

# MATERIAL SAFETY DATA SHEET (MSDS)

**Applicant Name** : DongGuan City GongHe Electronics Co., Ltd.  
**Applicant Address** : 1301Room Building 13, Xuefu road, Songshan Lake, Dongguan,  
Guangdong, CN, 523808.  
**Product Name** : Super Capacitor 4.2V 21000F  
**Report No.** : RT202211250000992  
**Received Date** : 2022-11-24  
**Redact Period** : 2022-11-24 to 2022-11-25  
**Regulatory Requirements** : As requested by the applicant, the Material Safety Data Sheet is prepared according to Globally Harmonized System of Classification and Labelling of Chemicals (GHS)Rev\_9.

DONGGUAN RUITONG TESTING TECHNOLOGY SERVICE CO., LTD.



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Nancheng District, Dongguan City, China

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## SECTION 1. Identification of the substance/preparation and company

- 1.1 Product Name** : Super Capacitor 4.2V 21000F
- 1.2 Model No.** : 4.2V 21000F
- 1.3 Recommended Use** : Stored energy
- 1.4 Applicant Name** : DongGuan City GongHe Electronics Co., Ltd.
- 1.5 Applicant Address** : 1301Room Building 13, Xuefu road, Songshan Lake, Dongguan, Guangdong, CN, 523808.
- 1.6 Manufacturer Name** : DongGuan City GongHe Electronics Co., Ltd.
- 1.7 Manufacturer Address** : 1301Room Building 13, Xuefu road, Songshan Lake, Dongguan, Guangdong, CN, 523808.
- 1.8 Tel / Fax** : 86-769-85426339
- 1.9 Email** : /
- 1.10 Emergency Phone** : 86-769-85426339

## SECTION 2. Hazards identifications

### 2.1 Hazard Classification of substance or mixture(GHS):

Class 9: Other dangerous goods- The capacitor

### 2.2 Pictograms:



### 2.3 Signal word:

Warning

### 2.4 Hazard description:

These chemicals are contained in a sealed can. Risk of exposure occurs only if the capacitor is

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mechanically or electrically abused.

## 2.5 Precautionary description:

Wear protective gloves/protective clothing/eye protection/face protection

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not open, squeeze, or disassemble the capacitor. Do not expose it to flames or open flames.

Contact of electrolyte and extruded lithium with skin and eyes should be avoided.

## SECTION 3. Composition / information on ingredients

The difference between the single product and mixture: Mixture

Substance name	Conc. (%)	CAS.
Acetonitrile	20-30	75-05-8
Activated Carbon	15-20	7440-44-0
Tetraethylammonium tetrafluoroborate	5-15	429-06-1
Aluminum	25-35	7429-90-5
Cellulose microcrystalline	0-5	9004-34-6
Paper	1-10	/
Other	Balance	/

## SECTION 4. First aid measures

General advice: Immediate medical attention is required. Show this safety data sheet (MSDS) to the doctor in attendance.

### 4.1 Following eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Seek medical attention immediately.

### 4.2 Following skin contact:

Immediately remove contaminated clothing and rinse skin with plenty of soap and water. Immediately consult a physician if feeling uncomfortable.

### 4.3 Following inhalation:

Move victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give cardiopulmonary resuscitation and consult a physician immediately.

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## 4.4 Following ingestion:

If it is ingested, rinse the mouth with water. Seek medical attention immediately.

## SECTION 5. Firefighting measures

### 5.1 Special hazards arising from the substance or mixture:

If the capacitor is in high temperature or short circuit may occur when the fire or explosion.

### 5.2 Extinguishing Media:

Dry powder, Chemical foam, Carbon dioxide, water mist. Carbon tetrachloride.

### 5.3 Advice for firefighters:

As in any fire, wear self-contained breathing apparatus(MSHA/NIOSH approved or equivalent)and full protective gear.

Extinguish fire in a safe distance with enough protection

Prevent fire extinguishing water from contaminating surface water or the ground water system.

### 5.4 Hazardous combustion products:

Carbon monoxide、Carbon dioxide.

## SECTION 6. Accidental release measures

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

If the capacitor material is released, remove personnel from area until fumes dissipate.

Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the capacitors to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors.

Wear appropriate protective measures (SEE SECTION 8).

