Safety Data Sheet

Report No.:	WP-22096262-JC-01En
Sample Name:	Water-based antistatic coating solution
Client:	Shanghai Chenlong Electro-static Technology Co., LTD.
Warranty of Design:	GB/T 17519-2013、GB/T 16483-2008

Shanghai WEIPU Testing Technology Group Co., LTD.

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Complied by: MengRu Wang

Approved by: Dihong Sun

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Safety Data Sheet

Water-based antistatic coating solution

Version: V1.0
Report No.: WP-22096262-JC-01En
Creation Date: 2022/09/26
Revision Date: 2022/09/26

*Prepared according to GB/T 17519-2013 and GB/T 16483-2008

1 Identification of the chemical and supplier

Product identifier

Product Name	Water-based antistatic coating solution
Cat No.	-
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable
Sample picture(s)	

Recommended use of the product and restrictions on use

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 Chenlong Electro-static Technology Co., LTD.
Address of the company	Room 3301, Building 3, 200 Sanlin road, Pudong Area, Shanghai
Post code	201616
Telephone number	86-021-51035035-8007
Fax number	86-021-58898195
E-mail address	terry@esd-world.com

Emergency phone number

Emergency phone number	13901795073

2 Hazard(s) identification

Emergency overview

Liquid. Slightly harmful in contact with skin. Irritating to skin. Serious irritating to eyes. Toxic by inhalation. Vapours may cause drowsiness and dizziness.

Hazard classification according to GHS

Acute Toxicity – Dermal	Category 5
Skin Corrosion/Irritation	Category 2

Serious Eye Damage/Irritation	Category 2A
Acute Toxicity – Inhalation	Category 3
Specific Target Organ Toxicity Single Exposure	Category 3(drowsiness or dizziness)

GHS Label elements

Hazard pictograms	
Signal word	**Danger**

Hazard statements

H313	May be harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness

Precautionary statements

◆ Prevention

P260	Do not breathe gas/mist/vapour/spray.
P261	Avoid breathing gas/mist/vapour/spray.
P264	Wash face and hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

◆ Response

P311	Call a POISON CENTER/doctor.
P312	Call a POISON CENTER/doctor, if you feel unwell.
P321	Specific treatment (see on this label).
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
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

P405	Store locked up.

P403+P233	Store in a well-ventilated place. Keep container tightly closed.

◆ Disposal

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

Hazard description

◆ Physical and chemical hazards

	No information available

◆ Health hazards

Inhaled	Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Inhalation of vapours or aerosols (mists, fumes), generated by the product during the course of normal handling, may produce toxic effects.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual.
Skin Contact	The product can cause skin irritation following direct contact with the skin. May be harmful in contact with skin.
Eye	This product may cause serious eye irritation. Severe inflammation may be expected with pain following direct contact with the eye.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.

3 Composition/information on ingredients

Substance/mixture

	Mixture

Component	CAS No.	EC No.	Concentration (wt, %)
2-Butoxyethanol	111-76-2	-	10
Water-based epoxy modified acrylic emulsion	/	-	Commercial secrets
Polyethylene wax emulsion	/	-	Commercial secrets
Di-isononyl-cyclohexane-1,2-dicarboxylate	166412-78-8	-	5
Water-based one-component crosslinker	/	-	Commercial secrets
Ionic polymer	/	-	Commercial secrets
Pure water	7732-18-5	231-791-2	47.5
Isopropyl alcohol	67-63-0	-	24

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 soap and 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, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Advice for protecting the rescuer

1	Remove all sources of ignition and increase ventilation.
2	Avoid contact with skin and eyes.
3	Avoid inhalation of vapor or mist.
4	Use personal protective equipment including respirator.

Special note to the doctor

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting 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.

Fire precautions and protective measures

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	Use personal protective equipment,do not breathe gas/mist/vapour/spray.
2	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
3	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

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	Cut off the source of the leak as much as possible.
2	Keep leaks in a ventilated place.
3	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
4	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
5	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.

