

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- Product Name/Identifiers: cmSORB® HP High-Performance Carbon Molecular Sieve
- Description: Cylindrical black particles
- Relevant identified uses of the substance or mixture and uses advised against
 - Relevant uses: Nitrogen generation
 - Uses advised against: None known
- Company: Interra Global, 800 Busse Highway, Suite 101, Park Ridge, IL 60068, USA
- Telephone: +1 (847)292-8600
- Emergency Telephone Number: +1(847)292-8600

2. HAZARD(S) IDENTIFICATION

- Not a hazardous material.
- Potential Health Effects:
 - Ingestion way: Inhalation
 - Health hazards: Prolonged exposure to dust from the product should be avoided to prevent respiratory issues.

3. COMPOSITION / INFORMATION ON INGREDIENTS

- Main components: $\geq 99\%$ carbon, $\leq 1\%$ proprietary
- Main application: It is used in nitrogen generators to adsorb oxygen to generate rich nitrogen gas.

4. FIRST AID MEASURES

- Description of first aid measures:
 - General information: Change powdered clothing.
 - Inhalation: Ensure supply of fresh air. Get medical attention for any breathing difficulty.
 - Skin contact: Clean skin with plenty of soap and water. Remove contaminated clothing and shoes. Thoroughly clean before reuse. Seek medical attention if irritation develops.

- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if possible, and continue rinsing. If eye irritation persists, seek medical advice/attention.
- Ingestion: Move to fresh air and keep respiratory tract unobstructed. Gargle with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, seek medical attention immediately. Loosen tight clothing such as a collar, tie, or belt.

5. FIREFIGHTING MEASURES

- Flash point (°C): > 400°C
- Lower explosive limit (%): Insignificant
- Upper explosive limit (%): Insignificant
- Ignition temperature (°C): Insignificant
- Oxidizability: None
- Minimum ignition energy (MJ): Insignificant
- Maximum explosion pressure (MPa): Insignificant
- Hazard characteristics: None
- Extinguishing media: Mist spraying, powder, carbon dioxide

6. ACCIDENTAL RELEASE MEASURES

- Non-hazardous

7. HANDLING AND STORAGE

- Precautions for safe handling:
 - Dust masks
 - Protective glasses
 - Allow for adequate ventilation
- Conditions for safe storage, including any incompatibilities:
 - Avoid direct sunlight and store in dry and cool warehouse.
 - Store in airtight containers. Avoid exposure to moisture.
 - To be transported with the vacuum plastic drums.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Maximum acceptable concentration: 2.9 mg/m³
- Monitoring methods: Gas monitor
- Engineering control: Provide good natural ventilation.
- Control parameters:
 - Eye protection: Safety glasses
 - Hand protection: 0,4mm butyl rubber, > 120 min (EN 374)
 - Skin protection: Protective clothing, dust masks
 - Other:
 - Avoid contact with eyes and skin.
 - Do not inhale dust.
 - Personal protective equipment should be selected specifically for the workplace, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: Solid
- Appearance: Cylindrical black particles
- Odor: Odorless
- pH-value: Not applicable
- Viscosity: Not applicable
- Boiling point [°C]: Not applicable
- Freezing/Melting point [°C]: Not applicable
- Autoignition temperature [°C]: Not applicable
- Decomposition temperature [°C]: Not applicable
- Solubility in water: Insoluble in water
- Specific gravity/density: 650 - 690g/l

10. STABILITY AND REACTIVITY

- Chemical stability: The product is stable under standard conditions.
- Oxidizability: None
- Harm of aggregate: Not applicable

- Decomposition product: Not applicable

11. TOXICOLOGICAL INFORMATION

- Acute toxicity: Not applicable
- Sub-acute and chronic toxicity: Not applicable
- Thrill: Not applicable
- Sensitization: Not applicable
- Mutagenicity: Not applicable
- Teratogenicity: Not applicable
- Carcinogenicity: Not applicable
- Others: Not applicable

12. ECOLOGICAL INFORMATION

- Ecotoxicity: Not applicable
- Biodegradability: Not applicable
- Non-biodegradable: Not applicable
- Biological enrichment or cumulative: Not applicable
- Other harmful effects: Not applicable

13. DISPOSAL CONSIDERATIONS

- Nature of the waste: Not applicable

14. TRANSPORT INFORMATION

- Risk regulation: None
- Caution during transportation: To be transported with the vacuum plastic drum.
Keep away from rain and direct sunshine.
- IATA: Not regulated as a hazardous material
- IMO: Not regulated as a hazardous material
- RID/ADR: Not regulated as a hazardous material

15. REGULATORY INFORMATION

- European/International Regulations
 - European Labeling in Accordance with EC Directives.
 - Hazard Symbols: Not applicable

- Risk Phrases: None
- Safety Phrases: None
- WGK (Water Danger/Protection)
- CAS# 7440-44-0: 0
- United Kingdom Occupational Exposure Limits.
- Canada
 - CAS# 7440-44-0 is listed on Canada's DSL List.
 - CAS# 7440-44-0 is not listed on Canada's Ingredient Disclosure List.
- Exposure Limits
 - CAS# 7440-44-0: OEL-GERMANY: TWA 6 mg/m³ (resp. dust)
 - OEL-SWITZERLAND: TWA 2.5 mg/m³ (resp. dust)
 - OEL-SWITZERLAND: TWA 5 mg/m³ (inhalable dust) JAN9
 - OEL-UNITED KINGDOM: TWA 10 mg/m³ (inhalable dust)
 - OEL-UNITED KINGDOM: TWA 5 mg/m³ (resp. dust)
 - OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
 - OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV
 - US FEDERAL
 - TSCA
 - CAS# 7440-44-0 is listed on the TSCA inventory.

16. OTHER INFORMATION

- Preparation Date: August 26, 2021
 - Revision Number: 2
 - Revision Date: September 21, 2021
 - Revised By: AH
 - Approved By: CB

16.2 WARRANTY

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