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TECHNICAL DATA SHEET (TDS)

DE Series Neutral Bar

PRODUCT IDENTIFICATION

- **Product Name:** DE Series Neutral Bar
- **Material Type:** Electrolytic Copper with Flame-Retardant Insulating Base
- **Details:**
    - **Company:** MISCO Australia
    - **Address:** 89-91 Licola Crescent, Dandenong South, VIC 3175
    - **Telephone Number:** 03 9706 5185
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    - **Website**: www.misco.net.au

- **TDS Number:** MISCO – TDS - 008
- **TDS Date:** 01/12/2024
- TDS Version: 1

PRODUCT DESCRIPTION

The DE Series from MISCO Australia provides high-quality earth and neutral bar solutions, designed for safe cable distribution and termination in low-voltage (LV) applications. Built with a tin-plated high-purity copper conductor and mounted on a rigid, flame-retardant PA66 base, each assembly is suited for direct panel mounting or DIN rail attachment (model dependent). DE Series bars are commonly deployed in switchboards, metering panels, industrial control gear, and custom assemblies.

These assemblies are available in a wide range of pole counts and configurations to suit various termination densities. High-conductivity copper ensures excellent electrical performance, while robust insulation offers safety, flame resistance, and long-term durability.

NEMA GRADE

NEMA Grade: Not applicable

CLASS

Class:

LV Switchgear Class – up to 1000V AC
IEC Overvoltage Category III

MILITARY SPECIFICATIONS AND TYPE

Not applicable

KEY PROPERTIES

- Rated for continuous 165 Amp operation.
- 99.9% pure electrolytic copper.
- Tin-plated for enhanced surface conductivity and corrosion protection.
- Flame-retardant, halogen-free PA66 base.
- UL94 V-0 fire rating.
- Wide operating temperature range.
- High insulation resistance.
- Available with stainless or zinc-plated steel terminal screws.
- Pre-drilled mounting holes or DIN rail clip mount.
- Manufactured in compliance with AS/NZS and IEC switchgear standards.

APPLICATIONS

- LV Switchboards
- Distribution Panels
- Metering Cabinets
- Motor Control Centres (MCC)
- Earth and Neutral Termination Points
- Sub-distribution and Utility Meter Boards
- Custom Switchboard Manufacturing (OEM use)

SPECIFICATIONS

Product Form: Bar and base assembly, fully pre-drilled and pre-threaded
Standard Colours: Tin-plated copper bar with grey or black base
Bar Dimensions (typical): 10 mm × 5 mm cross-section
Mounting Hole Pitch: 25 mm or 32 mm pitch standard
Pole Count Options: 10, 16, 20, 24, or custom
Terminal Type: M5 / M6 threaded with captive screws
Max. Cable Size per Pole: Up to 16 mm^2 (stranded)
Mounting Type: Base-mount screw or clip-in DIN rail (as specified)

Compliance:

- AS/NZS 3000
- AS/NZS 61439.1/.2
- IEC 60947-7-1

UL File: UL Recognized (Components) where applicable

TOLERANCES ON COPPER BAR

Parameter	Tolerance
Bar Length	±1 mm
Bar Width	±0.3 mm
Hole Positioning	±0.2 mm
Thread Tolerance	ISO metric, 6g class

MECHANICAL PROPERTIES

Property	Value
Bar Material	Electrolytic Copper (≥99.9%)
Surface Finish	Bright Tin Plated
Base Material	PA66 (Polyamide) GF-reinforced
Screw Type	M5/M6 Steel – Zinc or SS (model dependent)
Mounting Torque	2.5–3.0 Nm typical
Mounting Style	Screw mount / DIN rail snap-on (variant specific)
Flammability	UL94 V-0

ELECTRICAL PROPERTIES

Property	Value
Rated Continuous Current	165 A (IEC)
Max. Working Voltage	1000V AC / DC
Short-Time Withstand	6.3 kA for 1s (based on conductor cross-section)
Insulation Resistance	> 10^9 Ohm
Dielectric Strength	> 10 kV/mm across insulating base

THERMAL PROPERTIES

Property	Value
Operating Temp. Range	–20°C to +120°C
Storage Temp. Range	–40°C to +130°C
Coefficient of Thermal Expansion (Base)	0.2 mm/m·°C

CHEMICAL RESISTANCE

- Resistant to oils, lubricants, and hydrocarbons
- Stable in humid and industrial atmospheres
- Tin plating resists oxidation under normal conditions
- Base is resistant to weak acids and alkalis

PROCESSING AND MACHINING CONSIDERATIONS

Product is supplied fully assembled. No machining required. Ensure correct mounting torque and conductor sizing during installation.

ENVIRONMENTAL COMPLIANCE

- RoHS Compliant
- REACH Compliant
- No ozone-depleting substances
- Halogen-free thermoplastic base

SUSTAINABILITY AND ENVIRONMENTAL IMPACT

- Designed for long service life
- Minimal maintenance requirements
- Fully recyclable copper bar and base

SAFETY INFORMATION

- Install in accordance with AS/NZS 3000 and AS 61439
- Always de-energize equipment before installation or inspection
- Do not exceed torque or conductor limits

Refer to Safety Data Sheet (SDS) for full details before handling.

WARRANTY

MISCO Australia warrants this product to be free from manufacturing defects for a period of 12 months when installed and operated within rated limits. Warranty is void if product is modified or installed improperly.

DISCLAIMER

The information provided in this data sheet is intended as a general guide for the use and handling of material. It is based on current knowledge, testing, and is believed to be accurate and reliable as of the date of publication. However, ***MISCO Australia*** *makes no warranties, express or implied, regarding the material's performance, suitability, or fitness for any specific application.*

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Specifications are subject to change without notice as part of MISCO Australia's ongoing product improvement initiatives.

Always refer to the latest version of this data sheet before proceeding with critical applications.

All sales are subject to MISCO Australia's standard terms and conditions of sale.

Revision	Date Issued	Prepared / Reviewed By	Description of Change	Approved By

1.0	January 2025	MISCO Australia –	Initial release of Data Sheet for	Director, MISCO Australia

Document Control:

- **Document Title:**
- **Document ID:**
- **Revision:** 1.0
- **Review Cycle:** 24 months or upon regulatory update (whichever occurs first)

End of Technical Data Sheet.