

TECHNICAL DATA SHEET

ARCap — HDPE Series

Polymer Corrosion Protection Cap for Industrial Bolted Connections

PRODUCT IDENTIFICATION

Product	Series	Material	Document Ref.
ARCap	HDPE	High Density Polyethylene	AIS-TDS-002
Max. Service Temp.	Min. Service Temp.	Surface Prep. (Min.)	Tooling Required
100°C	-60°C	SSPC-SP1*	Power tools only

* Polyisobutene filler material may require surface preparation additional to this product. Consult manufacturer TDS.

PRODUCT DESCRIPTION

ARCap HDPE Series caps are precision injection-moulded from high density polyethylene for use in elevated-temperature or mechanically demanding industrial corrosion protection applications. The cap physically encases the bolt head or nut assembly and is filled with corrosion fill compound prior to installation, displacing air and moisture from all voids within the fastener geometry. Installation requires only limited tools and minimal surface preparation.

STORAGE

- Store in original packaging until use.
- Store in a cool, dry location not exposed to the elements.
- ARCap caps supplied without UV stabilization additives must not be exposed to sunlight during storage, as UV exposure will significantly degrade service life.

SERVICE CONDITIONS & OPERATING TEMPERATURE

Maximum service temperature is 100°C continuous. The cap must not be exposed to open flame or direct radiant heat sources. Minimum service temperature is -60°C – the polymer remains flexible and retains its friction-fit retention below this threshold under standard loading conditions. ARCap caps supplied without UV stabilization additives are suitable for use in unexposed locations only and must not be subjected to direct sunlight.

MATERIAL PROPERTIES

Property	Typical Value	Test Method
Density (g/cm ³)	0.960	ASTM D1505
Melt Index (g/10 min)	0.3	ASTM D1238
Tensile Strength at Break (kg/cm ²)	250	ASTM D638
Ultimate Elongation at Break (%)	175	ASTM D638
Low Temp. Brittleness (°C)	< -60	ASTM D746
Vicat Softening Point (°C)	127	ASTM D1525
Melting Point (°C)	132	DSC
Hardness (Shore D)	66	ASTM D2240
UV Stabilization (Optional)	HALS + Antioxidant additives	—
Size Tolerance	±0.2 mm	Caliper Measured

CHEMICAL RESISTANCE

Reagent / Environment	Resistance
Acids (dilute & concentrated)	Excellent
Alkalis / Bases	Excellent
Alcohols	Excellent
Esters	Excellent
Sea Water / Brine	Excellent
Grease / Mineral Oil	Excellent
Aromatic Hydrocarbons	Good
Strong Oxidising Agents	Limited

ORDERING INFORMATION

Parameter	Details
Size designation	Specify bolt head/nut AC (across corners) dimension in mm
Material	HDPE
Colour	Specify RAL code if desired. Default: Black
Quantity	Minimum order quantities apply — contact Arcon
Custom geometry	Available on request — supply drawing or sample

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