GS Power CB1025

GS Power OFC Pure Copper 10 Gauge Wire Instruction Manual

Model: CB1025

1. Product Overview

The GS Power OFC Pure Copper 10 Gauge Wire is a high-quality, oxygen-free copper electrical wire designed for a wide range of 12V applications. This 25-foot bonded wire (25 ft Red & 25 ft Black) offers superior conductivity and flexibility, making it suitable for demanding electrical connections.

Image 1.1: A spool of GS Power 10 Gauge Red and Black bonded wire, showcasing its construction and color coding.

Key Features:

- **Enhanced Conductivity:** Made from 99.99% Oxygen-Free Copper (OFC) for optimal current flow and minimal signal loss.
- **Versatile Application:** Ideal for solar panels, amplifiers, hi-fi speakers, automotive wiring, home theater systems, RV power, robotics, marine, and R/C applications.
- **Durable Insulation:** Features automotive-grade GPT PVC insulation, resistant to oil and gas, ensuring longevity and safety.
- **Flexible Design:** Highly flexible construction allows for easy routing and installation in various setups.
- **Convenient Dispensing:** Supplied on a hard plastic spool for easy and tangle-free wire management.
- **Temperature Range:** Operates effectively in temperatures from -40°F to +176°F (-40°C to +80°C).

2. Technical Specifications

Understanding the technical specifications ensures proper application and performance of the wire.

Image 2.1: A visual representation of the wire's internal structure and a table comparing AWG standards, copper area, and resistance.

Table 2.1: GS Power 10 Gauge Wire Specifications

Specification	Detail
Wire Gauge	10 AWG (American Wire Gauge)
Wire Length	25 feet (Red) + 25 feet (Black)
Conductor Material	99.99% Oxygen-Free Pure Copper
Number of Conductors	2 (Red and Black, bonded parallel)
Strands per Conductor	109 strands
Diameter per Strand	0.25 mm
Insulation Material	Automotive-grade GPT PVC
Insulation Properties	Oil & gas resistant
Temperature Range	-40°F to +176°F (-40°C to +80°C)
Voltage Rating	12V (low voltage applications)

3. Safety Information

Always prioritize safety when working with electrical wiring. Failure to follow safety guidelines can result in injury or damage to equipment.

- **Disconnect Power:** Before installing or working with the wire, ensure all power sources are disconnected.
- **Use Correct Tools:** Employ appropriate wire strippers, cutters, and crimpers for the specific wire gauge.
- **Verify Gauge:** Always use the correct wire gauge for the intended current load to prevent overheating and potential fire hazards.

- **Proper Insulation:** Ensure all connections are properly insulated to prevent short circuits.
- **Avoid Damage:** Do not bend, pinch, or stretch the wire excessively, as this can damage the conductors or insulation.
- **Professional Installation:** If unsure about any aspect of installation, consult a qualified electrician or technician.

4. Setup and Installation

This wire is designed for ease of use in various electrical projects. Follow these general steps for proper setup and installation.

Image 4.1: The bonded red and black wires can be easily separated for individual connections.

Installation Steps:

1. **Plan Your Route:** Determine the path the wire will take, ensuring it avoids sharp edges, heat sources, and moving parts.
2. **Measure and Cut:** Measure the required length of wire and cut it using appropriate wire cutters. Account for any slack needed for connections.
3. **Separate Wires:** The bonded red and black wires can be easily pulled apart to separate them for individual

connections.

4. **Strip Insulation:** Carefully strip the insulation from the ends of the wire using a 10 AWG wire stripper, exposing the copper strands.
5. **Make Connections:** Connect the stripped wire ends to your devices or terminals. Ensure a secure and tight connection. Use crimp connectors or solder as appropriate for the application.
6. **Insulate Connections:** Cover all exposed wire and connections with electrical tape, heat shrink tubing, or other suitable insulating material.
7. **Secure Wiring:** Use cable ties or clips to secure the wire along its route, preventing it from dangling or interfering with other components.

Image 4.2: Example of the wire being used in an RC application, demonstrating its flexibility and ease of installation.

5. Operation and Application

The GS Power 10 Gauge Wire is designed for reliable performance in various low-voltage (12V) electrical systems. Proper operation involves ensuring the wire is used within its specified limits and for appropriate applications.

Image 5.1: Illustration highlighting the 99.99% Oxygen-Free Copper and flexible, oil & gas resistant PVC insulation.

Suitable Applications:

- **Automotive:** Powering car audio systems, accessories, and other 12V automotive components.
- **Solar Panels:** Connecting solar panels to charge controllers or batteries in low-voltage setups.
- **Hi-Fi Audio:** Delivering clear audio signals to speakers in home theater or car audio systems.
- **RV Power:** Wiring for various electrical needs within recreational vehicles.
- **Robotics & R/C:** Providing power connections for robotic projects and remote-controlled devices.
- **General Electrical Wiring:** Suitable for indoor lighting, battery cables, and other low-voltage electrical circuits.

Always ensure the current draw of your application does not exceed the safe current carrying capacity of 10 AWG wire to prevent overheating.

