



ACME · Ashima Electrotech (P) Ltd.

Manufacturer of ACME Safe Earthing electrodes and backfill compound · Supplier of lightning and surge protection products

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ABOUT

Ashima Electrotech (P) Ltd. (AEPL), Jaipur, has worked in earthing and electrical protection since 2010. We manufacture earthing electrodes, copper bonded rods, earth enhancement compound and the 10-inch FRP pit cover under the ACME Safe Earthing brand, and supply lightning protection, surge protection and solar DC protection products from other manufacturers, including Mersen and Cirprotec. Standards and test documentation are product-specific: ask for the current documents for the exact product you are buying.

Specifications, standards, approvals and availability are product-specific. Third-party brand names belong to their manufacturers. Edition 2026.

SECTORS SERVED

Domestic / Residential

- › Pipe Earthing & Copper Clad Rods
- › HDPE Pit Covers
- › Surge Protection Devices

Industrial

- › High current withstand Earth Electrodes (>50 kA)
- › Industrial & Semi-Conductor Fuses
- › High End Surge Protection Devices
- › Ground Resistance Monitors

Health Care

- › Pure Copper Earth Electrode for MRI, Linear Accelerator, Cathlab

Electricity Supply & Maintenance

- › Highly conductive Earth Enhancement Material
- › Earth Electrodes for 33 kV / 132 kV / 400 kV substations
- › High voltage / MVA Transformers earthing

Railways & Banking

- › Copper bonded rods
- › Perforated Pipe Earthing & Earth Discharge Rods
- › Signal Earthing applications
- › Premium Earth Enhancement Compound for banks

Airports & Data Centers

- › Copper Bonded Rods + low resistivity Earth Enhancement Material
- › Advance Lightning Protection System
- › Low resistance earthing solutions

PRODUCT CATALOG

Copper Earth Electrode — Copper Strip in Copper Pipe

MANUFACTURED BY ASHIMA ELECTROTECH

ACME-CSCP

- 99.9% pure copper strips as primary conductor inside Copper Pipe
- For heavy fault current requirements
- Pressure-filled conductive & heat absorbent material to sustain heavy fault current

50 MM PIPE — WALL THICKNESS 1.0 MM

Description	Length	Strip Size	Catalogue Code	Wall Thickness
ACME 50mm Copper Pipe with Copper Strip	2 m	25×3	A50CC25321	1.0 mm
ACME 50mm Copper Pipe with Copper Strip	2 m	32×5	A50CC32521	1.0 mm
ACME 50mm Copper Pipe with Copper Strip	3 m	25×3	A50CC25331	1.0 mm
ACME 50mm Copper Pipe with Copper Strip	3 m	32×5	A50CC32531	1.0 mm

50 MM PIPE — WALL THICKNESS 1.5 MM

Description	Length	Strip Size	Catalogue Code	Wall Thickness
ACME 50mm Copper Pipe with Copper Strip	2 m	25×3	A50CC253215	1.5 mm
ACME 50mm Copper Pipe with Copper Strip	2 m	32×5	A50CC325215	1.5 mm
ACME 50mm Copper Pipe with Copper Strip	3 m	25×3	A50CC253315	1.5 mm
ACME 50mm Copper Pipe with Copper Strip	3 m	32×5	A50CC325315	1.5 mm

80 MM PIPE — WALL THICKNESS 1.0 MM

Description	Length	Strip Size	Catalogue Code	Wall Thickness
ACME 80mm Copper Pipe with Copper Strip	2 m	25×3	A80CC25321	1.0 mm
ACME 80mm Copper Pipe with Copper Strip	2 m	32×5	A80CC32521	1.0 mm

Description	Length	Strip Size	Catalogue Code	Wall Thickness
ACME 80mm Copper Pipe with Copper Strip	3 m	25×3	A80CC25331	1.0 mm
ACME 80mm Copper Pipe with Copper Strip	3 m	32×5	A80CC32531	1.0 mm

80 MM PIPE — WALL THICKNESS 1.5 MM

Description	Length	Strip Size	Catalogue Code	Wall Thickness
ACME 80mm Copper Pipe with Copper Strip	2 m	25×3	A80CC253215	1.5 mm
ACME 80mm Copper Pipe with Copper Strip	2 m	32×5	A80CC325215	1.5 mm
ACME 80mm Copper Pipe with Copper Strip	3 m	25×3	A80CC253315	1.5 mm
ACME 80mm Copper Pipe with Copper Strip	3 m	32×5	A80CC325315	1.5 mm

