



## Specification for approval

Model No.

HTC-04

Description.

Thermal compound (AD83 Plus)

Customer Version detail					
Customer Name	AINEX	approved by			
Issued Date					
Edition					
EVERCOOL Version detail					
File Serial Number	20240815001	PROJECT ENGINEER	CHIEF ENGINEER	R&D MANAGER	SALES
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Edition	1.0	Jerry	Guo	Daniel	Serene

# SAFETY DATA SHEET

Regulation (EC) No 1907/2006 (REACH)  
(COMMISSION REGULATION (EU) 2015/830)

Version 1  
Product Name AD83 Plus

Issue Date 15-Oct-2021  
Revision date 18-May-2023

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

### 1.1. Product identifier

Product Name AD83 Plus  
Product Code

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

Recommended Use Thermal grease  
Uses advised against No information available

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

Supplier SHENZHEN ANSWER ELECTRONIC CO.,LTD  
Address 3/F,JinYu City Industrial Park,XueXiang Village,Buji Town Longgang  
AREA SHENZHEN CHINA  
Postal Code 518000  
Phone +86 755-8419-3748  
FAX +86 752-8419-4748  
E-mail alenyu@163.com

Importer  
Address  
Postal Code  
Phone  
FAX  
E-mail

### 1.4. Emergency telephone number

Asia Pacific Tel:+886-2-2225-3517  
China Tel: +86-21-51872177  
Europe Tel: +31-(0)40-702-0900  
North America Tel: +1-888-624-5099

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]  
Chronic aquatic toxicity Category 2 - (H411)

### 2.2. Label elements

Symbols/Pictograms



Signal word None  
Hazard Statements H411 - Toxic to aquatic life with long lasting effects  
Precautionary Statements P273 - Avoid release to the environment  
P391 - Collect spillage  
P501 - Dispose of contents/ container to an approved waste disposal plant

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.1 Mixture**

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminum	231-072-3	7429-90-5	71.2	Flam. Sol. 1 (H228) Water-react. 2 (H261)
Zinc oxide	215-222-5	1314-13-2	21.4	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Polysiloxane	-	-	7.3	-
Pigment	-	-	0.1	-

**SECTION 4: First aid measures****4.1. Description of first aid measures****General advice**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.

**Eye contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion**

Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person.

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

No information available.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

No information available.

**5.2. Special hazards arising from the substance or mixture**

No information available.

**5.3. Advice for firefighters**

Evacuate personnel to safe areas. Move containers from fire area if you can do it without risk. Cool drums with water spray. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Stay upwind. Ensure adequate ventilation, especially in confined areas.

## SECTION 6: Accidental release measures

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

Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Local authorities should be advised if significant spillages cannot be contained. Prevent entry into waterways, sewers, basements or confined areas.

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

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

### 6.4. Reference to other sections

See Section 7 for more information

See section 8 for more information

See section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Take precautionary measures against static discharges. Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Use personal protection recommended in Section 8.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep locked up and out of reach of children. Store in accordance with local regulations.

### 7.3. Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Chemical Name	Australia	Austria	Belgium	Denmark	European Union
Aluminum (CAS #: 7429-90-5)	10 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	STEL 20 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	-	TWA: 5 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	-
Zinc oxide (CAS #: 1314-13-2)	10 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup> STEL	TWA: 5 mg/m <sup>3</sup>	-	TWA: 4 mg/m <sup>3</sup>	-

Chemical Name	Latvia	France	Finland	Germany	Italy
Aluminum (CAS #: 7429-90-5)	TWA: 2 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 1.5 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup> TWA: 1.5 mg/m <sup>3</sup>	-
Zinc oxide (CAS #: 1314-13-2)	TWA: 0.5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> Ceiling / Peak: 2 mg/m <sup>3</sup> Ceiling / Peak: 0.4 mg/m <sup>3</sup> Ceiling / Peak: 4 mg/m <sup>3</sup>	-

Chemical Name	Poland	Portugal	Spain	Switzerland	Netherlands
Aluminum (CAS #: 7429-90-5)	TWA: 2.5 mg/m <sup>3</sup> TWA: 1.2 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup>	-
Zinc oxide (CAS #: 1314-13-2)	STEL: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	STEL: 10 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	STEL: 10 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	STEL: 3 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup>	-

