

Solidify Modifier (Modifier)

base classes — `bpy_struct`, `Modifier`

class `bpy.types.SolidifyModifier(Modifier)`

Create a solid skin, compensating for sharp angles

bevel_convex

Edge bevel weight to be added to outside edges

TYPE:

float in [-1, 1], default 0.0

edge_crease_inner

Assign a crease to inner edges

TYPE:

float in [0, 1], default 0.0

edge_crease_outer

Assign a crease to outer edges

TYPE:

float in [0, 1], default 0.0

edge_crease_rim

Assign a crease to the edges making up the rim

TYPE:

float in [0, 1], default 0.0

invert_vertex_group

Invert the vertex group influence

TYPE:

boolean, default False

material_offset

Offset material index of generated faces

TYPE:

int in [-32768, 32767], default 0

material_offset_rim

Offset material index of generated rim faces

TYPE:

int in [-32768, 32767], default 0

nonmanifold_boundary_mode

Selects the boundary adjustment algorithm

- `NONE` None – No shape correction.
- `ROUND` Round – Round open perimeter shape.
- `FLAT` Flat – Flat open perimeter shape.

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TYPE:

enum in ['NONE', 'ROUND', 'FLAT'], default 'NONE'

nonmanifold_merge_threshold

Distance within which degenerated geometry is merged

TYPE:

float in [0, 1], default 0.0001

nonmanifold_thickness_mode

Selects the used thickness algorithm

- **FIXED** Fixed – Most basic thickness calculation.
- **EVEN** Even – Even thickness calculation which takes the angle between faces into account.
- **CONSTRAINTS** Constraints – Thickness calculation using constraints, most advanced.

TYPE:

enum in ['FIXED', 'EVEN', 'CONSTRAINTS'], default 'CONSTRAINTS'

offset

Offset the thickness from the center

TYPE:

float in [-inf, inf], default -1.0

rim_vertex_group

Vertex group that the generated rim geometry will be weighted to

TYPE:

string, default "", (never None)

shell_vertex_group

Vertex group that the generated shell geometry will be weighted to

TYPE:

string, default "", (never None)

solidify_mode

Selects the used algorithm

- **EXTRUDE** Simple – Output a solidified version of a mesh by simple extrusion.
- **NON_MANIFOLD** Complex – Output a manifold mesh even if the base mesh is non-manifold, where edges have 3 or more connecting faces. This method is slower..

TYPE:

enum in ['EXTRUDE', 'NON_MANIFOLD'], default 'EXTRUDE'

thickness

Thickness of the shell

TYPE:

float in [-inf, inf], default 0.01

thickness_clamp

Offset clamp based on geometry scale

TYPE:

float in [0, 100], default 0.0

thickness_vertex_group

Thickness factor to use for zero vertex group influence

TYPE:

float in [0, 1], default 0.0

use_even_offset

Maintain thickness by adjusting for sharp corners (slow, disable when not needed)

TYPE:

boolean, default False

use_flat_faces

Make faces use the minimal vertex weight assigned to their vertices (ensures new faces remain parallel to their original ones, slow, disable when not needed)

TYPE:

boolean, default False

use_flip_normals

Invert the face direction

TYPE:

boolean, default False

use_quality_normals

Calculate normals which result in more even thickness (slow, disable when not needed)

TYPE:

boolean, default False

use_rim

Create edge loops between the inner and outer surfaces on face edges (slow, disable when not needed)

TYPE:

boolean, default True

use_rim_only

Only add the rim to the original data

TYPE:

boolean, default False

use_thickness_angle_clamp

Clamp thickness based on angles

TYPE:

boolean, default False

vertex_group

Vertex group name

TYPE:

string, default "", (never None)

classmethod bl_ma_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`
- `Modifier.name`
- `Modifier.type`
- `Modifier.show_viewport`
- `Modifier.show_render`
- `Modifier.show_in_editmode`
- `Modifier.show_on_cage`
- `Modifier.show_expanded`
- `Modifier.is_active`
- `Modifier.use_pin_to_last`
- `Modifier.is_override_data`
- `Modifier.use_apply_on_spline`
- `Modifier.execution_time`
- `Modifier.persistent_uid`

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`
- `Modifier.bl_rna_get_subclass`
- `Modifier.bl_rna_get_subclass_py`