INSURANCE FACTS
INTRODUCTION

This manual presents the basic factors that affect fire and extended coverage insurance rates on metal building systems. Its purpose is to clarify the fundamentals involved in the determination of these rates. This information is general in nature and does not address special conditions related to particular regions of the U.S.

Every builder should assume the responsibility of assisting an owner in procuring the minimum rates for a metal building systems project. This can best be accomplished while the building is in the planning stages. The information in this guide will help you determine which design elements to consider in order to achieve the best insurance rates.

It is to your advantage to ally yourself with a respected insurance broker or agent. This professional can assist you in reviewing rates as applied to a specific building project. In many cases, he or she will be able to advise you of rate-reducing opportunities.

If you have sufficient specific information to indicate that insurance rates in your state do not fall into a proper category as described in this manual, please inform your supplier. The manufacturer can then request that the Insurance Committee of the Metal Building Manufacturers Association (MBMA) investigate the rating procedures of the state rating organization. The MBMA Insurance Committee will be in a position to evaluate the problem and initiate action in these broad instances.

The Insurance Committee of the MBMA should be contacted with reference to fairly broad inequities in rates, but should not be contacted on each specific job. In analyzing the rates on a particular job, it would be more advisable to contact your insurance broker or agent, or in some cases, the rating organization.
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INSURANCE FACTS

Insurance is essentially definable as the spreading of risk of economic loss due to fire, windstorm, flood, riot and civil commotion, terrorism and various other perils.

To spread the risk equitably, all elements of the risk should be analyzed and weighted properly for potential economic loss.

This analysis logically leads to classification of buildings according to their loss potential and the publication of an annual rate or Fire Insurance Rate. This rate is based on a monetary amount per hundred dollars of insurance.

FIRE INSURANCE RATES consist of:

1. **Building rates**, which apply to the amount of insurance on the building alone
2. **Contents rates**, which apply to the amount of insurance on contents alone
3. **Extended coverage rates**, which are rates on an endorsement that may be attached to the fire insurance policy

The endorsement may cover hazards of windstorm, hail, vandalism and malicious mischief, riot and civil commotion, terrorism, etc., and will apply to the amount of insurance on a building and its contents.

Extended coverage insurance may not be written separately, but must be an endorsement to a fire insurance policy.

Hazards covered under this endorsement, other than windstorm, are difficult to analyze, and the extended coverage rates are therefore based essentially upon susceptibility to wind damage. The construction class will determine the extended coverage rates.

There are three basic features included in all fire insurance rates.

**First**: The rate must correctly reflect the hazards associated with the occupancy.
**Second**: The rate must be equitably applied to all similar risks.
**Third**: The rate must be an incentive to provide good fire protection.

Charges should be included in the rate to encourage an owner to maintain property in the safest possible condition and eliminate the hazards upon which the charges are predicated.
WHO DETERMINES INSURANCE RATES?

In most states insurance rates for most structures are computed by a Commercial Risk Services (CRS) office of the Insurance Services Office (ISO). In a few states, (e.g. Louisiana and Texas), an independent rating organization other than ISO is used.

Some insurance companies have filed with individual State Insurance Departments for their own rate-making authority and thus compute their own rates within those states. Most of these rates are for larger buildings (over 15,000 square feet), many of which are protected by sprinkler systems. A list of ISO offices and independent organizations is found in the appendix.

HOW ARE FIRE RATES COMPUTED?

ISO offices and some independent organizations use the Commercial Fire Rating schedule (CFR). This schedule results in a uniform treatment of buildings regarding construction and occupancy features. This does not, however, result in uniform rates from state to state.

Most states control rates through their insurance department, which grants rate-making authority and issues licenses to insurance companies. The rate levels within an individual state are predicated upon the loss experience for each risk class and type of construction within that state.

For each building class within a given state, ISO computes a Loss Cost for that class of building. This cost may vary within a state based on local factors, such as the capability of local fire departments and other public services, as well as environmental exposures.

