

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Revision Date 20-Feb-2024 Revision Number 3

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: <u>Carpenter 20 gauze</u>

Cat No. : 46526

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

Recommended Use Laboratory chemicals. Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company

Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific)

Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom

Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Skin SensitizationCategory 1 (H317)CarcinogenicityCategory 2 (H351)Specific target organ toxicity - (repeated exposure)Category 1 (H372)

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Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary Statements

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

2.3. Other hazards

Toxicity to Soil Dwelling Organisms

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567		
Nickel	7440-02-0	EEC No. 231-111-4	35.0	Skin Sens. 1 (H317) Carc. 2 (H351) STOT RE 1 (H372)		
Iron	7439-89-6	EEC No. 231-096-4	32.94	-		
Chromium	7440-47-3	EEC No. 231-157-5	21.0	-		
Molybdenum	7439-98-7	EEC No. 231-107-2	3.0	Flam. Sol. 2 (H228)		

Full text of Hazard Statements: see section 16

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4.1. Description of first aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

approved class D extinguishers. Do not use water or foam.

Extinguishing media which must not be used for safety reasons

Water may be ineffective.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Metal oxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. No special precautions required.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to

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contaminate ground water system.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Pick up and transfer to properly labelled containers.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry place. Keep away from acids.

Technical Rules for Hazardous Substances (TRGS) 510 Class 6.1D Storage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Nickel	STEL: 1.5 mg/m ³ 15 min		TWA: 0.5 mg/m ³ 8 hr.
	TWA: 0.5 mg/m ³ 8 hr		STEL: 1.5 mg/m ³ 15 min
	Skin		
Chromium	STEL: 1.5 mg/m ³ 15 min	TWA: 2 mg/m ³ (8hr)	TWA: 2 mg/m ³ 8 hr.
	TWA: 0.5 mg/m ³ 8 hr		STEL: 6 mg/m ³ 15 min
Molybdenum	STEL: 20 mg/m ³ 15 min		_
· ·	TWA: 10 mg/m ³ 8 hr		

Biological limit values

List source(s):

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Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Nickel 7440-02-0 (35.0)			DNEL = 0.035mg/cm2	

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Nickel 7440-02-0 (35.0)			DNEL = 0.05mg/m ³	DNEL = 0.05mg/m ³
Iron 7439-89-6 (32.94)			DNEL = 3mg/m ³	
Chromium 7440-47-3 (21.0)			DNEL = 0.5mg/m ³	
Molybdenum 7439-98-7 (3.0)				DNEL = 11.7mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Nickel	PNEC = 7.1µg/L	PNEC = 109mg/kg		PNEC = 0.33mg/L	PNEC = 29.9 mg/kg
7440-02-0 (35.0)		sediment dw		_	soil dw
Chromium	$PNEC = 6.5 \mu g/L$	PNEC =	PNEC =		PNEC = 21.1mg/kg
7440-47-3 (21.0)		205.7mg/kg			soil dw
		sediment dw			
Molybdenum PNEC = 12.7mg/L		PNEC =		PNEC = 21.7mg/L	PNEC = 9.9mg/kg
7439-98-7 (3.0)		22600mg/kg		, and the second	soil dw
, ,		sediment dw			

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Nickel	Nickel PNEC = 8.6µg/L PNEC =			PNEC = 0.12mg/kg	
7440-02-0 (35.0)		sediment dw		food	
Molybdenum PNEC = 2.28mg/L		PNEC = 2368mg/kg			
7439-98-7 (3.0)		sediment dw			

8.2. Exposure controls

Engineering Measures

None under normal use conditions.

Personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection No special protective equipment required

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Disposable gloves	See manufacturers	-	EN 374	(minimum requirement)
	recommendations			

Skin and body protection Long sleeved clothing.

Respiratory Protection No special protective equipment required.

Large scale/emergency use In case of insufficient ventilation, wear suitable respiratory equipment

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Small scale/Laboratory use No personal respiratory protective equipment normally required

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water

system. Local authorities should be advised if significant spillages cannot be contained.

Solid

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State Solid

AppearanceGrey - SilverOdorOdorless

Odor Threshold
Melting Point/Range
Softening Point
Boiling Point/Range
No data available
No data available
No information available

Flammability (liquid) Not applicable

Flammability (solid,gas) No information available

Explosion Limits No data available

Flash Point No information available Method - No information available

Autoignition Temperature

No data available

No data available

No data available

pH No information available

Viscosity Not applicable Solid

Water Solubility Insoluble in water Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Vapor Pressure23 hPa @ 20 °CDensity / Specific GravityNo data availableBulk DensityNo data available

Vapor Density Not applicable Solid

Particle characteristics No data available

9.2. Other information

Evaporation Rate Not applicable - Solid

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization No information available.
Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

None known.