**Special & custom sizes available on request*

G.I. Earth Electrode — G.I. Pipe with G.I. Strip

MANUFACTURED BY ASHIMA ELECTROTECH

ACME-GIPGS

- GI strip as primary conductor inside GI pipe
- Multiple strip sizes for different fault current requirements
- Hot Dip Galvanization (HDG) for anti-corrosion resistance

Description	Length	Strip Size	Catalogue Code
ACME 50mm GI Pipe with GI strip Earth Electrode	2 m	25×3	A50G2532
ACME 50mm GI Pipe with GI strip Earth Electrode	2 m	32×6	A50G3262
ACME 50mm GI Pipe with GI strip Earth Electrode	3 m	25×3	A50G2533
ACME 80mm GI Pipe with GI strip Earth Electrode	3 m	25×3	A80G2533
ACME 80mm GI Pipe with GI strip Earth Electrode	3 m	32×6	A80G3263
ACME 80mm GI Pipe with GI strip Earth Electrode	3 m	50×6	A80G5063

**Special & custom sizes available on request*

G.I. Earth Electrode — Pipe in Pipe

MANUFACTURED BY ASHIMA ELECTROTECH

ACME-GIPP

- Longer equipment life and improved human safety
- Acme-EEC used to keep electrode surrounding moisture high
- Circular path ensures fault current spreads uniformly in all directions

Description	Length	Inner Pipe Size	Catalogue Code
ACME 50mm GI Pipe in Pipe Earth Electrode	2 m	25 mm	AGP50252
ACME 50mm GI Pipe in Pipe Earth Electrode	3 m	25 mm	AGP50253
ACME 80mm GI Pipe in Pipe Earth Electrode	2 m	40 mm	AGP80402

Description	Length	Inner Pipe Size	Catalogue Code
ACME 80mm GI Pipe in Pipe Earth Electrode	3 m	40 mm	AGP80403

G.I. Earth Electrode — Copper Strip in G.I. Pipe

MANUFACTURED BY ASHIMA ELECTROTECH

ACME-GIPCS

- 99.9% pure copper strips as primary conductor in GI Pipe
- For heavy fault current requirements
- Pressure-filled conductive & heat absorbent material

Description	Length	Strip Size	Catalogue Code
ACME 50mm GI Pipe with copper strip	2 m	25×3	A50C2532
ACME 50mm GI Pipe with copper strip	2 m	32×5	A50C3252
ACME 50mm GI Pipe with copper strip	3 m	25×3	A50C2533
ACME 50mm GI Pipe with copper strip	3 m	32×5	A50C3253
ACME 50mm GI Pipe with copper strip	3 m	40×6	A50C4063
ACME 80mm GI Pipe with copper strip	2 m	25×3	A80C2532
ACME 80mm GI Pipe with copper strip	3 m	25×3	A80C2533
ACME 80mm GI Pipe with copper strip	3 m	32×5	A80C3253
ACME 80mm GI Pipe with copper strip	3 m	50×6	A80C5063

**Special & custom sizes available on request*

Copper Bonded Ground Rod

MANUFACTURED BY ASHIMA ELECTROTECH

ACME-CBGR

- Molecularly bonded pure electrolytic copper on low-carbon high tensile steel core
- Anti-corrosion, ductile, easy to install deeply
- 99.9% pure electrolytic copper bonded on low carbon steel

Description	Length	Micron Coating	Catalogue Code
Copper Bonded Rod	1 m	40–50	ACBR040M1
Copper Bonded Rod	2 m	40–50	ACBR040M2
Copper Bonded Rod	3 m	40–50	ACBR040M3
Copper Bonded Rod	2 m	250–270	ACBR250M2
Copper Bonded Rod	3 m	250–270	ACBR250M3

**Special & custom sizes available on request*

Earthing Accessories

SUPPLIED BY ASHIMA ELECTROTECH

A Clamp

U Bolt Type E

U Bolt Type E2

U Bolt Type GUV

Earth Rod Clamp

Coupler

Earth Enhancement Backfill Compound

MANUFACTURED BY ASHIMA ELECTROTECH

ACME-EEC

- Reduces earthing resistance in all soil types (Rocky, Sandy, low moisture)
- Contains Ti, Na, Mg, Ca, C — natural, non-hazardous minerals
- Non-corrosive: sulphur content below 2%

PARAMETER	VALUE
Colour	Dark Grey
pH Value	7–10
Electric Resistivity	<0.12 $\Omega \cdot m$
Conductivity Rate	High
Water Solubility	<5%
Bag Size	10 kg / 20 kg / 25 kg
Moisture Content at 105°C	10.05%
Sulphur Content	<2%

Bentonite Earth Backfill

SUPPLIED BY ASHIMA ELECTROTECH

Natural clay (sodium-activated montmorillonite) that swells many times its dry volume when mixed with water. Retains moisture long-term, absorbs moisture from surrounding soil, keeps earthing system effective. Datasheet available on request.