Most insurance companies use the same Loss Cost that is developed by ISO and approved by the state department of insurance. Each insurance company then develops their own unique Loss Conversion Factor (LCF) that is then approved by the state. The LCF is a reflection of the insurance company’s cost of writing and servicing the insurance coverage in that state. The final rate is computed by multiplying the ISO Loss Cost by the LCF.

\[ \text{Loss Cost} \times \text{Loss Conversion Factor} = \text{Final Rate} \]

Thus, while the method of determining the rate is the same from state to state, the ultimate rate varies due to factors and rate level adjustments that are established by and applied within each state, as well as individual insurance company’s LCF.
Some small structures (15,000 sq. ft. or less) are not individually rated under the CFR schedule. They are rated by the insurance company or agent by use of the ISO Commercial Lines Manual. Typical structures include:

- Commercial buildings
- Non-manufacturing and warehouse facilities
- Hotels and motels without restaurants
- Small frame, noncombustible or joisted masonry buildings

This produces a flat rate based on construction type, protection class, and occupancy.

CLASSIFICATION OF BUILDING CONSTRUCTION

To determine a fire insurance rate, a building is first classified according to its construction. Construction classifications for rating purposes generally fall into six categories, each of which includes a number of variations. The basic classifications are:

**FIRE-RESISTIVE (Construction Class 6)**
These are buildings with solid (not less than 4” thick) or hollow (not less than 8” thick) masonry walls or assemblies with a fire resistance rating of not less than 2 hours and floor and roof assemblies with a fire resistance rating of not less than 2 hours. All horizontal and vertical load bearing building components must be protected with a fire resistance rating of not less than 2 hours, including pre-stressed or post-tensioned concrete units.

**MODIFIED FIRE-RESISTIVE (Construction Class 5)**
These are buildings with exterior walls, floors, and roof constructed of materials described in Construction Class 6 Fire-Resistive. The difference between the two classes is that Class 5 buildings have a deficiency in wall thickness that results in a fire resistance rating of not less than 2 hours, but not less than 1 hour.

**MASONRY NONCOMBUSTIBLE (Construction Class 4)**
These are buildings with exterior walls of fire-resistive construction not less than 1 hour or masonry (not less than 4” thick) and with noncombustible or slow-burning floors and roof.

**NONCOMBUSTIBLE (Construction Class 3)**
These are buildings with exterior walls, floors, and roof of noncombustible or slow-burning materials supported by noncombustible or slow-burning supports. Metal building systems normally fall into this category.

**JOISTED MASONRY (Construction Class 2)**
These are buildings with exterior walls of fire resistance rating of not less than 1 hour. They may also be masonry buildings. In either case these buildings have combustible floors and/or roof.
FRAME (Construction Class 1)
These are buildings with exterior walls, floors, and a roof of combustible construction. They may also be buildings with exterior walls of noncombustible or slow-burning construction with combustible floors and roof. Included are buildings with walls and roof with composite assemblies that include both combustible materials and noncombustible materials.

RATING METHODOLOGY

After establishing the class of basic building construction, buildings are rated using ISO CFR schedule by considering the following elements:

1. Basic construction
2. Secondary construction
3. Occupancy
4. Exposure
5. Protection
6. Internal protection

1. Basic Construction
The elements considered under basic construction are walls, floors and roofs, including supports and assembly. Considerations in the walls are the type of materials, wall thickness, damageability potential, and the fire resistance rating. The floor and roof materials are analyzed with respect to their basic materials, their damageability type, and their fire resistance rating. Application of the CFR schedule produces a series of charges, in points.

