# MusgraveTexture(Texture)

base classes — `bpy_struct`, `ID`, `Texture`

**class** bpy.types.**MusgraveTexture(Texture)**

Procedural musgrave texture

**dimension_max**

Highest fractal dimension

**TYPE:**

float in [0.0001, 2], default 1.0

**gain**

The gain multiplier

**TYPE:**

float in [0, 6], default 1.0

**lacunarity**

Gap between successive frequencies

**TYPE:**

float in [0, 6], default 2.0

**musgrave_type**

Fractal noise algorithm

- `MULTIFRACTAL` Multifractal – Use Perlin noise as a basis.
- `RIDGED_MULTIFRACTAL` Ridged Multifractal – Use Perlin noise with inflection as a basis.
- `HYBRID_MULTIFRACTAL` Hybrid Multifractal – Use Perlin noise as a basis, with extended controls.
- `FBM` fBM – Fractal Brownian Motion, use Brownian noise as a basis.
- `HETERO_TERRAIN` Hetero Terrain – Similar to multifractal.

**TYPE:**

enum in ['MULTIFRACTAL', 'RIDGED_MULTIFRACTAL', 'HYBRID_MULTIFRACTAL', 'FBM', 'HETERO_TERRAIN'], default 'MULTIFRACTAL'

**nabla**

Size of derivative offset used for calculating normal

**TYPE:**

float in [0.001, 0.1], default 0.025

**noise_basis**

Noise basis used for turbulence

- `BLENDER_ORIGINAL` Blender Original – Noise algorithm - Blender original: Smooth interpolated noise.
- `ORIGINAL_PERLIN` Original Perlin – Noise algorithm - Original Perlin: Smooth interpolated noise.
- `IMPROVED_PERLIN` Improved Perlin – Noise algorithm - Improved Perlin: Smooth interpolated noise.
- `VORONOI_F1` Voronoi F1 – Noise algorithm - Voronoi F1: Returns distance to the closest feature point.
- `VORONOI_F2` Voronoi F2 – Noise algorithm - Voronoi F2: Returns distance to the 2nd closest feature point.
- `VORONOI_F3` Voronoi F3 – Noise algorithm - Voronoi F3: Returns distance to the 3rd closest feature point.
- `VORONOI_F4` Voronoi F4 – Noise algorithm - Voronoi F4: Returns distance to the 4th closest feature point.
- `VORONOI_F2_F1` Voronoi F2-F1 – Noise algorithm - Voronoi F1-F2

- VORONOI_F2_F1 Voronoi F2-F1 – Noise algorithm - Voronoi F1-F2.
- VORONOI_CRACKLE Voronoi Crackle – Noise algorithm - Voronoi Crackle: Voronoi tessellation with sharp edges.
- CELL_NOISE Cell Noise – Noise algorithm - Cell Noise: Square cell tessellation.

**TYPE:**

enum in ['BLENDER_ORIGINAL', 'ORIGINAL_PERLIN', 'IMPROVED_PERLIN', 'VORONOI_F1', 'VORONOI_F2', 'VORONOI_F3', 'VORONOI_F4', 'VORONOI_F2_F1', 'VORONOI_CRACKLE', 'CELL_NOISE'], default 'BLENDER_ORIGINAL'

**noise_intensity**

Intensity of the noise

**TYPE:**

float in [0, 10], default 1.0

**noise_scale**

Scaling for noise input

**TYPE:**

float in [0.0001, inf], default 0.25

**octaves**

Number of frequencies used

**TYPE:**

float in [0, 8], default 2.0

**offset**

The fractal offset

**TYPE:**

float in [0, 6], default 1.0

**users_material**

Materials that use this texture

(readonly)

**users_object_modifier**

Object modifiers that use this texture

(readonly)

**classmethod bl_rna_get_subclass(id, default=None)**

**PARAMETERS:**

**id** (*str*) – The RNA type identifier.

**RETURNS:**

The RNA type or default when not found.

**RETURN TYPE:**

bpy.types.Struct subclass

**classmethod bl_rna_get_subclass_py(id, default=None)**

**PARAMETERS:**

**id** (*str*) – The RNA type identifier.

**RETURNS:**

The class or default when not found.

**RETURN TYPE:**

type

## Inherited Properties

- bpy_struct.id_data
- ID.name
- ID.name_full
- ID.id_type
- ID.session_uid
- ID.is_evaluated
- ID.original
- ID.users
- ID.use_fake_user
- ID.use_extra_user
- ID.is_embedded_data
- ID.is_missing
- ID.is_runtime_data
- ID.is_editable
- ID.tag
- ID.is_library_indirect
- ID.library
- ID.library_weak_reference
- ID.asset_data
- ID.override_library
- ID.preview
- Texture.type
- Texture.use_clamp
- Texture.use_color_ramp
- Texture.color_ramp
- Texture.intensity
- Texture.contrast
- Texture.saturation
- Texture.factor_red
- Texture.factor_green
- Texture.factor_blue
- Texture.use_preview_alpha
- Texture.use_nodes
- Texture.node_tree
- Texture.animation_data
- Texture.users_material
- Texture.users_object_modifier

## Inherited Functions

- bpy_struct.as_pointer
- bpy_struct.driver_add
- bpy_struct.driver_remove
- bpy_struct.get
- bpy_struct.id_properties_clear
- bpy_struct.id_properties_ensure
- bpy_struct.id_properties_ui
- bpy_struct.is_property_hidden
- bpy_struct.is_property_overridable_library
- bpy_struct.is_property_readonly
- bpy_struct.is_property_set
- bpy_struct.items
- bpy_struct.keyframe_delete
- bpy_struct.keyframe_insert
- bpy_struct.keys
- bpy_struct.path_from_id
- bpy_struct.path_resolve
- bpy_struct.pop
- bpy_struct.property_overridable_library_set
- bpy_struct.property_unset
- ID.rename
- ID.evaluated_get
- ID.copy
- ID.asset_mark
- ID.asset_clear
- ID.asset_generate_preview
- ID.override_create
- ID.override_hierarchy_create
- ID.user_clear
- ID.user_remap
- ID.make_local
- ID.user_of_id
- ID.animation_data_create
- ID.animation_data_clear
- ID.update_tag
- ID.preview_ensure
- ID.bl_rna_get_subclass
- ID.bl_rna_get_subclass_py
- Texture.evaluate
- Texture.bl_rna_get_subclass

- bpy_struct.type_recast
- bpy_struct.values

- Texture.bl_rna_get_subclass
- Texture.bl_rna_get_subclass_py