Chemical Name	Norway	United Kingdom	ACGIH TLV	OSHA PEL	NIOSH IDLH
Aluminum (CAS #: 7429-90-5)	TWA: 5 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup>	STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> respirable fraction	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> Al	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> Respirable dust TWA: 5 mg/m <sup>3</sup> Al
Zinc oxide (CAS #: 1314-13-2)	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	-	STEL: 10 mg/m <sup>3</sup> respirable fraction TWA: 2 mg/m <sup>3</sup> respirable fraction	TWA: 5 mg/m <sup>3</sup> fume TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> fume (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) STEL: 10 mg/m <sup>3</sup> fume	IDLH: 500 mg/m <sup>3</sup> Ceiling: 15 mg/m <sup>3</sup> dust TWA: 5 mg/m <sup>3</sup> dust and fume STEL: 10 mg/m <sup>3</sup> fume

**Derived No Effect Level (DNEL)**

No information available

TWA: 5 mg/m

**Predicted No Effect Concentration (PNEC)**

No information available

**8.2. Exposure controls****Engineering Controls**

Showers. Eyewash stations. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition.

**Personal protective equipment**

Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand Protection

Wear protective gloves.

Skin and body protection

Suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

**Environmental exposure controls**

Prevent entry into waterways, sewers, basements or confined areas.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Appearance

Paste

Color

Gray

Odor

No information available

Odor Threshold

Not determined

pH

Not determined

Melting point/freezing point

Not determined



Boiling point / boiling range	Not determined
Flash point	150 °C
Evaporation rate	Not determined
Flammability (solid, gas)	Not flammable
Flammability Limit in Air	Not applicable
Vapor Pressure	Not determined
Vapor density	Not applicable
Density	2.5 g/cm <sup>3</sup>
Relative density	Not determined
Partition coefficient (LogPow)	Not determined
Autoignition temperature	Not applicable
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not an explosive
Oxidizing properties	Not determined

#### 9.2. Other information

No information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

None under normal processing.

#### 10.4. Conditions to avoid

Heat, flames and sparks.

#### 10.5. Incompatible materials

None known based on information supplied.

#### 10.6. Hazardous decomposition products

None under normal use conditions.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Overall product	No information available.> 5000 mg/kg ( Rat )	-	-
Aluminum (CAS #: 7429-90-5)	LD50> 15900 mg/kg bw(rat)	-	LC50> 0.888 mg/L/4 h(rat)
Zinc oxide (CAS #: 1314-13-2)	> 5000 mg/kg ( Rat )	> 2000 mg/kg bw (Rat)	> 1.79 mg/L air 4h (Rat)

##### Skin corrosion/irritation

Non-irritating to the skin.

##### Serious eye damage/eye irritation

No eye irritation.

**Sensitization**

No sensitization responses were observed.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

No information available.

**Reproductive toxicity**

No information available.

**STOT - single exposure**

No information available

**STOT - repeated exposure**

No information available

**Aspiration hazard**

No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
Aluminum (CAS #: 7429-90-5)	-	> 50 mg/L/96h	-
Zinc oxide (CAS #: 1314-13-2)	2.36 mg/L 96h Skeletonema costatum 2.97 mg/L 96h Skeletonema costatum 1.85 mg/L 96h Skeletonema costatum 1.23 mg/L 96h Skeletonema costatum	1.1 mg/L 96h 23.06 mg/L 84h Danio rerio	0.098 mg/L 48h Daphnia magna 1.55 mg/L 48h Daphnia magna 3.3 mg/L 48h Daphnia magna

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available

### 12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment information is not available as chemical safety assessment not conducted.

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste from residues/unused products

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**SECTION 14: Transport information**

14.1 UN Number	3077
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide 23.9%)
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazards	Marine pollutant
14.6 Special precautions	No information available
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**  
European Union

Component	EINECS/ELINCS	SVHC candidates	RESTRICTIONS - REACH TITLE VIII
Aluminum 7429-90-5 ( 71.2% )	X	-	-
Zinc oxide 1314-13-2 ( 21.4% )	X	-	-

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

**International Inventories**

Component	TSCA	DSL/NDSL	ENCS	IECSC	KECL	PICCS	AICS
Aluminum 7429-90-5 ( 71.2% )	X	X	Exempt	X	X	X	X
Zinc oxide 1314-13-2 ( 21.4% )	X	X	X	X	X	X	X

"-" Not Listed

"X" Listed

**15.2. Chemical safety assessment**

No information available

**SECTION 16: Other information**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Issue Date	15-Oct-2021
Revision date	18-May-2023
Revision Note	Not applicable

**Key or legend to abbreviations and acronyms used in the safety data sheet**

TWA - TWA (time-weighted average)

STEL - STEL (Short Term Exposure Limit)



**Ceiling - Maximum limit value**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**Full text of H-Statements referred to under section 3**

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H228 - Flammable solid

H261 - In contact with water releases flammable gases

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

----- End of Safety Data Sheet -----