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# RigidBodyWorld(bpy\_struct)

base class — `bpy_struct`

**class** `bpy.types.RigidBodyWorld(bpy_struct)`

Self-contained rigid body simulation environment and settings

## collection

Collection containing objects participating in this simulation

**TYPE:**

`Collection`

## constraints

Collection containing rigid body constraint objects

**TYPE:**

`Collection`

## effector\_weights

**TYPE:**

`EffectorWeights`, (readonly)

## enabled

Simulation will be evaluated

**TYPE:**

boolean, default False

## point\_cache

**TYPE:**

`PointCache`, (readonly, never None)

## solver\_iterations

Number of constraint solver iterations made per simulation step (higher values are more accurate but slower)

**TYPE:**

int in [1, 1000], default 10

## substeps\_per\_frame

Number of simulation steps taken per frame (higher values are more accurate but slower)

**TYPE:**

int in [1, 32767], default 10

## time\_scale

Change the speed of the simulation

**TYPE:**

float in [0, 100], default 1.0

## use\_split\_impulse

Reduce extra velocity that can build up when objects collide (lowers simulation stability a little so use only when necessary)

**TYPE:**

boolean, default False

boolean, default False

### **convex\_sweep\_test(object, start, end)**

Sweep test convex rigidbody against the current rigidbody world

#### **PARAMETERS:**

**object** (`Object` , (never None)) – Rigidbody object with a convex collision shape

#### **RETURNS:**

*object\_location*, The hit location of this sweep test, `mathutils.Vector` of 3 items in [-inf, inf]

*hitpoint*, The hit location of this sweep test, `mathutils.Vector` of 3 items in [-inf, inf]

*normal*, The face normal at the sweep test hit location, `mathutils.Vector` of 3 items in [-inf, inf]

*has\_hit*, If the function has found collision point, value is 1, otherwise 0, int in [-inf, inf]

#### **RETURN TYPE:**

(`mathutils.Vector` of 3 items in [-inf, inf], `mathutils.Vector` of 3 items in [-inf, inf], `mathutils.Vector` of 3 items in [-inf, inf], int in [-inf, inf])

### **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\_ma\_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`

## **Inherited Functions**

- |   |  |
|---|--|
| • <code>bpy_struct.as_pointer</code>                      | • <code>bpy_struct.items</code>                            |
| • <code>bpy_struct.driver_add</code>                      | • <code>bpy_struct.keyframe_delete</code>                  |
| • <code>bpy_struct.driver_remove</code>                   | • <code>bpy_struct.keyframe_insert</code>                  |
| • <code>bpy_struct.get</code>                             | • <code>bpy_struct.keys</code>                             |
| • <code>bpy_struct.id_properties_clear</code>             | • <code>bpy_struct.path_from_id</code>                     |
| • <code>bpy_struct.id_properties_ensure</code>            | • <code>bpy_struct.path_resolve</code>                     |
| • <code>bpy_struct.id_properties_ui</code>                | • <code>bpy_struct.pop</code>                              |
| • <code>bpy_struct.is_property_hidden</code>              | • <code>bpy_struct.property_overridable_library_set</code> |
| • <code>bpy_struct.is_property_overridable_library</code> | • <code>bpy_struct.property_unset</code>                   |

- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.type_recast`
- `bpy_struct.values`

## References

- `Scene.rigidbody_world`

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