Conductive Cement

SUPPLIED BY ASHIMA ELECTROTECH

Low resistivity grounding material. Prepared with hardening material (graphite/carbon) ratios to define conductivity. Contains corrosion inhibitor.

Positive low contact
resistance

No hazardous
chemicals

Does not leach or
wash away

Corrosion Inhibitor
properties

No expansion or shrinkage

Earthing Chamber / Pit Covers

10-INCH FRP COVER MANUFACTURED BY ASHIMA · OTHERS SUPPLIED

PVC EARTHING CHAMBER COVER (PVCECC)

PARAMETER	VALUE
Top diameter	265 mm
Bottom diameter	300 mm
Height	265 mm
Wall thickness	5.5 mm
Material	Polypropylene (PVC)
Features	Factory-built long holes for pipe strip access; light weight; max safe working load; easy to install

MS PIT COVER

Feature	Size (mm)	Thickness
Light Weight	300×300	2 mm
Maximum safe working load	450×450	4 mm
Easy to install	600×600	6 mm

CAST IRON PIT COVER

Heavy duty, for high-pedestrian-traffic areas. Made by die casting. Available in various sizes.

RCC PIT COVER

For remote sites (petrol pumps, substations) where masonry is impractical. Available sizes:

300×300 mm

450×450 mm

600×600 mm

Telescopic Earth Discharge Rod

SUPPLIED BY ASHIMA ELECTROTECH

ACME-TEDR

Highly insulated FRP Telescopic Earth Discharge Rod — automatic pultrusion plant, strong electrical & mechanical strength.

PARAMETER	VALUE
Material	FRP Pultruded
Process	Automatic Pultrusion Plant
Surface	Smooth and Glossy

PARAMETER	VALUE
Design	Telescopic Type
Locking	Push Button type Locking System
Total Sections	03
Assembled Length	18 Feet
Dry Power Frequency Voltage (1 min) with stand	11 kV rms, 33 kV rms, 132 kV rms
Glass Content	65%
Top Section Dia	25 mm
Bottom Section Dia	45 mm
Earthing	Die cast aluminium earthing instrument for 30 mm dia
Cable (11 kV)	4 sq. mm copper cable, 06 m long
Cable (33 kV)	10 sq. mm copper cable, 09 m long
Cable (132 kV)	35 sq. mm copper cable, 15 m long
Clamp	Crocodile grounding clamp
Cover	Included

MERSEN Surge Protection Devices (SPDs)

SUPPLIED BY ASHIMA ELECTROTECH

3-Stage Cascade Method

Cascade protection: successive stages combine high discharge capacity devices with low residual voltage devices. SPDs must withstand discharge current and keep U_{res} below equipment's U_e peak voltage.

INDUSTRIAL / LARGE APPLICATION SELECTION GUIDE

Scenario	Main Panel	Distribution Board	Equipment
External LPS present (direct)	SPD T1 — Iimp 50 kA (10/350) — STP T1 50	SPD T2 — Imax 40 kA (8/20) — STP T2 40	SPD T2+3 — Imax 20 kA (8/20) — STP T23 20
Overhead supply (high)	SPD T1+2 — Iimp 12.5 kA (10/350) — STP T12 12.5	SPD T2 — Imax 40 kA (8/20) — STP T2 40	SPD T2+3 — Imax 20 kA (8/20) — STP T23 20
Stormy region (medium)	SPD T1+2 — Iimp 12.5 kA (10/350) — STP T12 12.5	SPD T2 — Imax 40 kA (8/20) — STP T2 40	SPD T2+3 — Imax 20 kA (8/20) — STP T23 20
No external LPS, no overhead, non-stormy	SPD T2 — Iimp 40 kA (8/20) — STP T2 40	SPD T2+3 — Imax 20 kA (8/20) — STP T23 20	SPD T2+3 — Imax 20 kA (8/20) — STP T23 20

