Safety Data Sheet (MSDS) — Activated Carbon, 4 mm, impregnated with Potassium Hydroxide

Identification of the Substance and of the Company/Undertaking

Product identifier

Substance name: Activated carbon, 4 mm, impregnated with potassium hydroxide
EC No.: 931-328-0
CAS No.: 7440-44-0

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:
Laboratory chemical
Laboratory and analytical use
Uses advised against:
Not for private (household) use
Not for food, beverages, or animal feed

Product identifier

Company identification/Supplier： Henan CarbonFresh Activated Carbon Co., Ltd.
Website: https://www.carbonfreshcn.com/
Email: info@carbonfreshcn.com
Phone: (+86) 155-3801-7198
Address: Enterprise Headquarters Base, Innovation Park, High-tech Zone,Zhengzhou , Henan, China

Emergency telephone number

Not provided

Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP):
Serious eye damage/eye irritation, Category 1 (Eye Dam. 1), H318
Note: Full list of abbreviations in Section 16.

Label elements

Labelling according to CLP (EC No 1272/2008):
Signal word: Danger
Pictogram: GHS05 (corrosion/serious damage)
Hazard statement:
H318 Causes serious eye damage
Precautionary statements:
Prevention: P280 Wear protective gloves/eye protection
Response:
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Labelling for packages with contents not exceeding 125 ml:

Signal word: Danger
Pictogram: GHS05
H318 Causes serious eye damage
P280 Wear protective gloves/eye protection
P305+P351+P338 If in eyes … continue rinsing
P310 Immediately call a POISON CENTER/doctor

Labelling for packages with contents not exceeding 10 ml:

Signal word: Not required
Pictogram: Not required
Hazard statements: Not required
Precautionary statements: Not required

Other hazards

PBT and vPvB assessment: This substance is not PBT or vPvB.
Endocrine disrupting properties: Contains no endocrine disruptors (ED) at concentrations ≥ 0.1%.

Composition/Information on Ingredients

Substance

Substance name: Activated carbon
Molecular formula: C
Relative molecular mass: 12.01 g/mol
CAS No.: 7440-44-0
EC No.: 931-328-0
Impurities/additives/components:
Substance name: Potassium hydroxide
CAS No.: 1310-58-3
EC No.: 215-181-3
Index No.: 019-002-00-8
Content: < 12%
Note: Full list of abbreviations in Section 16.

First Aid Measures

Description of first aid measures

General advice: Remove contaminated clothing.
Inhalation: Move the person to fresh air. If in doubt or if symptoms persist, seek medical advice.
Skin contact: Rinse skin with water/shower. If in doubt or if symptoms persist, seek medical advice.

Eye contact: Immediately rinse cautiously with plenty of running water for 10–15 minutes, keeping eyelids apart; consult an ophthalmologist.
Ingestion: Rinse mouth. If feeling unwell, contact a physician.

Most important symptoms and effects, both acute and delayed

Risk of blindness; risk of severe eye damage.

Indication of any immediate medical attention and special treatment needed

None.

Firefighting Measures

Extinguishing media

Suitable extinguishing media: Coordinate firefighting with surrounding fire; water, foam, dry chemical, ABC powder.
Unsuitable extinguishing media: Direct water jet.

Special hazards arising from the substance or mixture

None.
Hazardous combustion products: Carbon monoxide (CO), carbon dioxide (CO_2).

Advice for firefighters

Do not inhale smoke in case of fire/explosion. Extinguish from a safe distance using conventional methods. Wear positive-pressure self-contained breathing apparatus.

Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Use personal protective equipment as required. Avoid contact with skin, eyes and clothing. Avoid inhalation of dust.

Environmental precautions

Keep away from sewers, surface water and groundwater. Collect contaminated rinse water for proper disposal.

Methods and materials for containment and cleaning up

Containment advice: Cover drains. Collect mechanically.
Cleaning advice: Collect mechanically while controlling dust generation.
Other information: Place in suitable containers for disposal.

Reference to other sections

Hazardous combustion products: see Section 5. Personal protective equipment: see Section 8. Incompatible materials: see Section 10. Disposal considerations: see Section 13.

Handling and Storage

Precautions for safe handling

Avoid formation of dust.

General occupational hygiene advice:

Wash hands before and after work and before breaks.
Keep away from food, beverages and animal feed.

Conditions for safe storage, including any incompatibilities

Store in a dry place.

Incompatible substances or mixtures: Follow guidance on combined storage. See also German TRGS 510. For incompatibilities, see Section 10.

Other storage design:

Specific design of storeroom or containers: Recommended storage temperature 15–25 °C.
Storage of hazardous substances in non-stationary containers:

Storage class (LGK): —

Specific end use(s)

No information available.

Exposure Controls/Personal Protection

Control parameters

National limits

Occupational exposure limits (workplace exposure limits): Information not available.