7 Handling and storage

Handling

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

Storage

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.

8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values（Chemical Harmful Factors）

Component	Standard	OELs	Standard value mg/m³	Critical adverse health effects	Remark
2-Butoxyethanol	GBZ 2.1-2019	PC-TWA	97	Irritation	-
		PC-STEL	-		
		MAC	-		
Isopropyl alcohol	GBZ 2.1-2019	PC-TWA	350	Eye and upper respiratory tract irritation, central nervous system damage	-
		PC-STEL	700		
		MAC	-		

◆ Biological limit values

Biological limit values	No relevant regulations

◆ 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 300 series standard Determination of toxic substances in workplace air.

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	Must wear appropriate safety goggles.
Hand protection	Must wear appropriate chemical protective gloves.
Respiratory protection	Must wear appropriate personal dust proof gas mask.
Skin and body protection	Must wear appropriate chemical protective clothing and chemical resistant shoes.

9 Physical and chemical properties

Physical and chemical properties

Appearance	Milky Liquid
Odor	Slight odor

Odor threshold	No information available
pH	6~6.5
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling range(°C)	No information available
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	No information available
Vapor density(Air = 1)	No information available
Relative density(Water=1)	No information available
Solubility	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	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 active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen. In contact with oxidants causes severe reactions, and may cause a fire or explosion.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide. Oxidants, alkali metals, alkaline earth metals and aluminum.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)

Isopropyl alcohol	5045mg/kg(Rat)	12800mg/kg(Rabbit)	No information available
2-Butoxyethanol	470mg/kg(Rat)	220mg/kg(Rabbit)	2.175mg/L(Rat)

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
2-Butoxyethanol	Category 3	Not Listed
Water-based epoxy modified acrylic emulsion	Not Listed	Not Listed
Polyethylene wax emulsion	Not Listed	Not Listed
Di-isononyl-cyclohexane-1,2-dicarboxylate	Not Listed	Not Listed
Water-based one-component crosslinker	Not Listed	Not Listed
Ionic polymer	Not Listed	Not Listed
Pure water	Not Listed	Not Listed
Isopropyl alcohol	Category 3	Not Listed

Others

Water-based antistatic coating solution	
Skin corrosion/irritation	Causes skin irritation(Category 2)
Serious eye damage/irritation	Causes serious eye irritation(Category 2A)
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	May cause drowsiness or dizziness(Category 3(drowsiness or dizziness))
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
Isopropyl alcohol	LC_{50}: 9640mg/L (96h)(Fish)	EC_{50}: >1000mg/L (48h)(Crustaceans)	ErC_{50}: >1000mg/L (72h)(Algae)

Di-isononyl-cyclohexane-1,2-dicarboxylate	LC_{50}: > 100mg/L (96h)(Fish)	EC_{50}: > 100mg/L (48h)(Crustaceans)	No information available
2-Butoxyethanol	LC_{50}: 1370mg/L (96h)(Fish)	EC_{50}: >1000mg/L (48h)(Crustaceans)	ErC_{50}: >1000mg/L (72h)(Algae)

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae
Isopropyl alcohol	No information available	NOEC: >100mg/L(Crustaceans)	NOEC: 1000mg/L(Algae)
2-Butoxyethanol	No information available	NOEC: >100mg/L(Crustaceans)	NOEC: 130mg/L(Algae)

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Pure water	Low	Low

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Pure water	Low	Log Kow=-1.38

Mobility in soil

Component	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
Pure water	Low	14.3

Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
2-Butoxyethanol	Not PBT/vPvB
Di-isononyl-cyclohexane-1,2-dicarboxylate	Not PBT/vPvB
Isopropyl alcohol	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

IATA-DGR

IATA-DGR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Others

Methods of packing	Packaging as recommended by manufacturer.
Precautions for transport	Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