### 6.2 Cleaning method and Environmental precautions:

It is recommended to discharge the capacitor to the end, handing in the abandoned capacitors to related department unified, dispose of the capacitors in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

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## SECTION 7. Safe handling and storage

### 7.1 Handling Notes:

Keep away from fire and heat sources. The capacitors should not be opened, destroyed or incinerated, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the capacitor, forced over-discharge, throw to fire. Do not crush or puncture the capacitor, or immerse in liquids.

### 7.2 Storage Notes:

Keep away from fire and heat sources. Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the capacitor near heating equipment, nor expose to direct sunlight for long periods. Do not store with food containers or incompatible materials (see section 10.2)

## SECTION 8. Exposure controls / personal protection

### 8.1 Occupational Exposure Limit:

No information found

### 8.2 Engineering Control:

Keep substances sealed during production and keep indoor ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### 8.3 Respiratory Protection:

Wear filter mask.

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.

### 8.4 Eyes Protection:

Wear protective goggles in working time. (Comply with the European Union EN 166 or The U.S. NIOSH standard.) If contacting with eyes, flush with plenty of water and seek medical attention.

### 8.5 Hands Protection:

Wear protective gloves (such as butyl rubber), passing the tests according to EN 374(EU), US F739 or

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AS/NZS 2161.1 standard.Wash with plenty of water if gloves puncture or skin exposure.

## 8.6 Sanitary Measure:

Forbid smoking, eating and drinking in working places. Washing hands after handling products.

## SECTION 9. Physical and chemical properties

	<b>Appearance and Color</b>	Silver grey Aluminum foil shell
	<b>Odour</b>	Odorless
	<b>Solubility</b>	Insoluble in water

## SECTION 10.Stability and reactivity

### 10.1 Stability:

Stable under recommended storage and handling conditions (See section 7).

### 10.2 Material for avoiding:

Strong oxidizers, acids, alkalis

### 10.3 Contact conditions for avoiding:

Fire、 High temperature.

### 10.4 Hazardous decomposition products

No data available

## SECTION 11. Toxicological information

Inhalation, skin contact and eye contact are possible when the capacitor is opened. Exposure to internal contents, the corrosive fumes will be very irritation to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

## SECTION 12. Ecological information

### 12.1 Ecotoxicity:

According to the environmental protection laws, this product can't be poured into sewers or drainage ditches, can't be discarded in those places which would affect soil and underground water.

### 12.2 Persistence and degradability:

No data available.

### 12.3 Bioaccumulative potential:

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No data available.

**12.4 Mobility in soil:**

No data available.

**12.5 Other adverse effects:**

No data available

**SECTION 13. Disposal considerations**




**13.1 Handling method for waste:**

Handling waste according to the local regulations. Contact specific waste disposal company or companies recommended by local laws.

**13.2 Handling method for uncleaned packaging:**

In accordance with official regulations.

**SECTION 14. Transport information**

	Mode of transport	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
	<b>UN NO.</b>	3508	3508	3508
	<b>Class</b>	9	9	9
	<b>Packaging group</b>	Not applicable	Not applicable	Not applicable
	<b>Technical name</b>	CAPACITOR,ASYMME TRIC(with an energy storage capacity greater than 0.3 Wh)	CAPACITOR,ASYMME TRIC(with an energy storage capacity greater than 0.3 Wh)	CAPACITOR,ASYMME TRIC(with an energy storage capacity greater than 0.3 Wh)
	<b>Label</b>			
	<b>Notes</b>	Gentle with, prevent collision drag and dump.prohibition with antioxidant and food chemical mixed stowage,transit should prevent sun、 fire、 rain and high temperature.		

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<b>Transport/Additional information</b>	According to the Certification for Safe Transport of Chemical Goods test results.The substance is not subject to any other provisions of IMO IMDG Code according to special provision 372.
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## SECTION 15. Regulatory information

Hazardous chemicals catalog  
International maritime dangerous goods code  
Dangerous Goods Number Of United Nations  
Technical Instructions for the Safe Transport of Dangerous Goods by Air  
Classification and code of dangerous goods  
Occupational Safety and Health Act (OSHA)  
The principle of classification of transport packaging groups of dangerous goods  
Globally Harmonized System of Classification and Labelling of Chemicals  
In accordance with all local laws.

## SECTION 16. Other information

### Disclaimer

The information in this Material Safety Data Sheet was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss,damage or expense arising out of or in any way connected with the handling,storage,use or disposal of the product. This MSDS was prepared and is to be used only for this product.This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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