Human health values

Relevant DNELs and other thresholds:
DNEL: 1.84 mg/m³ (human, inhalation, workers (industrial), long-term—local effects)
Relevant DNELs for components:
Potassium hydroxide (CAS 1310-58-3): DNEL 1 mg/m³ (human, inhalation, workers (industrial), long-term—local effects)

Environmental values

Relevant PNECs and other thresholds:
PNEC (soil, terrestrial organisms): 10 mg/kg (short-term/single exposure)

Exposure controls

Personal protective equipment (PPE):

Eye/face protection: Safety goggles with side shields.
Skin protection:

Glove material: NBR (nitrile rubber)
Material thickness: > 0.11 mm
Breakthrough time: > 480 minutes (permeation level 6)

Hand protection: Chemical protective gloves tested to EN 374. Confirm resistance for specific chemicals with the glove supplier. Stated breakthrough times are approximate values under continuous contact at 22 °C. Elevated temperatures, body heat, and stretching that reduce effective layer thickness can significantly shorten breakthrough time. If in doubt, contact the manufacturer. When layer thickness roughly increases/decreases by a factor of 1.5, breakthrough time doubles/halves accordingly. Data apply to pure substances and are indicative only for mixtures.

Other protection: Schedule skin recovery breaks. Preventive skin protection (barrier cream/ointment) is recommended.

Respiratory protection: Respiratory protection is required when dust is generated. Use a particle filter (EN 143), P1 (filters at least 80% of airborne particles; colour code: white).

Environmental exposure controls: Keep away from sewers, surface water and groundwater.

Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Solid
Form: Extruded cylindrical pellets
Color: Not determined
Odor: Odorless
Melting/freezing point: > 3500 °C
Boiling point or initial boiling point and boiling range: Not determined
Flammability: Combustible, but not readily ignited
Lower/upper explosive limits: Not applicable (solid)
Flash point: Not applicable
Auto-ignition temperature: Not determined
Decomposition temperature: Not applicable
pH (value): Not applicable
Kinematic viscosity: Not applicable
Solubility: Water solubility Not determined
Partition coefficient n-octanol/water (log value): 0.78 (literature)
Vapour pressure: Not determined
Density/relative density: Not determined
Relative vapour density: Not applicable (solid)
Particle characteristics: No data
Other safety parameters:
Oxidizing properties: None

Other information

Physical hazard classes: Not applicable under GHS (physical hazards)
Other safety characteristics: No further information

Stability and Reactivity

Reactivity

Non-reactive under normal temperature and pressure.

Chemical stability

Stable under the expected conditions of storage and handling (temperature and pressure).

Possibility of hazardous reactions

Violent reaction with strong oxidizing agents.

Conditions to avoid

No specific conditions to avoid are known.

Incompatible materials

No further information.

Hazardous decomposition products

Hazardous combustion products: see Section 5.

Toxicological Information

Information on hazard classes as defined in CLP

Acute toxicity: Not classified
Oral LD50 > 2000 mg/kg (rat, ECHA)
Component acute toxicity data:
Potassium hydroxide (CAS 1310-58-3): Oral LD50 = 333 mg/kg (rat)
Skin corrosion/irritation: Not classified as skin corrosion/irritation
Serious eye damage/eye irritation: Causes serious eye damage
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT — single exposure: Not classified
STOT — repeated exposure: Not classified
Aspiration hazard: Not classified
Information on likely routes of exposure and symptoms related to the physical, chemical and toxicological characteristics:

Ingestion: No data available
Eye contact: Causes serious eye damage; risk of blindness
Inhalation: No data available
Skin contact: No data available
Other information: None

Information on endocrine disrupting properties

Contains no endocrine disruptors at concentrations ≥ 0.1%.

Other information

None.

Ecological Information

Toxicity

Not classified as hazardous to the aquatic environment.

Persistence and degradability

Theoretical oxygen demand (ThOD): 2,664 mg/mg
Theoretical carbon dioxide production (ThCO₂): 3,664 mg/mg

Bioaccumulative potential

Not expected to significantly bioaccumulate.
n-octanol/water partition coefficient (log KOW): 0.78 (literature)

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Endocrine disrupting properties

Contains no endocrine disruptors at concentrations ≥ 0.1%.

Other adverse effects

No data available.

Disposal Considerations

Waste treatment methods

This product and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Information related to sewer disposal: Do not discharge to sewers.

Disposal of containers/packaging: Handle contaminated packaging in the same manner as the substance. Completely emptied packaging may be recycled.

Relevant provisions relating to waste

Waste code/description should be assigned in accordance with Community provisions, taking industry sector and process into account.

Hazard properties that render waste hazardous:

HP 4 Irritant — skin irritation and eye damage

Remarks

Waste should be segregated into categories that can be separately handled by local or national waste management facilities. Refer to relevant national or regional provisions. Uncontaminated packaging may be recycled.

Transport Information

UN number or ID number

Not regulated by transport regulations

UN proper shipping name

Not specified

Transport hazard class(es)

None

Packing group

Not specified

Environmental hazards

According to dangerous goods regulations: Not hazardous to the environment

Special precautions for user

No further information.

