



Thermal Barrier Coating

*Magna Coatings is a proud member of the **Quantum Group** of companies.*

Magna's SafeCoat Latex can be used in the design, installation and maintenance of Stress Skin Panel Buildings and Protection of **foam plastic insulation**. **SafeCoat Latex** can be used in relocatable structures, as it will decrease flame spread ratings of many of the sheet goods used in this type of construction.

The use of Oriented Strand Board (OSB) as an alternative to plywood offers many users significant cost saving in building materials. **SafeCoat Latex** may be used on 5/8" OSB to achieve a **Class A Thermal Barrier** rating under ULC-S124. OSB is available in oversized sheets up to 10' x 24' that permit unusual size structures to be assembled with fewer joints and less labor. By contrast, plywood is only available in 4' x 8' sheets.

If the designer chooses to use OSB as an alternative to gypsum in room linings, he or she may experience substantial cost savings in the finishing cycle. Gypsum board is less expensive to buy but more costly to install and finish. In addition, gypsum is subject to more abrasion and puncture damage than OSB. In some installed-or-change-of-use applications, it may not be feasible to install gypsum because of plumbing, wiring or other services.

The structural properties of OSB may be advantageous for builders using Stressed Skin Panels. An OSB Thermal Barrier is more puncture resistant and better suited to applications in arenas, warehouses, and industrial settings. The **SafeCoat Latex Fire Retardant Coating** on the exposed face offers a bright, attractive finish with an inherent flame spread rating of 25 or less. This spray-on coating will be much less expensive and lighter than gypsum applied over the OSB. **SafeCoat** may be tinted to offer various color alternatives. **Operating costs may be reduced significantly.**



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Thermal Barrier Coating Building Code Overview

Building Code Overview - Requirements for Thermal Barriers

The National Building Code calls for the use of Thermal Barrier products to protect foamed plastic insulation. These sections read as follows:

Section: 3.1.4.5 (1) Where a building or part of a building is required to be of non-combustible construction, the construction shall be made from non-combustible materials, except as permitted in Sentences (2) to (12) and 3.2.2.8. (2) **3.1.4.5.(2)** Combustible elements of roofs, floors and walls shall be limited to:

(d) insulation, other than foamed plastic, having a flame spread rating of not more than 25 may be used where the insulation is not protected (by a thermal barrier) as described in Clauses (e) and (f).

e) *Foamed Plastic Insulation* having a flame spread rating of not more than 25 on any exposed surface... (which must) be protected by a thermal barrier.

(v) any thermal barrier that meets the requirements of Classification A when tested in conformance with ULC-S124..."

(f) insulation, including *foamed plastic*, having a flame spread rating not greater than 500 provided the insulation is protected from interior spaces in the building by a Class A thermal barrier as described in Clause (e) except in buildings exceeding 18m in height or in buildings without sprinklers regulated by Subsection 3.2.6. (where other protection is required). (*Italics added for emphasis*)

Section 3.1.12 Roof Assemblies

Section: 3.1.12.1.(1) Where a fire retardant treated wood roof system is used to comply with the requirements of Subsection 3.2.2., the roof deck assembly shall meet the conditions of acceptance of ULC-S126M (except that),

Section: 3.1.12.2.(2) the requirements of Sentence (1) may be waived provided:

(b) the combustible material above the deck is protected on its underside by a thermal barrier conforming to Clause 3.1.4.5(2)(e) (i.e.: a Class A Thermal Barrier).

Section-10.4.9.3. Relocatable Industrial Accommodation

Section 10.4.9.3 If foamed plastic is used, the surface shall be protected from interior spaces by 12.7 mm gypsum board or a thermal barrier conforming to a Classification.