SECTION 1: IDENTIFICATION

1.1 Product identifier

Product Name	Matisse® Brown

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

Identified uses	For research use only. Not for diagnostic use.

1.3 Details of the supplier of the data sheet

Company	Molecular Instruments, Inc. 5015 Eagle Rock Blvd Suite 301 Los Angeles, CA 90041
Telephone	+1 626 210 2600

SECTION 2. HAZARDS IDENTIFICATION

This safety data sheet complies with the requirements of Regulation EC 1907/2006.

2.1 Classification of the substance or mixture

GHS Classification

Health Hazards

Germ cell mutagenicity	Category 2, H341
Carcinogenicity	Category 1B, H350

2.2 Label elements including precautionary statements

Signal Word		Danger
Hazard Statements		
	H341	Suspected of causing genetic defects.
	H350	May cause cancer.
Precautionary Statements		
	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P280	Wear protective clothing, eye protection, face protection.
	P308+P313	IF exposed or concerned: Get medical advice/attention.
	P405	Store locked up.
	P501	Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3 Other hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. This substance/mixture does not meet the PBT/vPvB criteria of REACH regulation, annex XIII. This substance/mixture does not contain substance(s) equal to or greater than 0.1% by weight that are present in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Not applicable.

3.2 Dangerous Components

Chemical Name	CAS No	EINECS No	Weight %
1,2-Propanediol substance with national workplace exposure limit(s) (GB, HR, IE, LT, LV, PL, NO)	57-55-6	200-338-0	15-16
3,3'-Diaminobenzidine tetrahydrochloride	7411-49-6	231-018-9	< 1

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General information	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
Inhalation	Allow victim to breath fresh air. Allow the victim to rest. Get medical attention if symptoms occur.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. Drink plenty of water. Consult a physician.
Skin Contact	Rinse immediately with plenty of water. Get medical attention if symptoms occur.
Eye Contact	Flush immediately with plenty of water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses if present.

4.2 Most important symptoms and effects, both acute and delayed

General information	Suspected of causing genetic defects. May cause cancer.
Inhalation	Prolonged exposure may cause irritation.
Ingestion	Ingestion may cause adverse effects.
Skin Contact	Prolonged exposure may cause skin irritation.

Eye Contact	May cause slight irritation to eyes.
Chronic Symptoms	Suspected of causing genetic defects. May cause cancer.

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container at hand.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media	Water spray, dry chemical, foam, carbon dioxide (CO_2).
Unsuitable Extinguishing Media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2 Special hazards

Fire Hazard	Not considered flammable but may burn at high temperatures.
Explosion Hazard	Product is not explosive.
Reactivity	Hazardous reactions will not occur under normal conditions.

5.3 Advice for fire fighters

Precautionary Measures Fire	Exercise caution when fighting any chemical fire.
Firefighting Instructions	Use water spray or fog for cooling exposed containers.
Protection During Firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.

5.4 Further information No data available.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

General	Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist, or spray. If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.
For Non-Emergency Personnel	Use appropriate personal protective equipment (PPE). Evacuate unnecessary personnel.
For Emergency Personnel	Equip cleanup crew with proper protection. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the

assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2 Environmental Precautions

Prevent entry to sewers and public waters.

6.3 Methods and material for containment and clean up

Contain any spills with dikes or absorbments to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area. Clean up spills immediately and dispose of waste safely. Transfer spilled materials to a suitable container for disposal. Contact competent authorities after a spill.

6.4 Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in accordance with standard industrial practices, and ensure appropriate usage. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking, and when leaving work. Obtain special instructions before use. Do not breathe mist, vapor, spray. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Handle in accordance with good industrial hygiene and safety procedures.

7.2 Conditions for safe storage, including any incompatibles

Comply with applicable regulations. Store in accordance with applicable national storage class systems. Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Water reactive materials.

7.3 Specific end use(s)

For research use only.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Limits

Components	CAS No	Value type (Form of exposure)	Control parameters/Permissible concentration	Basis
1,2-Propanediol	57-55-6	TWA	474 mg/m^3 (total vapor and particles) 10 mg/m^3 (particles)	Croatia
		TWA	150 ppm 10 mg/m^3 (particulates) 470 mg/m^3 (total vapor and particulates)	Croatia Ireland

		TWA	150 ppm (total vapor and particulates)	Ireland
		STEL	1410 mg/m^3 (calculated particulates) 30 mg/m^3 (calculated) 450 ppm (calculated total vapor and particulates)	Ireland
		TWA	7 mg/m^3 7 mg/m^3	Latvia Lithuania
		TWA	79 mg/m^3	Norway
		TWA STEL	25 ppm 118.5 mg/m^3 (value calculated)	Norway
		STEL	37.5 ppm	Norway
		TWA	100 mg/m^3 (vapor and inhalable fraction)	Poland

8.2 Exposure controls

Appropriate Engineering Controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.
Personal Protective Equipment	Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection. Personal protective equipment should be chosen in accordance with discussion with the supplier of the protective equipment.
Materials for Protective Clothing	Chemically resistant materials and fabrics.
Hand Protection	Wear protective gloves.
Eye and Face Protection	Chemical safety goggles.
Skin and Body Protection	Wear suitable protective clothing.
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known, wear approved respiratory protection.
Other Information	When using, do not eat, drink, or smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Liquid.

