Health)	Carbon black

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
Propane-1,2-diol	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Ethanol	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Polyethylene glycol	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Polyethylene glycol monooleate	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Sucrose stearate	Listed	Not Listed	Listed	Listed	Listed	Listed	Listed	Listed
Poly(vinyl butyral)	Not Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Isopropanol	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed
Carbon black	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

Creation Date	2023/02/07
Revision Date	2023/02/07
Reason for revision	—

16.2 Full text Risk and Hazard codes

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation(inhalation).

16.3 Abbreviations and acronyms

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

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

16.4 Further information

The contents and format of this SDS are in accordance with 29 CFR 1910.1200.

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