

Enumerated Types

A list of important enumerated types used in the idTech7 engine.

- [textureType_t](#)
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textureType_t

The textureType_t enum is part of the idImage class. It designates a texture as 2-dimensional, 3-dimensional, or cubic. It can be found in [.tga file headers](#) extracted from Doom Eternal .resources files.

Definition

```
enum textureType_t
{
    TT_2D = 0x0,
    TT_3D = 0x1,
    TT_CUBIC = 0x2,
};
```

textureFormat_t

The `textureFormat_t` enum is part of the `idImage` class. It describes the image format / block compression type. There are 56 formats defined, but only 13 of these formats are known to be used in Doom Eternal.

Definition

```
enum textureFormat_t
{
    FMT_NONE [0] = 0x0,
    FMT_RGBA32F [1] = 0x1,
    FMT_RGBA16F [2] = 0x2,
    FMT_RGBA8 [3] = 0x3,
    FMT_ARGB8 [4] = 0x4,
    FMT_ALPHA [5] = 0x5,
    FMT_L8A8_DEPRECATED [6] = 0x6,
    FMT_RG8 [7] = 0x7,
    FMT_LUM8_DEPRECATED [8] = 0x8,
    FMT_INT8_DEPRECATED [9] = 0x9,
    FMT_BC1 [10] = 0xA,
    FMT_BC3 [11] = 0xB,
    FMT_DEPTH [12] = 0xC,
    FMT_DEPTH_STENCIL [13] = 0xD,
    FMT_X32F [14] = 0xE,
    FMT_Y16F_X16F [15] = 0xF,
    FMT_X16 [16] = 0x10,
    FMT_Y16_X16 [17] = 0x11,
    FMT_RGB565 [18] = 0x12,
    FMT_R8 [19] = 0x13,
    FMT_R11FG11FB10F [20] = 0x14,
    FMT_X16F [21] = 0x15,
    FMT_BC6H_UF16 [22] = 0x16,
    FMT_BC7 [23] = 0x17,
    FMT_BC4 [24] = 0x18,
    FMT_BC5 [25] = 0x19,
    FMT_RG16F [26] = 0x1A,
    FMT_R10G10B10A2 [27] = 0x1B,
```

```

FMT_RG32F [ ] = 0x1C,
FMT_R32_UINT [ ] = 0x1D,
FMT_R16_UINT [ ] = 0x1E,
FMT_DEPTH16 [ ] = 0x1F,
FMT_RGBA8_SRGB [ ] = 0x20,
FMT_BC1_SRGB [ ] = 0x21,
FMT_BC3_SRGB [ ] = 0x22,
FMT_BC7_SRGB [ ] = 0x23,
FMT_BC6H_SF16 [ ] = 0x24,
FMT_ASTC_4X4 [ ] = 0x25,
FMT_ASTC_4X4_SRGB [ ] = 0x26,
FMT_ASTC_5X4 [ ] = 0x27,
FMT_ASTC_5X4_SRGB [ ] = 0x28,
FMT_ASTC_5X5 [ ] = 0x29,
FMT_ASTC_5X5_SRGB [ ] = 0x2A,
FMT_ASTC_6X5 [ ] = 0x2B,
FMT_ASTC_6X5_SRGB [ ] = 0x2C,
FMT_ASTC_6X6 [ ] = 0x2D,
FMT_ASTC_6X6_SRGB [ ] = 0x2E,
FMT_ASTC_8X5 [ ] = 0x2F,
FMT_ASTC_8X5_SRGB [ ] = 0x30,
FMT_ASTC_8X6 [ ] = 0x31,
FMT_ASTC_8X6_SRGB [ ] = 0x32,
FMT_ASTC_8X8 [ ] = 0x33,
FMT_ASTC_8X8_SRGB [ ] = 0x34,
FMT_DEPTH32F [ ] = 0x35,
FMT_BC1_ZERO_ALPHA [ ] = 0x36,
FMT_NEXTAVAILABLE [ ] = 0x37,
};

```

Known values used in Doom Eternal

These formats are confirmed to be used in Doom Eternal, based on textures extracted from .resources or .streamdb.

```

FMT_RGBA8 [ ] = 0x3
FMT_ALPHA [ ] = 0x5
FMT_RG8 [ ] = 0x7
FMT_BC1 [ ] [ ] = 0xA

```

```
FMT_BC3[ ]= 0xB
FMT_BC6H_UF16 [ ]= 0x16
FMT_BC7 [ ]= 0x17
FMT_BC4[ ]= 0x18
FMT_BC5[ ]= 0x19
FMT_BC1_SRGB[ ]= 0x21
FMT_BC3_SRGB[ ]= 0x22
FMT_BC7_SRGB[ ]= 0x23
FMT_BC1_ZERO_ALPHA [ ]= 0x36
```

textureMaterialKind_t

The `textureMaterialKind_t` enum is part of the `idImage` class.

Definition

```
enum textureMaterialKind_t
{
    TMK_NONE = 0x0,
    TMK_ALBEDO = 0x1,
    TMK_SPECULAR = 0x2,
    TMK_NORMAL = 0x3,
    TMK_SMOOTHNESS = 0x4,
    TMK_COVER = 0x5,
    TMK_SSSMASK = 0x6,
    TMK_COLORMASK = 0x7,
    TMK_BLOOMMASK = 0x8,
    TMK_HEIGHTMAP = 0x9,
    TMK_DECALALBEDO = 0xA,
    TMK_DECALNORMAL = 0xB,
    TMK_DECALSPECULAR = 0xC,
    TMK_LIGHTPROJECT = 0xD,
    TMK_PARTICLE = 0xE,
    TMK_UNUSED_1 = 0xF,
    TMK_UNUSED_2 = 0x10,
    TMK_LIGHTMAP = 0x11,
    TMK_UI = 0x12,
    TMK_FONT = 0x13,
    TMK_LEGACY_FLASH_UI = 0x14,
    TMK_LIGHTMAP_DIRECTIONAL = 0x15,
    TMK_BLENDMASK = 0x16,
    TMK_COUNT = 0x17,
};
```