9.2 Other information

No data available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
Hazardous reactions will not occur under normal conditions.

10.2 Stability
Stable under recommended handling and storage conditions (see Section 7).

10.3 Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4 Conditions to avoid
Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5 Incompatible materials
Strong acids, strong bases, strong oxidizers. Water reactive materials.

10.6 Hazardous decomposition products
None expected under normal conditions of use.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely Routes of Exposure	Dermal, Eye Contact, Inhalation, Oral
Acute Toxicity (Oral):	Not classified.
Acute Toxicity (Dermal):	Not classified.
Acute Toxicity (Inhalation):	Not classified.

1,2-Propanediol

LD50 Dermal Rabbit	20800 mg/kg
LD50 Oral Rat	20 g/kg

Skin Corrosion/Irritation	Not classified.
Serious Eye Damage/Irritation	Not classified.
Respiratory or Skin Sensitization	Not classified.
Germ Cell Mutagenicity	Suspected of causing genetic defects.
Carcinogenicity	May cause cancer.
Reproductive Toxicity	Not classified.
Specific Target Organ Toxicity (Single Exposure)	Not classified.
Specific Target Organ Toxicity (Repeated Exposure)	Not classified.
Aspiration Hazard	Not classified.

<u>Principle Routes of exposure</u>
<u>Potential Health Effects</u>

Inhalation	Prolonged exposure may cause irritation.
Ingestion	Ingestion may cause adverse effects.
Skin Contact	Prolonged exposure may cause skin irritation.
Eye Contact	May cause slight irritation to eyes.

Chronic Symptoms	Suspected of causing genetic defects. May cause cancer.

11.2 Information on other hazards

Based on available data, this substance(s) in this mixture not listed below do(es) not have endocrine disrupting properties with respect to humans as it does not meet the criteria set out in Section A of Regulation (EU) No. 2017/2100 and/or the criteria set out in Regulation (EU) 2018/605, or the substance(s) are not required to be disclosed.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Chemical Name	Freshwater Algae Data	Crustacea Data	Freshwater Fish Species Data
1,2-Propanediol	NOEC = 1000 mg/l	EC50 = 10000 mg/l (24h) (D. magna) EC50 = 1000 mg/l (48 h) (D. magna (static)) NOEC = 1000 mg/l	LC50 = 51600 mg/l (96 h) (O. mykiss (static)) LC50 = 41-47 ml/l (96 h) (o. mykiss (static))

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulation potential

1,2-Propanediol:

BCF Fish 1	(1 dimensionless)
Partition coefficient: n-octanol/water	log Pow: -0.92

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Does not contain any PBT/vPvB substances >=0.1% assessed in accordance with REACH Annex XVIII.

12.6 Endocrine disrupting properties

Based on available data, this substance(s) in this mixture not listed below do(es) not have endocrine disrupting properties with respect to humans as it does not meet the criteria set out in Section A of Regulation (EU) No. 2017/2100 and/or the criteria set out in Regulation (EU) 2018/605, or the substance(s) are not required to be disclosed.

12.7 Other adverse effects

Avoid release to the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of contents/container in accordance with local, regional, national, and international regulations. Container may remain hazardous when empty. Continue to observe all

precautions. Biologically contaminated materials should be incinerated. Avoid release to the environment.

SECTION 14. TRANSPORT INFORMATION

IATA/ADR/DOT-US/IMDG

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1 UN number	Not applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packaging group	Not applicable
14.5 Environmental hazards	Not applicable

SECTION 15. REGULATORY INFORMATION

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

15.1.1 EU-Regulations

15.1.1.1 REACH Annex XVII Information

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No. 1907/2006:

3,3'-Diaminobenzidine tetrahydrochloride	3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No. 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9, and 3.10.

15.1.1.2 REACH Candidate List Information

Contains no substance on the REACH candidate list.

15.1.1.3 POP (2019/1021) – Persistent Organic Pollutants Information

Contains no substance subject to Regulation (EU) No. 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants.

15.1.1.4 PIC Regulation EU (649/2012) – Export and Import of Hazardous Chemicals Information

Contains no substance subject to Regulation (EU) No. 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous materials.

15.1.1.5 REACH Annex XIV Information

Contains no REACH Annex XIV substances.

15.1.1.6 Susbtances Depleting the Ozone Layer (1005/2009) Information

No additional information available.

15.1.1.7 EC Inventory Information

3,3'-Diaminobenzidine tetrahydrochloride	Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
1,2-Propanediol	Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.1.1.8 Other Information

No additional information available.

15.1.2 National Regulations

No additional information available.

15.1.3 International Inventory Lists

3,3'-Diaminobenzidine tetrahydrochloride	Listed on the United States TSCA (Toxic Substances Control Act) inventory – Status: Active Listed on the Canadian DSL (Domestic Substances List) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory) Listed on the NCI (Vietnam – National Chemicals Inventory)
1,2-Propanediol	Listed on the United States TSCA (Toxic Substances Control Act) inventory – Status: Active Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam – National Chemicals Inventory)

15.2 Chemical safety assessment
No data available.

SECTION 16. OTHER INFORMATION

Other Information	According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878.

Disclaimer
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