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Sculpt(Paint)

base classes — [bpy_struct](#), [Paint](#)

class bpy.types.Sculpt(Paint)

automasking_boundary_edges_propagation_steps

Distance where boundary edge automasking is going to protect vertices from the fully masked edge

TYPE:

int in [1, 20], default 1

automasking_cavity_blur_steps

The number of times the cavity mask is blurred

TYPE:

int in [0, 25], default 0

automasking_cavity_curve

Curve used for the sensitivity

TYPE:

[CurveMapping](#), (readonly)

automasking_cavity_curve_op

Curve used for the sensitivity

TYPE:

[CurveMapping](#), (readonly)

automasking_cavity_factor

The contrast of the cavity mask

TYPE:

float in [0, 5], default 1.0

automasking_start_normal_falloff

Extend the angular range with a falloff gradient

TYPE:

float in [0.0001, 1], default 0.25

automasking_start_normal_limit

The range of angles that will be affected

TYPE:

float in [0.0001, 3.14159], default 0.349066

automasking_view_normal_falloff

Extend the angular range with a falloff gradient

TYPE:

float in [0.0001, 1], default 0.25

automasking_view_normal_limit

The range of angles that will be affected

TYPE:

float in [0.0001, 3.14159], default 1.5708

constant_detail_resolution

Maximum edge length for dynamic topology sculpting (as divisor of Blender unit - higher value means smaller edge length)

TYPE:

float in [0.0001, inf], default 3.0

detail_percent

Maximum edge length for dynamic topology sculpting (in brush percentage)

TYPE:

float in [0.5, 100], default 25.0

detail_refine_method

In dynamic-topology mode, how to add or remove mesh detail

- `SUBDIVIDE` Subdivide Edges – Subdivide long edges to add mesh detail where needed.
- `COLLAPSE` Collapse Edges – Collapse short edges to remove mesh detail where possible.
- `SUBDIVIDE_COLLAPSE` Subdivide Collapse – Both subdivide long edges and collapse short edges to refine mesh detail.

TYPE:

enum in ['SUBDIVIDE', 'COLLAPSE', 'SUBDIVIDE_COLLAPSE'], default 'SUBDIVIDE'

detail_size

Maximum edge length for dynamic topology sculpting (in pixels)

TYPE:

float in [0.5, 40], default 12.0

detail_type_method

In dynamic-topology mode, how mesh detail size is calculated

- `RELATIVE` Relative Detail – Mesh detail is relative to the brush size and detail size.
- `CONSTANT` Constant Detail – Mesh detail is constant in world space according to detail size.
- `BRUSH` Brush Detail – Mesh detail is relative to brush radius.
- `MANUAL` Manual Detail – Mesh detail does not change on each stroke, only when using Flood Fill.

TYPE:

enum in ['RELATIVE', 'CONSTANT', 'BRUSH', 'MANUAL'], default 'RELATIVE'

gravity

Amount of gravity after each dab

TYPE:

float in [0, 1], default 0.0

gravity_object

Object whose Z axis defines orientation of gravity

TYPE:

`Object`

lock_x

Disallow changes to the X axis of vertices

TYPE:

boolean, default False

lock_y

Disallow changes to the Y axis of vertices

TYPE:

boolean, default False

lock_z

Disallow changes to the Z axis of vertices

TYPE:

boolean, default False

radial_symmetry

Number of times to copy strokes across the surface

TYPE:

int array of 3 items in [1, 64], default (0, 0, 0)

symmetrize_direction

Source and destination for symmetrize operator

TYPE:

enum in [Symmetrize Direction Items](#), default 'NEGATIVE_X'

transform_mode

How the transformation is going to be applied to the target

- `ALL_VERTICES` All Vertices – Applies the transformation to all vertices in the mesh.
- `RADIUS_ELASTIC` Elastic – Applies the transformation simulating elasticity using the radius of the cursor.

TYPE:

enum in ['ALL_VERTICES', 'RADIUS_ELASTIC'], default 'ALL_VERTICES'

use_automasking_boundary_edges

Do not affect non manifold boundary edges

TYPE:

boolean, default False

use_automasking_boundary_face_sets

Do not affect vertices that belong to a Face Set boundary

TYPE:

boolean, default False

use_automasking_cavity

Do not affect vertices on peaks, based on the surface curvature

TYPE:

boolean, default False

use_automasking_cavity_inverted

Do not affect vertices within crevices, based on the surface curvature

TYPE:

boolean, default False

use_automasking_custom_cavity_curve

Use custom curve

TYPE:

boolean, default False

use_automasking_face_sets

Affect only vertices that share Face Sets with the active vertex

TYPE:

boolean, default False

use_automasking_start_normal

Affect only vertices with a similar normal to where the stroke starts

TYPE:

boolean, default False

use_automasking_topology

Affect only vertices connected to the active vertex under the brush

TYPE:

boolean, default False

use_automasking_view_normal

Affect only vertices with a normal that faces the viewer

TYPE:

boolean, default False

use_automasking_view_occlusion

Only affect vertices that are not occluded by other faces (slower performance)

TYPE:

boolean, default False

use_deform_only

Use only deformation modifiers (temporary disable all constructive modifiers except multi-resolution)

TYPE:

boolean, default False

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`
- `Paint.brush`
- `Paint.brush_asset_reference`
- `Paint.eraser_brush`
- `Paint.eraser_brush_asset_reference`
- `Paint.palette`
- `Paint.show_brush`
- `Paint.show_brush_on_surface`
- `Paint.show_low_resolution`
- `Paint.use_sculpt_delay_updates`
- `Paint.use_symmetry_x`
- `Paint.use_symmetry_y`
- `Paint.use_symmetry_z`
- `Paint.use_symmetry_feather`
- `Paint.cavity_curve`
- `Paint.use_cavity`
- `Paint.tile_offset`
- `Paint.tile_x`
- `Paint.tile_y`
- `Paint.tile_z`

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`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `Paint.bl_rna_get_subclass`
- `Paint.bl_rna_get_subclass_py`

References

- `ToolSettings.sculpt`