

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 1 of 10

BRANDT GH Molybdenum**SECTION 1: Identification****Product Identifier****Product Name:** BRANDT GH Molybdenum**Product code:** 20008BRN**Recommended Use of the Chemical and Restrictions on Use:****Recommended Uses:** Trace element solution**Restrictions on Use:** Refer to product label**Manufacturer or Supplier Details****Manufacturer:****United States**

BRANDT Consolidated, Inc.

2935 South Koke Mill Road

Springfield, Illinois 62711

1-217-547-5800

msds@Brandt.co

www.brandt.co

Only Representative: Regulatory Department

Emergency Telephone Number:**WORLD (Including UK and Germany)**

CHEMTREC

1-800-424-9300 (24 HOURS)

Virgin Islands 1-800-424-9300 (24 HOURS)

International Maritime +1 (703) 527-3887 (24 HOURS)

SECTION 2: Hazard Identification**Classification of the chemical in accordance with paragraph (d) of § 1910.1200:**

Eye Irritation, category 2

Label elements**Hazard Symbol(s):****Signal Word:** Warning**Hazard statement(s):**

H319 Causes serious eye irritation

Precautionary Statement(s):

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves, protective clothing, eye protection, face protection and hearing protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P401 Store in accordance with local, regional, national, and international regulations.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: None

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 2 of 10

BRANDT GH Molybdenum

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 31138-65-5	Sodium glucoheptonate	25-35
CAS Number: 10102-40-6	Molybdate (MoO ₄ ²⁻), sodium, hydrate (1:2:2), (T-4)-	10-15

Additional information: No additional information

SECTION 4: First Aid Measures

Description of Necessary Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. If respiratory symptoms develop or persist, seek medical advice/attention

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention

After Skin Contact:

Wash affected area with plenty of soap and water. Remove contaminated clothing and laundry before reuse. If skin irritation develops or persists, seek medical advice/attention

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention

After Eye Contact:

Immediately rinse eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. If eye irritation develops or persists, seek medical advice/attention

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention

After Ingestion:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center.

Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention

Most Important Symptoms and Effects, Both Acute and Delayed

Acute Symptoms and Effects:

Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing

Delayed Symptoms and Effects:

Effects are dependent on exposure (dose, concentration, contact time)

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Immediate Medical Attention:

No additional information.

Special Treatment:

No additional information.

Notes for the Doctor:

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 3 of 10

BRANDT GH Molybdenum

Treat symptomatically

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam

Unsuitable Extinguishing Media:

Do not use water jet

Specific Hazards Arising From The Chemical:

Thermal decomposition may produce irritating/toxic fumes/gases

Special Protective Equipment and Precautions for Fire-Fighters

Special Protective Equipment:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA)

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

Special precautions

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided

Methods and Material for Containment and Cleaning Up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13)

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10). Store in secured area away from children, feed, and other food products. Store in original container. Store in a well-ventilated area. Storage temperature: 40 F to 100 F.

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 4 of 10

BRANDT GH Molybdenum

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Molybdate (MoO ₄ ²⁻), sodium, hydrate (1:2:2), (T-4)-	10102-40-6	8-Hour TWA: 0.5 mg/m ³ (Mo respirable particulate matter (as Molybdenum soluble compounds,))
NIOSH	Molybdate (MoO ₄ ²⁻), sodium, hydrate (1:2:2), (T-4)-	10102-40-6	IDLH: 1000 mg/m ³ (Mo (as Molybdenum soluble compounds))
	Molybdate (MoO ₄ ²⁻), sodium, hydrate (1:2:2), (T-4)-	10102-40-6	8-Hour TWA: 5 mg/m ³ (Mo (as Molybdenum soluble compounds))
OSHA	Molybdate (MoO ₄ ²⁻), sodium, hydrate (1:2:2), (T-4)-	10102-40-6	8-Hour TWA: 5 mg/m ³ (Mo (as Molybdenum soluble compounds))
United States(California)	Molybdate (MoO ₄ ²⁻), sodium, hydrate (1:2:2), (T-4)-	10102-40-6	PEL: 0.5 mg/m ³ (Mo (as Molybdenum soluble compounds))

Biological Limit Values:

No biological exposure limits noted for the ingredient(s).

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Individual Protection Measures, Such as Personal Protective Equipment

Eye and Face Protection:

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. 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. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 5 of 10

BRANDT GH Molybdenum

Physical state	Liquid
Color	Brown
Odor (includes odor threshold)	Caramel
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flammability	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Flash point	Not determined or not available.
Auto-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
pH	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Vapor pressure (includes evaporation rate)	Not determined or not available.
Density and/or relative density	1.2 g/cm ³ (10.0 lb/gal)
Relative vapor density	Not determined or not available.
Particle characteristics	Not determined or not available.

Other Information

No additional information.

SECTION 10: Stability and Reactivity

Reactivity:

Not reactive under recommended handling and storage conditions.

Chemical Stability:

Stable under recommended handling and storage conditions.

Possibility of hazardous reactions, including those associated with foreseeable emergencies:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible Materials:

None known.