ISO has also defined rules that insurance carriers follow regarding buildings of mixed construction as follows:

- Any class of building (Class 2 through 6) must have at least 2/3 of the building total wall area and 2/3 of the total roof and floor area constructed according to the requirements of that class.
- If less than 2/3 of the building’s total wall area and 2/3 of the total roof and floor area or any portion of the building are in any single class, the entire building would be classified by the construction type assigned to the portion of the building that is greater than 1/3 of the wall area or the total roof and floor area.
- Any building that has either more than 1/3 of the wall area or more than 1/3 of the total floor and roof area rated as Frame, the entire building will be rated as Class 1, Frame.
2. Secondary Construction
Secondary construction considers the following factors:

- Vertical openings (applicable only in Class 5 and 6 buildings) and protection type protection for these openings
- Building area and heights, approved division walls, roof surface whether approved or unapproved, combustible floor and roof concealed spaces, combustible interior constructions (over 10% of the wall area)
- Combustible interior finishes or insulation with a flame spread greater than 25 and a smoke development rating greater than 200
- Combustible exterior attachments, such as a combustible roof over an exterior loading dock with a flame spread greater than 25 and a smoke development rating greater than 200
- General building conditions

Charges in terms of percentage are assessed according to the CFR schedule for the secondary construction items.

3. Occupancy
The hazards of each occupancy type have been analyzed by ISO and are included within the CFR schedule. Basic occupancy charges are applied in the form of percentages based upon the hazards of each occupant of the building.

Additional charges are added for:

- Hazards of the occupancy not contemplated under the basic occupancy charge, such as spray painting in a metalworking operation
- Combustibility classification applicable to the building contents

4. Exposure
Exposure considers the potential harm to the building being rated due to an external fire. This could come from a nearby building or one along a shared fire wall.

Things considered in the CFR schedule are:

- Wall construction, both of the buildings being rated and that of the exposed building
- Occupancy hazard of the exposure distance
- Class of the exposing building
- Contents of the exposing building
- Exposure conditions

This produces an exposure charge in points. Sprinklered buildings, as well as Class 5 or 6 buildings, are not considered exposures. Special rules may apply to yard property such as: grain or seed tanks; flammable liquid or gas tanks; wharves, piers, and platforms; and refuse burners and open fires.

5. Protection
Protection refers to the public protection capability classification as determined by the ISO Protection Schedule of the city, community, or zone where the building is located.
Other terms such as “town grading class” or “town grading” or “town class” are sometimes used to describe protection.

Public Protection Class (PPC) ratings range from 1 (lowest) to 10 (highest). This protection schedule considers such things as quality of public water supply, fire department, building codes, fire alarm, etc. It varies from a Class 10 town (the best protection) to a Class 1 town (an unprotected area without public water or fire protection facilities).

The CFR schedule has a table of protection class factors which vary based on the state where the building is located and the building construction class.

While a town may have a PPC rating, the distance to a fire department (as well as the distance to the nearest fire hydrant) can reduce the town PPC rating for a specific building. Generally, if the building is more than five miles from the nearest station and/or more than 1,000 feet from a fire hydrant, the PPC will be reduced, resulting in a charge.

6. Internal Protection
Internal protection considers protective features within the building. Among these are:

- Portable fire extinguishers
- Standpipe and hose systems
- Watchman service
- Automatic fire detection systems
- Partial or substandard automatic sprinkler systems
- Limited supply automatic fire protection systems

Automatic sprinkler systems would not qualify the risk for rating under the sprinkler schedule. These protection features produce CFR schedule credits in percentages.

Building Contents
Two elements are considered to determine the rate applied to the building.

1. The combustibility classifications applicable to contents range from noncombustible (C-1) to rapid (or flash) burning (C-5).
2. The susceptibility classifications applicable to contents, ranges from S-1 (minimal damage: pig iron, marble, and heavy metals) to S-5 (extreme loss: animals and birds, explosives, flowers, and furs).

Rate Computations
The described points, charges, and credits are used in a series of mathematical calculations, including application of several factors. The result of these calculations
is an 80% Co-Insurance Building Rate for the building and an 80% Co-Insurance Contents Rate for each tenant. These rates are in dollars and cents per $100 of insurance coverage.