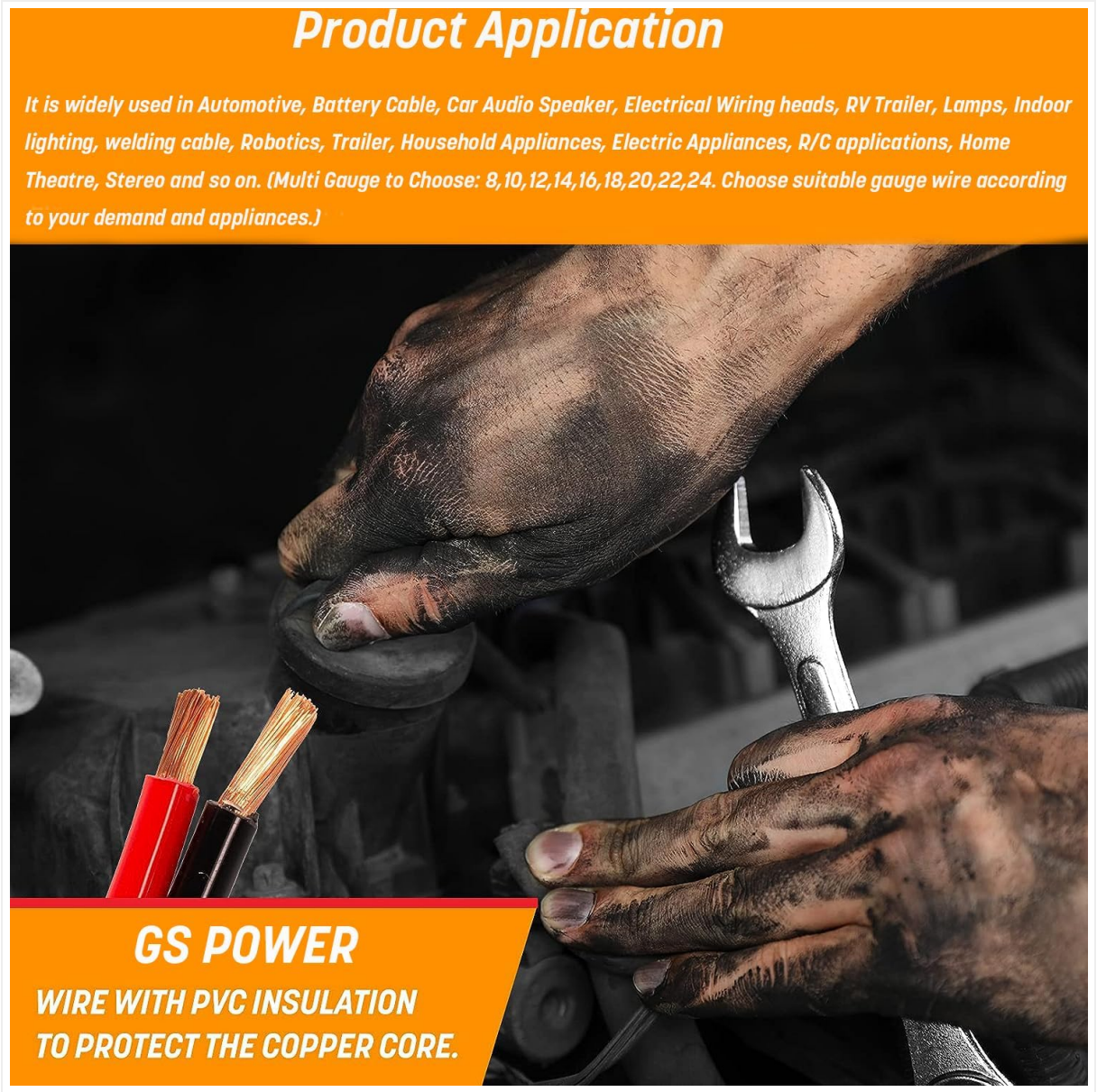

Image 5.2: Hands working on an engine, illustrating the wire's application in automotive electrical systems.

6. Maintenance and Care

Proper maintenance ensures the longevity and safe operation of your GS Power wire.

- **Regular Inspection:** Periodically inspect the wire for any signs of wear, cuts, abrasions, or discoloration in the insulation.
- **Check Connections:** Ensure all connections remain tight and free from corrosion. Loose connections can lead to resistance and heat buildup.
- **Avoid Physical Damage:** Protect the wire from physical stress, sharp objects, and excessive bending that could compromise the insulation or conductors.
- **Environmental Protection:** While the PVC insulation is oil and gas resistant, avoid prolonged exposure to harsh chemicals or extreme temperatures outside the specified range.
- **Cleanliness:** Keep the wire and its surroundings clean and free of debris that could cause damage or interfere with connections.

7. Troubleshooting

If you encounter issues with your wiring setup, consider the following common problems and solutions.

Table 7.1: Common Troubleshooting Scenarios

Problem	Possible Cause	Solution
No power/signal	Loose or corroded connection; damaged wire; incorrect wiring.	Check all connections for tightness and corrosion. Inspect wire for visible damage. Verify wiring diagram.
Wire overheating	Excessive current load; insufficient wire gauge for application; poor ventilation.	Reduce current load. Ensure 10 AWG is appropriate for the load. Improve ventilation around the wire.
Intermittent connection	Loose connection; partial wire break; vibration.	Secure all connections. Inspect wire for internal breaks (flex test). Secure wire to prevent movement.
Poor audio quality (if used for speakers)	Loose connections; interference; incorrect polarity.	Check speaker wire connections. Ensure proper polarity (red to positive, black to negative). Route wire away from power cables to reduce interference.

8. Warranty Information

GS Power products are manufactured to high-quality standards. For specific warranty details regarding your OFC Pure Copper 10 Gauge Wire, please refer to the product packaging or contact GS Power customer support directly. Typically, warranties cover defects in materials and workmanship under normal use.

9. Customer Support

For further assistance, technical support, or inquiries regarding your GS Power OFC Pure Copper 10 Gauge Wire, please contact our customer support team.

Website: Visit the official GS Power website for FAQs and contact information.

Email: Refer to your product packaging for customer service email addresses.

Phone: Contact numbers may be available on the GS Power website or product documentation.

When contacting support, please have your product model (CB1025) and purchase information ready.