Maritime transport in bulk according to IMO instruments

The cargo is not intended to be transported in bulk.

Additional information in line with UN Model Regulations

Road, rail and inland waterways (ADR/RID/ADN): Not applicable (not regulated)

IMDG: Not applicable

ICAO-IATA/DGR: Not applicable

Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union (EU) regulations

List of restricted hazardous substances (REACH, Annex XVII):

Substance name: Activated carbon

Restriction No.: R75 (restriction related to tattoo inks and permanent make-up, Entry 75)

Key points (summary):

1.From 2022-01-04, substances meeting the following conditions shall not be placed on the market in mixtures for tattooing purposes, and mixtures containing such substances shall not be used for tattooing purposes (covering various limits and conditions related to carcinogenicity, mutagenicity, reproductive toxicity, sensitization, corrosion/irritation, serious eye damage/eye irritation, and Annex II/IV of the Cosmetics Regulation).

2.“For tattooing purposes” means procedures in which a mixture is injected or introduced into human skin, mucous membrane, or the eyeball to leave a mark or design.

3.If a substance meets multiple restrictions, the most stringent limit applies.

4.Certain pigments (phthalocyanine blue, phthalocyanine green) were deferred until 2023-01-04. 5–7) If subsequent classifications or Cosmetics Annex lists are revised, apply from the relevant effective date or after 18 months; mixtures placed on the market for tattooing must bear specific information (“Mixture for use in tattoos or permanent make-up”), batch number, list of ingredients under a common nomenclature, “pH adjuster” where applicable, warnings on potential sensitizers such as nickel/hexavalent chromium, instructions for safe use, etc., and recipients must be informed prior to use.

5.Products not labelled “mixture for use in tattoos or permanent make-up” must not be used for tattooing. 9–10) Exemptions for gases, certain medical device uses, etc., see the original text.

Authorisation list (REACH Annex XIV) / SVHC Candidate List: Not listed

Seveso Directive (2012/18/EU): Not specified

Volatile organic compounds (VOC) content: 0% (0 g/L)

RoHS (Restriction of Hazardous Substances in EEE): Not listed

European Pollutant Release and Transfer Register (PRTR): Not listed

Water Framework Directive (WFD): Not listed

Explosives precursors regulation: Not listed

Drug precursors regulation: Not listed

Ozone-depleting substances (ODS): Not listed

Prior Informed Consent (PIC): Not listed

Persistent Organic Pollutants (POP): Not listed

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National regulations (Germany)

Ordinance on Facilities Handling Substances Hazardous to Water (AwSV): Water hazard class WGK: nwg (not hazardous to water), Index No.: 801

Technical Instructions on Air Quality Control (TA Luft): Not assigned; content ≥ 25 wt%

Storage in non-stationary containers (TRGS 510): Storage class (LGK): 11 (combustible solids)

National regulations (Sw Switzerland)

VOC incentive tax ordinance (VOCV): Product exempt (VOC content does not exceed 3% by mass)

Other information

Directive 94/33/EC on the protection of young people at work. Comply with restrictions on employment of pregnant and breastfeeding workers (92/85/EEC).

National/Regional chemical inventories (all "listed")

AU: AIIC; CA: DSL; CN: IECSC; EU: ECSI; KR: KECI; MX: INSQ; NZ: NZIoC; PH: PICCS; TR: CICR; TW: TCSI; US: TSCA (ACTIVE)

See abbreviations below.

Chemical safety assessment

In accordance with REACH Article 14(1), a chemical safety assessment has been carried out for the substance or components of the mixture at a registered volume of ≥ 10 tonnes per registrant per year.

Other Information

Abbreviations and acronyms

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service registry number

CLP: Classification, Labelling and Packaging Regulation (EC No 1272/2008)

DGR: Dangerous Goods Regulations (IATA/DGR)

DNEL: Derived No-Effect Level

EC No.: European Community number (EINECS/ELINCS/NLP)

ED: Endocrine disruptor

EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods Code
Index No.: Substance index number in CLP Annex VI, Part 3
LD50: Median lethal dose
LGK: Storage class (German TRGS 510)
NLP: No longer polymer
PBT: Persistent, Bioaccumulative and Toxic
PNEC: Predicted No-Effect Concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
SVHC: Substances of Very High Concern
TRGS: Technical Rules for Hazardous Substances (Germany)
VOC: Volatile Organic Compounds
vPvB: Very Persistent and Very Bioaccumulative

Key literature references and data sources

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP)
REACH Regulation (EC) No. 1907/2006, as amended by 2020/878/EU
Transport of dangerous goods by road, rail and inland waterways (ADR/RID/ADN)
International Maritime Dangerous Goods Code (IMDG)
IATA Dangerous Goods Regulations (IATA/DGR)

List of relevant phrases (codes and full texts appearing in Sections 2 and 3)

H318 Causes serious eye damage.

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