Other Rating Methods
The method of rating just described using the ISO CFR schedule is the most common. Some jurisdictions that are not ISO members use other rate methods, and some mutual companies and others have their own rate schedules filed with the individual state insurance departments. Still others will utilize the rates produced by ISO, but apply deviations from them. These deviations must be set forth and approved by the state insurance departments of each respective state. Whatever rate method is used, it basically considers the same elements of the risk as the CFR schedule.

Co-Insurance
As mentioned above, the rates produced by application of the CFR schedule are 80% Co-Insurance Building Rates and 80% Co-Insurance Contents Rates. Co-insurance is a term that means that the policy holder has agreed to maintain insurance coverage equal to or greater than 80% of the value of the property being insured. If, at the time of a loss, the policy holder has failed to maintain this level of insurance, the policy holder becomes a co-insurer for the difference between the amount carried and the amount required by the agreement. Higher co-insurance limits may be carried, such as 90% and 100%, which result in a rate reduction to the policy holder. This is computed by taking the percentage credit of the 80% co-insurance building rate or contents rate.

HOW DO METAL BUILDING SYSTEMS RATES COMPARE?

Rates produced under the CFR schedule descend from Construction Class 1, Frame, to Construction Class 6, Fire-Resistive. A Frame building would contribute fuel to the fire; and in a fire, the building would likely suffer significant damage. As a result, the rates on Frame buildings are usually the highest of the six classes of buildings.

On the other end of the scale, it is assumed that a fire-resistive building adds no fuel to the fire and would survive even a rather severe internal contents fire and thus be usable again after the fire. Usually, full Fire-Resistive Construction Class 6 buildings have a low insurance rate.

The typical metal building system is classified as Noncombustible, Construction Class 3. While, for the most part, a metal building system does not contribute additional fuel to the fire, it can be severely damaged in the event of a large fire and require replacement. Therefore, metal building systems are rated higher than Fire-Resistive, but considerably lower than Frame.

Under some previous rating treatments, metal building systems normally were classified as “brick” buildings which, in the vernacular of the CFR schedule, would be Joisted Masonry, Construction Class 2.
The CFR schedule now recognizes the superiority of a metal building system over one with combustible floors and/or roof, typical of Joisted Masonry Class 2 buildings.

While the CFR schedule does produce very favorable rates for metal building systems, these rates are still subject to state-by-state modifications for two purposes:

1. To bring the rate levels up to the historic levels for that state
2. To reflect the actual loss experience, or loss cost, in that state for each construction class and occupancy code.

Therefore, the rates will vary from state to state even though the rating method used is the same.

HOW TO REVIEW INSURANCE RATES FOR THE CUSTOMER

When discussing insurance rates with a prospective building customer, suggest that you be allowed to contact his/her insurance broker. A well-informed broker should have a letter of record or authority filed with the respective ISO/CRS office or rating bureau authorizing him or her to review insurance rating for the policy holder.

The ISO/CRS office or rating bureau will furnish the broker with estimated rates for any proposed building and will also provide advice about how rates can be minimized.

If you or the building customer do not desire to involve the customer’s insurance broker, you can discuss the rates directly with the ISO/CRS office or rating bureau. This discussion may

MBMA worked closely with UL, and after a series of tests, obtained one- and two-hour listings for columns typically used in metal building systems. This was a breakthrough in fire protection research. Previously, the minimum size column eligible for listing was a W10 by 49. Additional testing resulted in the listing of a one-hour column with "3-sided" protection. The fourth side, adjacent to the exterior wall panel, must be protected only by glass fiber or mineral wool insulation material. Treatment of such walls varies from jurisdiction to jurisdiction, and individual rulings should be obtained for each project.
only be general in nature unless the customer has authorized the ISO/CRS office or bureau to discuss the rates in detail.

