

SAFETY DATA SHEET

1. SUBSTANCE AND SOURCE IDENTIFICATION

Product Identifier

RM Number: 8210
RM Name: Hemp Plant
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Reference Material (RM) is intended for the evaluation of analytical methods for the determination of toxic elements in hemp, for method development, method harmonization, and for quality assurance when assigning values to in-house control materials. A unit of RM 8210 consists of three packets, each packet containing 1.5 g of material.

Company Information

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2. HAZARDS IDENTIFICATION

Note: This material is intended for research use only; not for human use. The tetrahydrocannabinol (THC) concentrations have been determined at NIST to be less than or equal to 0.3 % and as such they are legal plant materials. The physical properties of this material indicates that accumulated dust on surfaces generated where operations produce fine particulates may lead to combustible dust concentrations in air. RM 8210 is supplied in a small quantity and under normal laboratory conditions does not constitute a combustible dust hazard.

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements

Symbol: No symbol/pictogram.
Signal Word: No signal word.
Hazard Statement(s): No applicable hazard statements.
Precautionary Statement(s): No applicable precautionary statements.
Hazards Not Otherwise Classified: Not applicable.
Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. COMPOSITION AND INFORMATION ON HAZARDOUS INGREDIENTS

Substance: Cannabis Plant Material (Powder)

Other Designations: Not available.

Components are listed in compliance with OSHA 29 CFR 1910.1200. For actual values, see the Reference Material Information Sheet.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
None	--	--	--
Non-Hazardous Component(s)			
Cannabis Plant Material (Powder)	8063-14-7	--	100
Tetrahydrocannabinol (THC)	1972-08-3	--	≤ 0.3

4. FIRST AID MEASURES

Description of First Aid Measures

Inhalation: If adverse effects occur, remove to well ventilated (uncontaminated) area. If breathing is difficult, qualified personnel may administer oxygen. If not breathing, qualified personnel should give artificial respiration. Seek immediate medical attention.

Skin Contact: Rinse affected skin thoroughly with soap or mild detergent and water for at least 15 minutes. If skin irritation persists, seek medical aid and bring the container or label.

Eye Contact: Immediately flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Seek immediate medical attention.

Ingestion: If a large amount is swallowed, seek medical attention.

Most Important Symptoms/Effects, Acute and Delayed: No information available.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards: Avoid generating dust. RM 8210 is supplied in a small quantity and under normal laboratory conditions does not constitute a combustible dust hazard.

Extinguishing Media:

Suitable: Regular dry chemical, carbon dioxide, water, and regular foam.

Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Do not touch spilled material. Notify safety personnel of spills. Collect spilled material in appropriate container for disposal. Isolate hazard area and deny entry.

7. HANDLING AND STORAGE

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards. Keep separated from incompatible substances (oxidizing materials). See the Reference Material Information Sheet for specific storage conditions.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits: This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. No occupational exposure limits have been established for this material. The exposure limits for Particulates Not Otherwise Regulated are applicable.

OSHA (PEL): 15 mg/m³ (TWA, total particulates)
5 mg/m³ (TWA, respirable particulates)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye Protection: Splash resistant safety goggles and emergency eyewash station are recommended.

Skin and Body Protection: Chemical-resistant clothing and gloves are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties	Hemp plant material
Appearance (physical state, color, etc.):	powder
Molar Mass (g/mol):	not applicable
Molecular Formula:	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not available
Melting point/freezing point (°C):	not available
Relative Density (g/L):	not available
Density:	not available
Vapor Pressure (mmHg):	not available
Vapor Density (air = 1):	not available
Viscosity (cP):	not available
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	not applicable
Thermal Stability Properties	
Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust. Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials. Avoid oxidation promoting conditions such as sunlight, metals.

Incompatible Materials: Strong oxidizing agents.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon and nitrogen.

Hazardous Polymerization: Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: X Inhalation X Skin X Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: No data available.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: No data available.

Skin Contact: No data available; skin exposure may result in mechanical irritation.

Eye Contact: No data available; may cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye Damage/ Eye Irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen Yes X No
Hemp plant material (power) is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: This material is not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Section 313 (40 CFR 372.65): Not regulated.

OSHA Process Safety (29 CFR 1910.119): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21)

ACUTE HEALTH:	No
CHRONIC HEALTH:	No
FIRE:	No
REACTIVE:	No
PRESSURE:	No

State Regulations:

California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:

WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 07 May 2024

Sources: ChemID^{plus}, U.S. National Library of Medicine's TOXNET system, *Cannabis*, available at <https://chem.nlm.nih.gov/chemidplus/rn/8063-14-7> (accessed May 2024).

29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1000TABLEZ1> (accessed May 2024).

CDC; NIOSH; *NIOSH Pocket Guide to Chemical Hazards*; Department of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC), National Institute for Safety and Health; *Particulates Not Otherwise Regulated*, 30 October 2019; available at <https://www.cdc.gov/niosh/npg/npgd0480.html> (accessed May 2024).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EINECS	European Inventory of Existing Commercial Chemical Substances	RM	Reference Material
EPCRA	Emergency Planning and Community Right-to-Know Act	RQ	Reportable Quantity
IARC	International Agency for Research on Cancer	RTECS	Registry of Toxic Effects of Chemical Substances
IATA	International Air Transport Association	SARA	Superfund Amendments and Reauthorization Act
IDLH	Immediately Dangerous to Life and Health	SCBA	Self-Contained Breathing Apparatus
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Median Lethal Dose or Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NIOSH	National Institute for Occupational Safety and Health	TWA	Time Weighted Average
NIST	National Institute of Standards and Technology	UEL	Upper Explosive Limit
n.o.s.	Not Otherwise Specified	WHMIS	Workplace Hazardous Materials Information System

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Users of this RM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; e-mail srmmsds@nist.gov; or via the Internet at <https://www.nist.gov/srm>.