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1 Identification

• This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. · Product identifier: Gas purifying filter · Trade name: CRS ZPureTM HC Purifier · Article number: 202232-B, 202232-SS, 202233-B, 202233-SS, 202232R-B, 202232R-SS, 202233R-B, 202233R-SS, 202232XL-B, 202232XL-SS, 202233XL-B, 202233XL-SS · SDS number: 991053 · CAS Number: 7440-44-0 · EC number: 231-153-3 · Application of the substance / the preparation Purifying gas · Details of the supplier of the safety data sheet · Manufacturer/Supplier: Chromatography Research Supplies, Inc. 2601 Technology Drive Louisville, KY 40299 USA msds@chromres.com · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (502) 491-6300 CHEMTREC (24 Hours) 800-424-9300 (U.S.A.) When Calling from Outside the U.S.A., Dial Your Access Code for the U.S.A., then 1, then 703-527-3887. 2 Hazard(s) identification · Classification of the substance or mixture H320 Causes eye irritation. · Classification according to Directive 67/548/EEC or Directive 1999/45/EC Flammable. • Information concerning particular hazards for human and environment: Not applicable. · Label elements • GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). · Hazard pictograms Void · Signal word Warning · Hazard statements Causes eye irritation. · Precautionary statements If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use. Wash thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. (Contd. on page 2) - USA

Printing date 08/01/2013

Reviewed on 08/01/2013

Trade name: CRS ZPureTM HC Purifier



· Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 7440-44-0 Carbon
- · Identification number(s)
- EC number: 231-153-3

4 First-aid measures

- · Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

• Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

• *Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.*

(Contd. on page 3)

Printing date 08/01/2013

Reviewed on 08/01/2013

Trade name: CRS ZPureTM HC Purifier

- · Environmental precautions: No special measures required.
- *Methods and material for containment and cleaning up: Pick up mechanically.*
- **Reference to other sections** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

· Handling:

- Precautions for safe handling No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- Breathing equipment: Not required.
- · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation • *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- · Penetration time of glove material
- *The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection:*



Tightly sealed goggles

(Contd. of page 2)

(Contd. on page 4)

Printing date 08/01/2013

Trade name: CRS ZPureTM HC Purifier

Reviewed on 08/01/2013

(Contd. of page 3)

9 Physical and chemical proper	9 Physical and chemical properties			
· Information on basic physical and	chemical properties			
· General Information				
· Appearance:				
Form:	Granulate			
Color:	Dark			
· Odor:	Odorless			
· Odour threshold:	Not determined.			
· pH-value:	Not applicable.			
· Change in condition				
Melting point/Melting range:	3550 °C (6422 °F)			
Boiling point/Boiling range:	4827 °C (8721 °F)			
· Flash point:	Not applicable.			
· Flammability (solid, gaseous):	Flammable.			
· Ignition temperature:	>220 °C (>428 °F)			
• Decomposition temperature:	Not determined.			
· Auto igniting:	Not determined.			
• Danger of explosion:	Not determined.			
· Explosion limits:				
Lower:	Not determined.			
Upper:	Not determined.			
· Vapor pressure:	Not applicable.			
• Density at 20 •C (68 •F):	1 g/cm ³ (8.345 lbs/gal)			
• Bulk density at 20 •C (68 •F):	$500 \ kg/m^3$			
· Relative density	Not determined.			
· Vapour density	Not applicable.			
· Evaporation rate	Not applicable.			
· Solubility in / Miscibility with				
Water:	Insoluble.			
· Partition coefficient (n-octanol/wat	er): Not determined.			
· Viscosity:				
Dynamic:	Not applicable.			
Kinematic:	Not applicable.			
Organic solvents:	0.0 %			
· Other information	No further relevant information available.			

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.

(Contd. on page 5)

Printing date 08/01/2013

Reviewed on 08/01/2013

Trade name: CRS ZPure[™] HC Purifier

• Hazardous decomposition products: No dangerous decomposition products known.

(Contd. of page 4)

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)
- Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes: Generally not hazardous for water
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- *Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information		
· UN-Number · DOT, ADR, ADN, IMDG, IATA	Void	
· UN proper shipping name · DOT, ADR, ADN, IMDG, IATA	Void	
		(Contd. on page 6)

USA

Safety Data Sheet acc. to OSHA HCS

Printing date 08/01/2013

Reviewed on 08/01/2013

Trade name: CRS ZPureTM HC Purifier

	(Contd. of page	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG Class	Void	
IATA Class	Void • Not applicable. See note 1 below.	
Packing group DOT, ADR, IMDG, IATA	Void	
Environmental hazards: Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex I MARPOL73/78 and the IBC Code	I of Not applicable.	
Transport/Additional information:	Not applicable. Note 1: Under the UN classification for activated carbon, all activate carbons have been identified as a class 4.2 product. However, this produ has been tested according to the "United Nations Transport of Dangerou Good"s test protocol for a "self-heating substance" (United Nation Transportation of Dangerous Goods, Manual of Tests and Criteria, Part II Section 33.3.1.6 - Test N.4 - Test Method for Self Heating Substances) and has been specifically determined that this product does not meet th definition of a self heating substance (class 4.2) or any other hazard class and therefore should not be listed as a hazardous material. This informatio is applicable only for the Acivated Carbon Product identified in th document.	

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara
- Section 355 (extremely hazardous substances):
 Substance is not listed.

 Section 313 (Specific toxic chemical listings):
 Substance is not listed.

 TSCA (Toxic Substances Control Act):
 Substance is listed.

 Proposition 65

 Chemicals known to cause cancer:
 Substance is not listed.

 Chemicals known to cause reproductive toxicity for females:
 Substance is not listed.

 Chemicals known to cause reproductive toxicity for males:
 Substance is not listed.

 (Contd. on page 7)

Printing date 08/01/2013

Reviewed on 08/01/2013

Trade name: CRS ZPureTM HC Purifier

(Contd. of page 6)

USA

• Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

· GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms Void

· Signal word Warning

· Hazard statements

- Causes eye irritation.
- · Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Wash thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing MSDS: Product safety department

· Contact: Product Safety Department

• Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)