15 Regulatory information

International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIIC	ENCS
2-Butoxyethanol	√	√	√	√	√	√	√	√	√
Water-based epoxy modified acrylic emulsion	×	×	×	×	×	×	×	×	×
Polyethylene wax emulsion	×	×	×	×	×	×	×	×	×
Di-isononyl-cyclohexane-1,2-dicarboxylate	×	×	×	√	√	√	√	√	√
Water-based one-component crosslinker	×	×	×	×	×	×	×	×	×
Ionic polymer	×	×	×	×	×	×	×	×	×
Pure water	√	√	√	√	√	√	√	√	√
Isopropyl alcohol	√	√	√	√	√	√	√	√	√

[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]	Korea Existing Chemicals Inventory
[AIIC]	Australia. Inventory of Industrial Chemicals (AIIC)
[ENCS]	Japan Inventory of Existing & New Chemical Substances

Chinese chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2-Butoxyethanol	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Water-based epoxy modified acrylic emulsion	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Polyethylene wax emulsion	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Di-isononyl-cyclohexane-1,2-dicarboxylate	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Water-based one-component crosslinker	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Ionic polymer	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Pure water	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Isopropyl alcohol	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×

【A】 Catalog of Hazardous Chemicals(2015 Edition), Notice 5th 2015, the former China State Administration of Work together with the Ministry of Industry and Information Technology, etc.
【B】 List of Toxic Chemicals Restricted in China, Notice 60th 2019, the Ministry of Ecology and Environment, Ministry Commerce, General Administration of Customs.
【C】 List of Ozone Depletion Chemicals Controlled to be Imported/Exported in China（First to Sixth batches）, Noti 2000 to 2012, the former Ministry of Environmental Protection of PRC.
【D】 Catalog of Hazardous Chemicals for Priority Management（First and Second batches）, Notice 95th, 2011, No 12th 2013, China State Administration of Work Safety.
【E】 Catalog of Hazardous Chemicals for Environmental Management, Notice 33th 2014, The former Ministry of Env Protection.
【F】 List of Various Monitoring Chemicals, 52th 2020, the Ministry of Industry and Information Technology.
【G】 List of Priority Controlled Chemicals (the First batch), 83th 2017, the former Ministry of Environmental Protection Industry and Information Technology, the former National Health And Family Planning Commission.
【H】 Catalog of Specially Controlled Hazardous Chemicals (First Edition), 1st 2020, the Ministry of Emergency Mana Ministry of Industry and Information Technology, Ministry of Public Security, Ministry of Transport.
【I】 List of Toxic and Harmful Water Pollutants (First batch), 28th 2019, the Ministry of Ecology and Environment, Na Health Commission.
【J】 Catalog of Highly Toxic Chemicals, Notice 142th 2003, the former Ministry of Health of P.R.China.
【K】 Dangerous Chemicals Directory Used to Manufacure Exploder (2017 Edition), Notice 11th May. 2017, Ministry Public Security of P.R.China.
【L】 Catalog of Stupefacient and Psychotropic Substances(2013 Edition), Notice 230th 2013, China Food and Drug Administration.
【M】 Catalog of Classification and Varieties of Precursor Chemicals, 120th 2017, series of announcements issued by Ministry of Public Security and other ministries and commissions.
【N】 Catalog of Import and Export Management of Precursor Chemicals, 7th 2006, the Ministry of Commerce.
【O】 International Verification of Precursor Chemicals Management Catalog, 8th 2006, the Ministry of Commerce, Mi Public Security.

Note:

"√" Indicates that the substance included in the regulations.
"×" No data or not inlcuded in the regulations.

16 Other information

Information on revision

Creation Date	2022/09/26
Revision Date	2022/09/26
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: https://www.echemportal.org/echemportal/substancesearch/index.action。
[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	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Develo
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hy
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to repro
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

Disclaimer

This Safety Data Sheet (SDS) was prepared according to GB/T 16483-2008 and GB/T 17519-2013. 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.

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