

P180 Carbon Dioxide Adsorbent

SAFETY DATA SHEET

Document No.	Version	Issue date	Revision date
P180-SDS-EN	V1.0	-	-

01 Identification

Item	Information
Product name	P180 Carbon Dioxide Adsorbent
Other name	P180 CO2 Adsorbent
CAS number	Not applicable; porous material
EC number	Not applicable
Molecular formula	Not specified
Molecular weight	Not applicable
Recommended uses	CO2 capture from power-plant and steel-mill flue gas; CO2 removal for natural-gas purification; CO2 removal upstream of air-separation units; Capture of formaldehyde, hydrogen sulfide and other acidic gases; Supercritical CO2 extraction, food-grade CO2 production and fine-chemical synthesis
Supplier	Meridian Chemical Solutions LLC
Address	[Company address]
Telephone	[Telephone number]
Email	[Email address]
Emergency telephone	[Emergency telephone number]

02 Hazard identification

Signal word and classification: Warning. The source states that these are reference classifications for porous adsorbent materials and not product-specific test results.

Code	Hazard statement	Category
H315	Causes skin irritation	Category 2, reference classification
H319	Causes serious eye irritation	Category 2A, reference classification
H335	May cause respiratory irritation	Category 3, reference classification

Precautions: Use local exhaust ventilation. Avoid breathing vapor, mist or dust. Wear protective gloves, protective clothing and eye protection. Wash thoroughly after handling. Keep the product out of drains, soil and surface water.

03 Composition and information on ingredients

High-performance porous adsorbent. Main component: P180 Carbon Dioxide Adsorbent. CAS: Not applicable; porous material.

04 First aid measures

Exposure	Measures
Skin	Remove contaminated clothing and rinse with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
Eyes	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if easy to do. Seek medical attention.
Inhalation	Move the person to fresh air and keep breathing comfortable. Obtain medical attention if symptoms occur.
Ingestion	Rinse mouth. Do not induce vomiting. Obtain medical attention promptly.

05 Firefighting measures

Use water spray, dry chemical or carbon dioxide as appropriate. Avoid high-pressure water jets that may spread spilled material. Firefighters should wear full protective equipment and self-contained breathing apparatus. Thermal decomposition may produce irritating or toxic fumes.

06 Accidental release measures

Isolate the area and restrict access. Wear suitable protective equipment. Collect liquid with inert absorbent or sweep solid granules into a sealed container while avoiding dust. Prevent discharge to drains and waterways. Dispose of collected material under applicable local regulations.

07 Handling and storage

Keep the work area well ventilated. Avoid contact with skin and eyes and avoid inhalation of vapor, mist or dust. Keep away from incompatible materials. Handle containers carefully.

Storage: Store sealed in a dry, cool place away from fire and heat. Protect from moisture. Shelf life: 12 months in the original packaging.

Packaging: 25 kg fiber drum. Custom packaging available.

08 Exposure controls and personal protection

Control	Recommendation
Occupational limits	No data provided in the source document.
Engineering controls	Use enclosure or local exhaust ventilation where appropriate.
Respiratory protection	Use suitable respiratory protection when ventilation is inadequate or dust may be generated.
Eye protection	Chemical safety goggles.
Hand protection	Chemical-resistant protective gloves.
Skin protection	Protective work clothing.

09 Physical and chemical properties

Property	Value / status	Remarks
Appearance	White, fine, low-density granules	-
Particle size	60-100 mesh	-
Density	0.64 g/cm ³	-
BET surface area	614.7 m ² /g	-
Total pore volume	0.395 cm ³ /g	-
Average pore diameter	2.57 nm	-
Most probable pore diameter	2.13 nm	-
Pure CO ₂ adsorption capacity	11.4 mmol/g	1 bar, 25 C

10 Stability and reactivity

Stable under normal sealed storage and handling conditions. Avoid high temperatures, strong oxidizers and other incompatible materials identified for the intended process. Protect moisture-sensitive products from prolonged exposure to humid air. Product-specific decomposition data were not provided unless stated elsewhere in this document.

11 Toxicological information

The hazard statements listed in Section 2 reflect the source document. Other toxicological endpoints, including sensitization, carcinogenicity and reproductive toxicity, were not fully supported by test data in the source and should be confirmed before formal issue.

12 Ecological information

Measured ecological data were not provided. Prevent uncontrolled release to water, soil and drainage systems. Adsorbents that have captured hazardous substances may require disposal as hazardous waste.

13 Disposal considerations

Collect waste in sealed containers and dispose of it through a licensed waste contractor in accordance with local, national and international requirements. Do not discharge waste directly to the environment.

14 Transport information

Transport classification in the Chinese source must be reviewed by a qualified regulatory professional before shipment. Protect packages from impact, sunlight, rain, excessive heat and moisture. Carry the current SDS with the shipment.

15 Regulatory information

Production, use, storage, transport and disposal must comply with applicable chemical safety and environmental regulations in the destination jurisdiction.

16 Other information

This information is provided in good faith based on current knowledge. Conditions and methods of use are beyond the supplier's control. The user is responsible for evaluating suitability and safety for the intended application. This English version is a translation of the supplied Chinese document and requires regulatory review before external issue.

Supplier note

For reference only. Final requirements are subject to the executed contract and current product documentation.