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10.6. Hazardous decomposition products

Metal oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met

Dermal No data available Inhalation No data available

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nickel	LD50 > 9000 mg/kg (Rat)	-	LC50 > 10.2 mg/L (Rat) 1 h
Iron	7500 mg/kg (Rat)	-	=
Molybdenum	-	LD50 > 2000 mg/kg (Rat)	LC50 > 5.84 mg/L (Rat) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

No data available Respiratory Skin Category 1

May cause sensitization by skin contact

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; Category 2

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
Nickel			Cat. 1	Group 2B

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 1

Inhalation Route of exposure **Target Organs** Lungs.

(j) aspiration hazard; Not applicable

Solid

delayed

Symptoms / effects, both acute and Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

11.2. Information on other hazards

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Endocrine Disrupting Properties

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

The product contains following substances which are hazardous for the environment. **Ecotoxicity effects**

Contains a substance which is:. Very toxic to aquatic organisms. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water

system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Nickel	LC50: > 100 mg/L, 96h (Brachydanio rerio) LC50: = 1.3 mg/L, 96h semi-static (Cyprinus carpio) LC50: = 10.4 mg/L, 96h static (Cyprinus carpio)	EC50 = 510 μg/L 96h	EC50 = 0.1 mg/L 72h EC50 = 0.18 mg/L 72h

12.2. Persistence and degradability Product contains heavy metals. Discharge into the environment must be avoided. Special

pre-treatment is necessary

Persistence Degradability Insoluble in water, May persist. Not relevant for inorganic substances.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

12.3. Bioaccumulative potential

May have some potential to bioaccumulate; Product has a high potential to bioconcentrate

Component	log Pow	Bioconcentration factor (BCF)
Chromium		1.03 - 1.22

12.4. Mobility in soil

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water

solubility.

12.5. Results of PBT and vPvB

assessment

No data available for assessment.

12.6. Endocrine disrupting

properties

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused

Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

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European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Do not flush to sewer. Waste codes should be assigned by the user based on the

application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

ADR Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

<u>IATA</u> Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk

according to IMO instruments

SECTION 15: REGULATORY INFORMATION

Not applicable, packaged goods

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Nickel	7440-02-0	231-111-4	ı	-	Х	X	KE-25818	X	ı
Iron	7439-89-6	231-096-4	-	-	Х	X	KE-21059	X	-
Chromium	7440-47-3	231-157-5	-	-	Х	Х	KE-05970	Х	-
Molybdenum	7439-98-7	231-107-2	-	-	Х	Х	KE-25427	Χ	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Nickel	7440-02-0	X	ACTIVE	X	-	Х	X	Х
Iron	7439-89-6	Х	ACTIVE	Х	-	Х	X	Х
Chromium	7440-47-3	X	ACTIVE	Х	-	Х	Х	Х
Molybdenum	7439-98-7	Х	ACTIVE	Х	-	Х	Х	Х

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Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Nickel	7440-02-0	-	Use restricted. See item 27. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-
Iron	7439-89-6	-	- ′	-
Chromium	7440-47-3	-	Use restricted. See item 75. (see link for restriction details)	-
Molybdenum	7439-98-7	-	-	-

REACH links

https://echa.europa.eu/substances-restricted-under-reach

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Nickel	7440-02-0	Not applicable	Not applicable
Iron	7439-89-6	Not applicable	Not applicable
Chromium	7440-47-3	Not applicable	Not applicable
Molybdenum	7439-98-7	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

Water endangering class = 2 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class		
Nickel	WGK 2	Class II: 0.5 mg/m³ (Massenkonzentration) Krebserzeugende Stoffe - Class II: 0.5 mg/m³ (Massenkonzentration)		
Iron	nwg	, ,		
Chromium	nwg	Class III: 1 mg/m³ (Massenkonzentration)		
Molybdenum	nwg			

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Component	France - INRS (Tables of occupational diseases)		
Iron	Tableaux des maladies professionnelles (TMP) - RG 44,RG 44bis,RG 94		
Chromium	Tableaux des maladies professionnelles (TMP) - RG 10		

	Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure	
	Nickel 7440-02-0 (35.0)	Prohibited and Restricted Substances			
Ī	Chromium 7440-47-3 (21.0)	Prohibited and Restricted Substances			

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H372 - Causes damage to organs through prolonged or repeated exposure

H228 - Flammable solid

H400 - Very toxic to aquatic life

Legend

CAS - Chemical Abstracts Service

Inventory EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of

Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

TSCA - United States Toxic Substances Control Act Section 8(b)

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

IARC - International Agency for Research on Cancer

NZIoC - New Zealand Inventory of Chemicals

vPvB - very Persistent, very Bioaccumulative

Predicted No Effect Concentration (PNEC)

POW - Partition coefficient Octanol:Water

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from

ATE - Acute Toxicity Estimate **VOC** - (Volatile Organic Compound)

TWA - Time Weighted Average

EC50 - Effective Concentration 50%

LD50 - Lethal Dose 50%

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards On basis of test data **Health Hazards** Calculation method **Environmental hazards** Calculation method

Training Advice

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Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Prepared By Health, Safety and Environmental Department

Revision Date 20-Feb-2024

Revision Summary New emergency telephone response service provider.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet