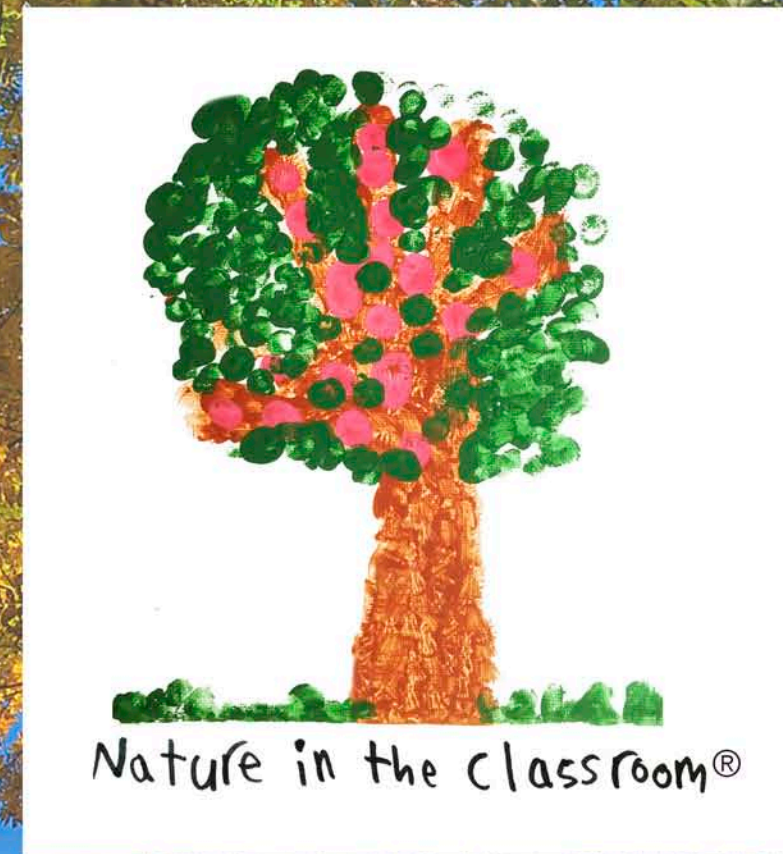


Ceilings for Classrooms



Our Mission
Classroom View
Ceiling Options
Tech Talk

scroll down



OUR MISSION:

Nature In The Classroom is a non-profit organization that seeks to enhance academic achievement, socio-emotional development and nurture a connection to the natural environment by donating tree canopy ceiling murals to educational settings.



ALoha

GREAT GRAPHING

How Many Pages in The Second?

| | |
|--------------|---------|
| Kai | Neymar |
| Lucas | Paul |
| Noah | Rafael |
| Ryker | Bridley |
| Marcos | Jax |
| Bryen | Aaron |
| Anronelle | Ablea |
| Magdalena | |
| Mrs. Miranda | |



Every day counts in KINDERGARTEN

Birthdays

Month of the Year

Month of the Year

January 2020

Number of the Day

5

Test

Math

Picture

Weather

Circle square triangle rectangle

100

10

1

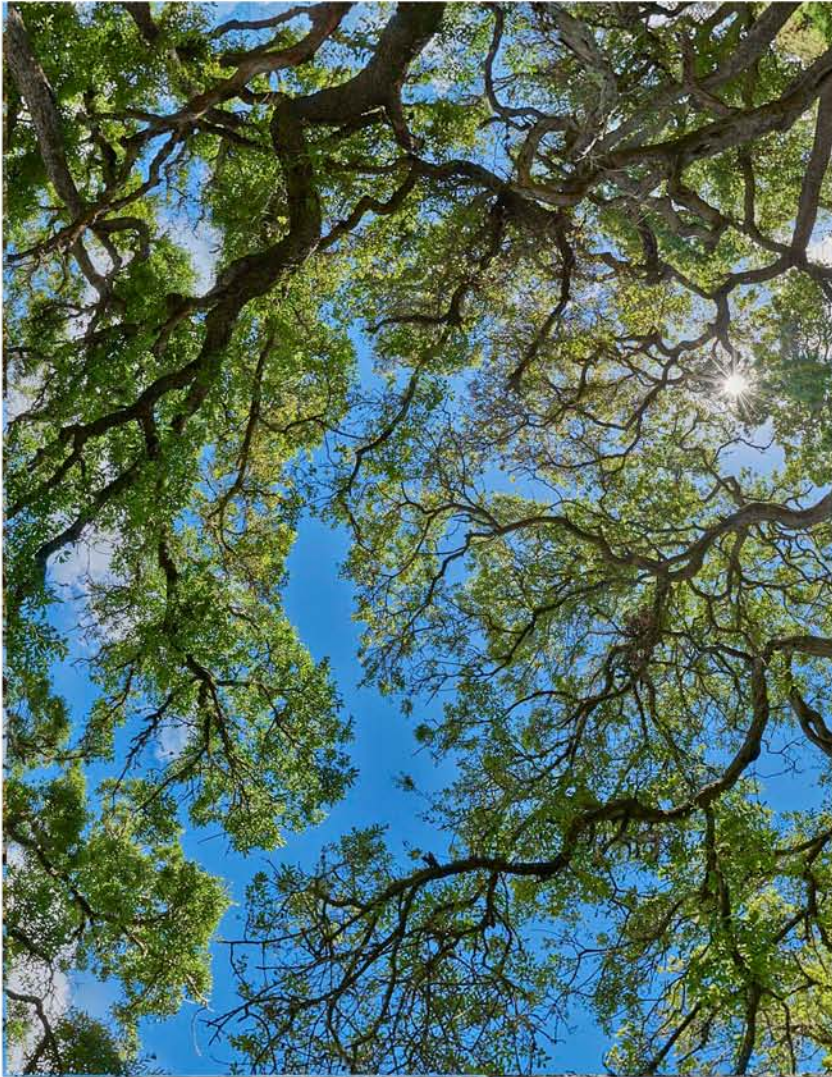
100

10

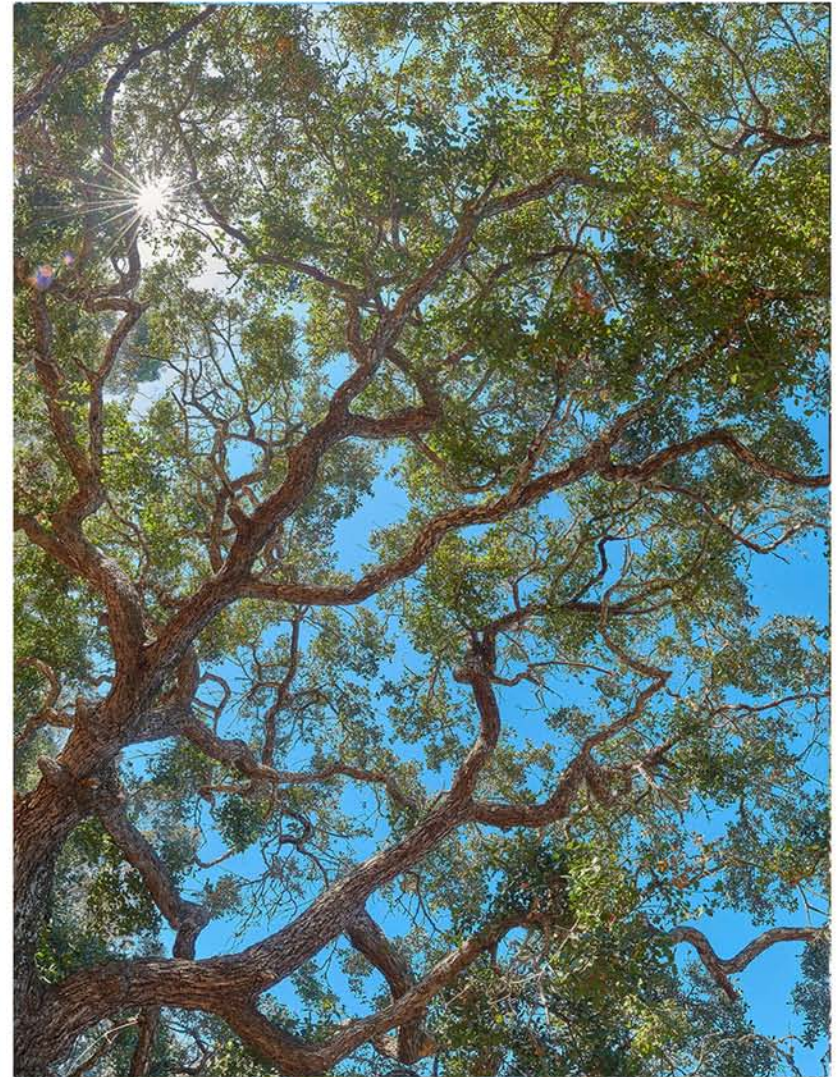
1

Tree Canopy Options

Murals are printed to fit a 12ft. X 16ft. drop ceiling grid



Scrub Oak



McDonald Oak

Tree Canopy Options

Murals are printed to fit a 12ft. X 16ft. drop ceiling grid



Island Oaks



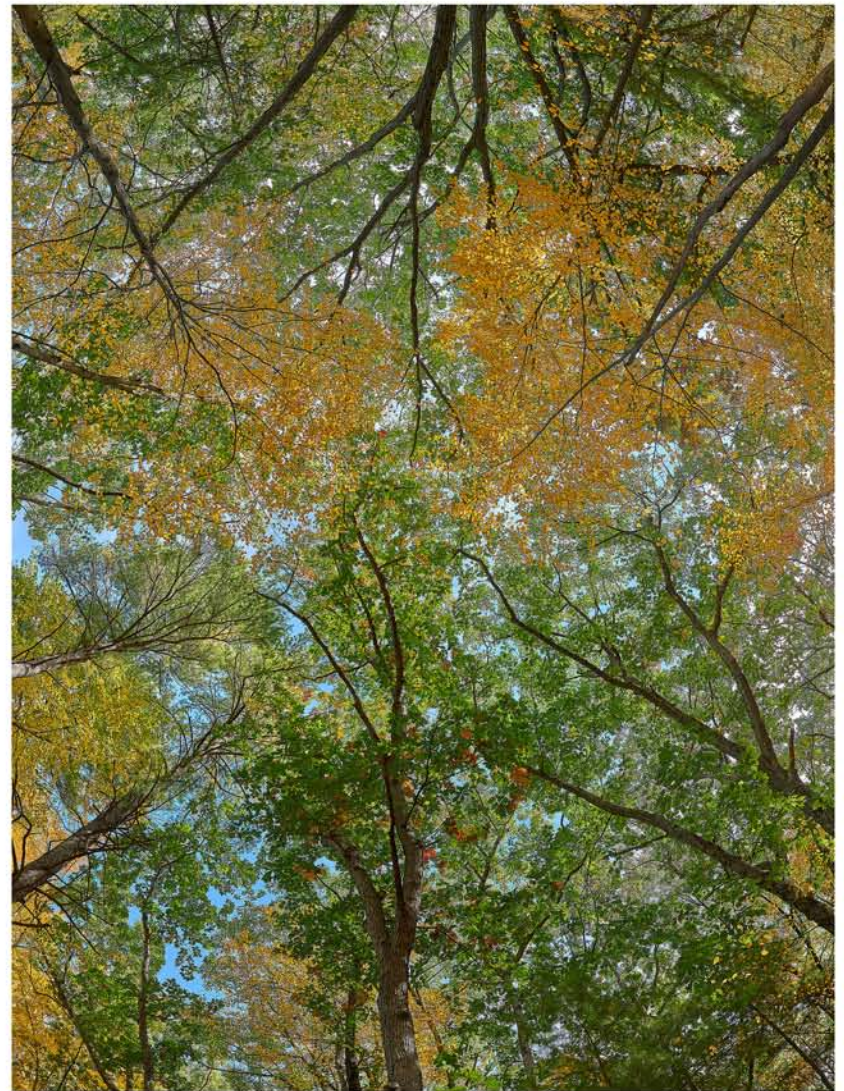
Ironwoods

Tree Canopy Options

Murals are printed to fit a 12ft. X 16ft. drop ceiling grid



Cottonwoods



Maples

Tree Canopy Options

Murals are printed to fit a 12ft. X 16ft. drop ceiling grid



Aspens



Palms

TECH TALK

Product: Sintra **Date:** August 25, 2005
Subject: Fire Characteristics **Revision:**
Number: D19 **Pages:** 4

Fire Characteristics of Sintra Material

Sometimes it is necessary to know the fire characteristics of materials that are used in the production of certain signage, graphics, exhibits or displays. These characteristics become important when the materials are used in applications where there may be stringent rules on how the materials behave when exposed to sources of combustion.

The following sections discuss the flame characteristics of Sintra, the standards it has been tested to, and where applicable it's classifications under these standards.

Relative Flammability Comparisons to Other Materials

In addition to its unique balance of performance properties, Sintra material has the following advantages as a fire-retardant material:

1. Self Extinguishing — remove the flame and the burning stops.
2. Relatively High Ignition Resistance—the heat content of Sintra material is 8,600 BTU/LB. Heat produced by a flame from Sintra material is not enough to produce the necessary vapors which combine with atmospheric oxygen to create a combustible mixture. Because of its low heat of combustion, Sintra material will not support combustion.

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www.3acompositesusa.com

3. High Oxygen Index — ASTM D-2863 measures the percent of oxygen in an oxygen/nitrogen mixture which barely supports burning. The oxygen content of the earth's atmosphere is about 21%. Materials with oxygen index values of approximately 26 and above should not continue burning after the flame source is removed because the normal atmospheric oxygen content is insufficient to support combustion. The oxygen index values of Sintra material is 46–49%.
4. No "Flaming Drip" — some burning polymers produce molten flaming drips which contribute to flame spread. Sintra material produces a form-retaining carbonaceous char that does not drip.

UL 1975

Fire Test for Foamed Plastics Used for Decorative Purposes

The test method determines the ability of foamed plastics and products containing foamed plastics used for decorative purposes to resist rapid heat release when subjected to a flaming ignition source. The method is intended to products used for the following decorative purposes:

- Typical open-ceiling, portable exhibit booth constructions incorporating manufactured panels.
- Individual, manufactured decorative objects such as, but not limited to, mannequins, murals, and signs.
- Theater, motion picture, and television stage settings, with or without horizontal projections.

| THICKNESS | DENSITY (lbs/ft3) | MAX. INST. RHR (kW) |
|-----------|-------------------|------------------------|
| 1 mm | 44 | 38 |
| 6 mm | 44 | 42 |
| 10 mm | 28 | 80 |
| 19 mm | 28 | 62 |

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UL 94

Standard for Flammability of Plastic Materials for Parts in Devices and Appliances

The test method is intended to characterize flame propagation of a material and its tendency to char. The test also indicates the tendency of the material to produce flaming particles which could ignite a cotton indicator located below the sample. It is used to determine a material's tendency either to extinguish or to spread the flame once the specimen has been ignited.

There are various flame classifications specified in UL 94 that are assigned to materials based on the results of these bench top tests. The classifications are used to distinguish a material's burning characteristics.

| UL-94 Classification | Sintra Gauges |
|-----------------------------|----------------------|
| V-0 | 1 – 19 mm |
| 5VA | 2 – 19 mm |
| 5VB | 1 mm |

These classifications show that the material was tested in a vertical position and self-extinguished within a specified time after the ignition source was removed. These classifications also indicate that the material dripped no flaming particle that ignited a cotton indicator located below the sample. A material with a 5VA or 5VB classification is subjected to a flame ignition source that is approximately five times more severe than that used in the V-0 classification.

ASTM E-84 (UL Steiner Tunnel Test)

Standard Test Method for Surface Burning Characteristics of Building Materials

The test method uses a sample of material 20-24" wide by 24' long that fits under the roof of a 25' long tunnel forming the ceiling of the tunnel. Gas burners on one end of the tunnel impinge a flame on 7 square feet of the test specimen. The progression of the flame is observed and smoke development is measured by a photometer.

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The flame propagation is plotted as distance vs. time. The photometer data is plotted as percent of absorption vs. time. The flame spread and smoke development indexes are then calculated and reported.

Sintra Material Performance - ASTM E-84

| Thickness | Flame Spread | Smoke Development |
|------------------|---------------------|--------------------------|
| 2mm | 20 | 380 |
| 3mm | 20 | 315 |
| 4mm | 20 | 425 |
| 5mm | 20 | >450 |
| 6mm | 20 | >450 |
| 10mm | 25 | >450 |
| 13mm | >25 | >450 |
| 19mm | >25 | >450 |

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