PHOTOVOLTAIC SPD SELECTION

Scenario	DC Side	AC Side
Large-scale / Rooftop (Solar Farms)	SPD T2 PV — Imax 40 kA (8/20) — STP T2 40 PV	SPD T2 — Imax 40 kA (8/20) — STP T2 40

Scenario	DC Side	AC Side
Self-consumption / Off-grid (Residential)	SPD T2 PV — I _{max} 40 kA (8/20) — STP T2 40 (ELV)	SPD T2 — I _{max} 40 kA (8/20) — STP T2 40
OEM Inverter Manufacturer	SPD T2 PV — I _{max} 40 kA (8/20) — STP T2 40 PV	SPD T2 — I _{max} 40 kA (8/20) — STP T2 40

MERSEN SPD PRODUCT LINEUP

STM T1 — Type 1

First Step of Protection
I_{imp}: 50 kA

STM T12 — Type 1+2 Combined

Combined T1+T2
I_{imp}: 12.5 kA / I_{max}: 50 kA

STM T2 — Type 2 Wide Range

Wide range Type 2
I_{max}: 40 kA

STM T2 PV — Photovoltaic

PV-specific EN50539-11, UL 1449
I_{max}: 40 kA

STP T23 — Type 2+3

Fine protection
I_{max}: 20 kA / U_{oc}: 10 kA

STM T23 S — Slim

Space saving Type 2+3
I_{max}: 20 kA / U_{oc}: 6–10 kA

STE T23 — EMI Filter

Powerful EMI Filter Type 2+3
I_{max}: 20 kA / U_{oc}: 6 kA

STL T23 — Street Light

LED Street Light, 10 kV
I_{max}: 10 kA / U_{oc}: 10 kA

MERSEN PV Fuses & Fuse Holders

SUPPLIED BY ASHIMA ELECTROTECH

1000 VDC MIDGET PV FUSES

5 A

1000VDC Midget

10 A

1000VDC Midget

12 A

1000VDC Midget

15 A

1000VDC Midget

20 A

1000VDC Midget

25 A

1000VDC Midget

30 A

1000VDC Midget

1500 VDC 10×85 ROBUST PV FUSES

5 A

1500VDC 10×85 Robust

15 A

1500VDC 10×85 Robust

20 A

1500VDC 10×85 Robust

25 A

1500VDC 10×85 Robust

30 A

1500VDC 10×85 Robust

32 A

1500VDC 10×85 Robust

FUSE HOLDERS

CUS101HEL 1000VDC Single Pole	USM1HEL 1000VDC Single Pole	10×38 Holder 1000VDC PV Fuses	Helioprotection 1500VDC Fuse Holder
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Direct Current Distribution Box

SUPPLIED BY ASHIMA ELECTROTECH

ACME-DCDB

- Collects solar cell output and supplies to inverter for AC output
- Main parts: DC MCB, DC Fuses, Connectors, DC SPDs
- Specification typically: 2 IN 2 OUT (Input & Output configurable)
- Acts as disconnecter unit between solar output and inverter section
- Designed for tough operational conditions

ESE Lightning Rod — Cirprotec Nimbus 60

SUPPLIED BY ASHIMA ELECTROTECH

Early Streamer Emission · NFC 17-102:2011 · AISI 316

Electronic ESE air terminal (rod + conductor + arrester). 60 μs early streamer emission time per NFC17102:2011. No external power needed — uses atmospheric gradient energy. High-frequency pulses create low-impedance ionized path.

PARAMETER	VALUE
Product Height	528.5 mm
Product Width	85 mm
Product Weight	3235 g
Standard	NF C 17-102:2011
Certifications	CE; BUREAUVERITAS
Housing Material	Stainless Steel AISI 316
Enclosure Rating	IP 67
Temperature Range	-20°C to +80°C
Early Streamer Emission Certification	LRIC
Early Streamer Emission Time	60 μs
Max. Withstood Current (10/350)	200 kA
Min. Cable Section	50 mm ²
Max. Flat Tape Width	30 mm
Min. Flat Tape Width	25 mm

PARAMETER	VALUE
Max. Flat Tape Thickness	6 mm
Min. Flat Tape Thickness	2 mm

FRANKLIN LIGHTNING ARRESTER — COPPER SPECS

PARAMETER	VALUE
Number of Spikes	5
Length of Spike	90 mm
Mounting Bar Height	500–1500 mm
Mounting Bar Dia	14–17 mm
Mounting Base	85 mm
Sphere Dia	53 mm

Supporting Mast

SUPPLIED BY ASHIMA ELECTROTECH

ACME

Quality steel with galvanization. Available in 40 mm and 58 mm dia, heights of 2 m / 3 m / 5 m / 9 m. Insulating material at top prevents underflow of current. Consists of: Lightning Arrester, Insulator, GI Mast, Base Plate.