Hazardous Decomposition Products:

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

SECTION 11: Toxicological Information

Acute Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Route	Result
Molybdate (MoO ₄ ²⁻), sodium, hydrate (1:2:2), (T-4)-	oral	LD50 Rat: 4233 mg/kg ([Read-across substance data])
	dermal	LD50 Rat: >2000 mg/kg ([Read-across substance data])
	inhalation	LC50 Rat: >5.1 mg/L (4 hr [vapour, Read-across substance data])

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 6 of 10

BRANDT GH Molybdenum

Name	Route	Result
Sodium glucoheptonate	oral	LD50 Rat: >4040 mg/kg
	dermal	LD50 Rat: >2000 mg/kg

Skin Corrosion/Irritation

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye irritation.

Product Data:

No data available.

Substance Data: No data available.

Respiratory or Skin Sensitization

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data: No data available.

International Agency for Research on Cancer (IARC):

Name	Classification
Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	Not Applicable
Sodium glucoheptonate	Not Applicable

National Toxicology Program (NTP):

Name	Classification
Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	Not Applicable
Sodium glucoheptonate	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Specific Target Organ Toxicity (Single Exposure)

Assessment: Based on available data, the classification criteria are not met.

Product Data:

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 7 of 10

BRANDT GH Molybdenum

No data available.

Substance Data: No data available.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Information on Likely Routes of Exposure:

No data available.

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

No data available.

Interactive effects:

No additional information.

Other Information:

No additional information.

SECTION 12: Ecological Information

Ecotoxicity

Acute (Short-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result
Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	Fish LC50 Pimephales promelas: 609.1 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 2847.5 mg/L (48 hr [mortality, Read-across substance data])
	Aquatic Plants EC50 Phaeodactylum tricornutum: 356.9 mg/L (72 hr [growth rate, Read-across substance data])
Sodium glucoheptonate	Fish LC50 Oncorhynchus mykiss: >1000 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >1000 mg/L (48 hr [mortality])
	Aquatic Plants EC50 Raphidocelis subcapitata: 510 mg/L (72 hr [growth rate])

Chronic (Long-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result
Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	Fish NOEC Pimephales promelas: 462.8 mg/L (32 d [mortality, Read-across substance data])
	Aquatic Invertebrates NOEC Ceriodaphnia dubia: 156.5 mg/L (21 d [mortality, Read-across substance data])

Persistence and Degradability

Product Data: No data available.

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 8 of 10

BRANDT GH Molybdenum

Substance Data:

Name	Result
Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	Persistence assessment based on biodegradability is not relevant for inorganic compounds such as this substance.
Sodium glucoheptonate	The substance is readily biodegradable. 96% degradation in water, measured by O2 consumption, after 28 days.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	Bioaccumulation assessment using a classic BCF assessment is not considered relevant for inorganic compounds such as this substance.
Sodium glucoheptonate	The substance is not expected to bioaccumulate (log Pow: -6.44, QSAR substance data).

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	Mobility in soil assessment based on KOC/Kd values are not relevant for inorganic compounds such as this substance.
Sodium glucoheptonate	The substance is highly mobile, therefore, adsorption to soil and sediment is not expected (log Koc: -3.54 at 20 °C, QSAR substance data).

Results of PBT and vPvB assessment

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	PBT assessment does not apply to inorganic compounds such as this substance.
Sodium glucoheptonate	The substance is not PBT.

vPvB assessment:

Molybdate (MoO42-), sodium, hydrate (1:2:2), (T-4)-	vPvB assessment does not apply to inorganic compounds such as this substance.
Sodium glucoheptonate	The substance is not vPvB.

Other Adverse Effects: No additional information.

SECTION 13: Disposal Considerations

Disposal Methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

Contaminated packaging:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 9 of 10

BRANDT GH Molybdenum

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Bulk Name	Not Applicable
Ship Type	Not Applicable
Pollution Category	Not Applicable

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances: None of the ingredients are listed.

SARA Section 313 Toxic Chemicals: None of the ingredients are listed.

CERCLA: None of the ingredients are listed.

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know: None of the ingredients are listed.

New Jersey Right to Know: None of the ingredients are listed.

New York Right to Know: None of the ingredients are listed.

Pennsylvania Right to Know: None of the ingredients are listed.

California Proposition 65: None of the ingredients are listed.

Additional information: No additional information.

Safety Data Sheet

US Hazard Communication Standard 2024 (29 CFR 1910.1200)

Initial Preparation Date: 08.18.2026

Page 10 of 10

BRANDT GH Molybdenum

SECTION 16: Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of Manufacturer's knowledge, information and belief at the date of its publication; however, it is provided only as a guidance for safe handling, use, processing, storage, transportation, disposal and release of the Product. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made with respect to the Product or the information provided herein, or that the Product or information herein may be used without infringing the intellectual property rights of others. The information provided in this Safety Data Sheet relates only to the specific Product designated and may not be valid if the Product is used in combination with other materials or in any other process, unless specified herein. The user assumes all risk and liability for loss, injury, damage or expense due to any use, handling, storage or disposal of the Product, and Manufacturer recommends that the user conducts its own tests of the Product to determine suitability of the Product for user's particular use.

NFPA: 0-0-0

HMIS: 0-0-0

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End of Safety Data Sheet