Section 1. Identification

GHS product identifier : NUCHAR® SN

Chemical name : Activated carbon

Other means of identification : NUCHAR® SN; NUCHAR® SN-20; NUCHAR® SN 100X250

Product type : Solid.

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

Material uses : Liquid purification

Supplier's details : WestRock MWV, LLC
Ingevity Division
5255 Virginia Avenue
North Charleston
South Carolina USA
29406-3615

www.ingevity.com
email: sds@ingevity.com

Telephone no.: +1 843 740 2236, +1 800 458 4034
Hours of operation: 0800 - 1700 EST

Emergency telephone number (with hours of operation) : +1 703 527 3887 (USA)
4001-204937 (in China)
CHEMTREC International

Section 2. Hazards identification

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Other hazards which do not result in classification : Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : Activated carbon

Other means of identification : NUCHAR® SN; NUCHAR® SN-20; NUCHAR® SN 100X250

CAS number/other identifiers

CAS number : 7440-44-0

EC number : 231-153-3

Ingredient name	%	CAS number
Activated carbon	100	7440-44-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Section 4. First-aid measures

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical powder.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Fine dust clouds may form explosive mixtures with air.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Section 6. Accidental release measures

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of according to all federal, state and local applicable regulations.

Large spill : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Activated carbon	**ACGIH TLV (United States).** TWA: 10 mg/m³ 8 hours. Form: Particulates not otherwise defined.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles. Recommended: safety glasses with side-shields
Possible: splash goggles , face shield

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. > 8 hours (breakthrough time): disposable vinyl

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: disposable overall

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: If dust is generated and ventilation is inadequate, use respirator that will protect against dust/mist.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Powder.]

Colour : Black. [Dark]

Odour : Odourless.

Odour threshold : Not available.

pH : 6 to 8 [Conc. (% w/w): 10%]

Melting point : Not applicable.

Boiling point : Not applicable.

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Non-flammable.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits : Not available.

Vapour pressure : Not available.

Vapour density : Not available.

Relative density : 0.32 to 0.37 [Water = 1]

Solubility : Insoluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : 420 to 470°C (788 to 878°F)

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not applicable.

Other : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Activated carbon	LC50 Inhalation Dusts and mists LD50 Oral LD50 Oral	Rat Rat Rat	8500 mg/m³ >5000 mg/kg >2000 mg/kg	1 hours - -

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Activated carbon	Skin - Oedema Skin - Erythema/Eschar Eyes - Cornea opacity Eyes - Oedema of the conjunctivae Eyes - Iris lesion	Rabbit Rabbit Rabbit Rabbit Rabbit	0 0 0 0 0	- - - - -	- - - - -

Conclusion/Summary

Skin : Non-irritating to the skin.

Eyes : Non-irritating to the eyes.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Activated carbon	skin	Mouse	Not sensitizing

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Activated carbon	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Human	Negative

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Section 11. Toxicological information

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence/degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Section 14. Transport information

	UN	IMDG	IATA	DOT Classification
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	**Remarks** NUCHAR® Activated Carbon is not considered spontaneously combustible under the "Self-Heating Test for Carbon" protocol listed in the United Nations Manual of Tests and Criteria [33.3.1]. As such, Class 4.2 provisions for U.S. DOT, IATA, ICAO, ADR and IMDG shipments do not apply.	-	-	**Remarks** NUCHAR® Activated Carbon is not considered spontaneously combustible under the "Self-Heating Test for Carbon" protocol listed in the United Nations Manual of Tests and Criteria [33.3.1]. As such, Class 4.2 provisions for U.S. DOT, IATA, ICAO, ADR and IMDG shipments do not apply.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

China

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

China inventory (IECSC) : This material is listed or exempted.

List of Goods banned for Importing

None of the components are listed.

List of Goods banned for Exporting

None of the components are listed.

List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

Section 15. Regulatory information

None of the components are listed.

Japan

Fire Service Law

Dangerous substance classes	: Not applicable.	**Designated quantity**	: Not available.
Danger class	: Not available.		
Designated combustibles	: Not available.	**Designated quantity**	: Not available.
Substance to report	: Not listed		
Fire Service Law - Obstructive materials	: Not listed		

Maritime Safety Law

Notification Regulating Transportation of Dangerous Materials by Sea

None of the components are listed.

Container class

None of the components are listed.

ISHL

Use of specified chemical substances

None of the components are listed.

Lead regulation : Not listed

Label requirements

None of the components are listed.

Chemicals requiring notification

None of the components are listed.

Carcinogen

None of the components are listed.

Mutagen

None of the components are listed.

Corrosive liquid	: Not listed
Occupational Safety and Health Law	: Not available.
ISHL Prevention of Tetraalkyl Lead Poisoning	: Not listed
ISHL Harmful Substances Subject to Obtaining Permission for Manufacturing	: Not listed
ISHL Harmful Substances, Prohibited for Manufacturing	: Not listed
ISHL Dangerous Substances	: Not listed

Chemical Substances Control Law (CSCL)

Section 15. Regulatory information

None of the components are listed.

Explosives Control Law

None of the components are listed.

Poisonous and Deleterious Substances

Deleterious

None of the components are listed.

Poisonous

None of the components are listed.

Specified poisonous

None of the components are listed.

JSOH Carcinogen : Not listed

High Pressure Gas Control Law : Not applicable.

Organic solvents poisoning prevention : Not available.

Law Concerning Prevention of Pollution of the Ocean and Maritime Disaster : Not available.

Pollutant Release and Transfer Registers (PRTR)

None of the components are listed.

Road law : Not applicable.

List of Specially Controlled Industrial Waste : Not listed

Japan inventory : This material is listed or exempted.

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

South Korea

A. Regulation according to ISHA

ISHA Article 37 : This material is not listed.

ISHA Article 38 : This material is not listed.

Article 2 of Youth Protection Act on Substances Hazardous to Youth : Not applicable.

Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:
Activated carbon

Exposure Standards established for Harmful Factors : This material is not listed.

Harmful Factors Subject to Work Environment Measurement : This material is not listed.

Section 15. Regulatory information

Harmful Factors Subject to Special Health Check-up : This material is not listed.

Hazardous Substances Subject to Control : This material is not listed.

B. Regulation according to TCCA

TCCA Toxic chemicals : Not applicable

TCCA Observational chemicals : This material is not listed.

TCCA Article 32 (Banned) : This material is not listed.

TCCA Article 32 (Restricted) : This material is not listed.

TCCA Article 17 (TRI) : This material is not listed.

Korea inventory : This material is listed or exempted.

Accident Precaution chemicals : This material is not listed.

C. Dangerous Materials Safety Management Act : Not available.

D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations.

E. Regulation according to other foreign laws

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

Japan : This material is listed or exempted.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Taiwan : This material is listed or exempted.

United States : This material is listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision	:	2015-08-31
Date of previous issue	:	2015-08-24 .
Version	:	2.01
Key to abbreviations	:	ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail UN = United Nations
References	:	Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.