Conductors — Bare Copper Tape

SUPPLIED BY ASHIMA ELECTROTECH

20×1.5 mm	0.27 kg/m	20×3 mm	0.53 kg/m	25×2 mm	0.45 kg/m	25×3 mm	0.67 kg/m
1"×1/8"	0.67 kg/m	25×4 mm	0.89 kg/m	25×6 mm	1.33 kg/m	30×3 mm	0.80 kg/m
30×4 mm	1.07 kg/m	30×5 mm	1.33 kg/m	31×3 mm	0.83 kg/m	31.5×4 mm	1.13 kg/m
31×6 mm	1.65 kg/m	38×3 mm	1.01 kg/m	38×5 mm	1.69 kg/m	38×6 mm	2.02 kg/m
40×3 mm	1.06 kg/m	40×4 mm	1.42 kg/m	40×5 mm	1.78 kg/m	40×6 mm	2.16 kg/m
50×3 mm	1.33 kg/m	50×4 mm	1.78 kg/m	50×5 mm	2.22 kg/m	50×6 mm	2.68 kg/m
50×7 mm	3.08 kg/m	50×8 mm	3.56 kg/m	75×6 mm	4.00 kg/m	50×10 mm	4.44 kg/m
60×10 mm	5.32 kg/m	80×6 mm	4.32 kg/m	100×6 mm	5.36 kg/m		

BARE SOLID CIRCULAR & STRANDED CONDUCTOR

Name	Diameter	Cross-Sectional Area	Weight per mtr
Copper Conductor	08 mm	50.27 mm ²	0.44 kg

Name	Diameter	Cross-Sectional Area	Weight per mtr
Aluminium Conductor	08 mm	50.27 mm ²	0.12 kg

Exothermic Welding Tools

SUPPLIED BY ASHIMA ELECTROTECH

Tool	Description
Graphite Mould	High-quality graphite, reusable multiple times. Weld cavity allows molten metal to flow to all sections, creating permanent connection.
Mould Handle Clamp	Compatible with maximum exothermic moulds.
Steel Metal Disk	Timing device — allows welding powder to heat to proper temperature.
Exothermic Weld Powder	Main component. Moisture-resistant plastic tube packaging. Sizes: 25 g, 90 g, 150 g, 200 g, 250 g.
Ignite Powder (Starting Powder)	5 g sufficient per reaction. Applied on mould before and after weld powder; ignited via spark gun.
Hand Gloves	Safety gloves for weld powder melting at >1500°C. One pair lasts ~250 joints.
Flint Gun	Ignites starting powder to initiate exothermic reaction.
Soft Brush	Cleans sensitive mould weld cavity without damage.
Hard Brush	Cleans other mould sections.
Slag Removal Tool	Removes metal scrap and dust from the mould.
File Card	Cleans objects to be welded — removes rust and dirt.
Sealing Compound	Fills gap on mould where conductor passes.
Flame Torch	Usable for 200+ joints.
Safety Eye Glasses	Eye protection during exothermic welding process.

Complete Lightning Protection System

SUPPLIED BY ASHIMA ELECTROTECH

Full building LPS — air terminals to earthing, including surge protection at every stage.

1 Air Terminals

2 Air Rod Bases

3 Conductors

4 Conductor Fixing

5 Conductor Jointing Clamps

6 Test Clamps

7 Earth Electrodes

8 Earth Rod Clamps

9 Earth Pit Cover

10 Surge Protection Device (SPD)

TRUSTED BY

 Indian Railways	 TATA Power	 State Bank of India	 Jio	 Maruti Suzuki
 Berger Paints	 HDFC Bank	 AU Small Finance Bank	 ICICI Bank	 Punjab National Bank
 HCL	 Eicher	 Tech Mahindra	 Shree Cement	 Wonder Cement
 Rajasthan Rajya Vidyut Prasaran Nigam (RVPN)	 Rajasthan Housing Board	 Jal Jeevan Mission (Har Ghar Jal)	 Doordarshan	 Prasar Bharati

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