In order to obtain this authorization, you must file a letter of authorization with the ISO/CRS office or rating bureau. Forms for these letters are available through most of the rating authority's offices. This procedure protects the broker who is writing the insurance. These discussions should, wherever possible, take place during the planning stages of the building.

**Insurance Information Check Sheet**

To assist you and your customer in recognizing some of the basic elements included in insurance rates, and to facilitate a helpful discussion of insurance rates with others, the MBMA Insurance Information Check Sheet can be used (see the appendix for an example of this sheet).

Prior to discussing insurance rates with the customer's insurance agent or insurance broker, or with the ISO/CRS office or rating bureau, complete the MBMA Insurance Information Check Sheet for the proposed building. This will help assure you have the necessary information for a meaningful discussion and may also provide guidance about possible problem areas.

In the event comparisons are made between a metal building system and another type of building, sheets should be completed on each building type under consideration by the customer.

**Factors Affecting Schedule Rates of Metal Building Systems**

Metal building systems rates can vary and can even be classified in a different construction type other than Class 3, Noncombustible. Changes in classification will depend on the features incorporated into the building. The following are some factors that should be considered:

1. The use of fire-resistive (not less than one hour) exterior wall columns and other structural wall frame members results in lower rates and makes the building more competitive with Masonry Noncombustible buildings (Construction Class 4).
2. MBMA has developed and obtained a listing from UL for fire resistance rated exterior walls. The use of these walls can result in the metal building system being reclassified as Masonry Noncombustible (Construction Class 4) in some jurisdictions and in all cases, result in rates that are competitive with Construction Class 4.
3. MBMA has also obtained a one-hour fire resistance rated roof system listing from UL by combining the fire resistance rated columns described in item 1 above and the fire resistance rated wall systems described in item 2 above. With a fire resistance rated roof system, the metal building system can be reclassified as modified Fire-Resistive Classification (Construction Class 5). This combination will result in the lowest possible metal building system rate.
4. The use of a combustible insulation material or combustible interior finish material can dramatically affect the rate. The CFR schedule defines combustible as wood or other materials which will ignite and burn when
subjected to fire, including materials with a listed flame spread rating greater than 25.* Some Special Damage materials, such as foam plastics, can be classified combustible even though the flame spread is less than 25.*

The effect of the use of such materials varies from percentage charges under secondary construction to reclassifying the building as Construction Class 1, Frame, which carries a substantially higher rate.

The use of highly efficient insulating materials (such as foam plastics) to meet energy conservation requirements in building codes resulted in conflicts with the insurance industry as these materials were unilaterally classified as combustible. The Fire Protection and Related Insurance Matters Committee of MBMA worked actively with insulation manufacturers and insurance interests to resolve this conflict.

As a result, revisions to the Commercial Fire Rating (CFR) schedule have altered the treatment of Special Damage materials. These materials may now be eligible for rating as Slow Burning, provided that they have a listed flame spread rating of not greater than 25* and also meet one of the following:

1. The material is covered by an acceptable thermal barrier consisting of 1/2-inch or more of noncombustible material such as plaster, cement, or gypsum board, or covered by a listed thermal barrier of minimum 15 minute finish rating.
2. The material or composite assembly is listed as having passed either the full scale corner fire test or the enclosed room fire test.

Since the building is still rated as Slow Burning, the building can continue to be classified as Construction Class 3, Noncombustible. Without this change and with this material used in the exterior walls, the building will be rated as a Class 1, Frame building.

5. The installation of automatic sprinkler systems in a building materially reduces the rate. It would be well to discuss comparable costs between an unsprinklered, fire-resistive building and a metal building system with an approved system of automatic sprinklers. You may be able to show the customer that the installation of an automatic sprinkler system could materially reduce overall fire risk and minimize the chances of being put out of business by a disastrous fire.

* See flame spread definition in the glossary.
OCCUPANCY FACTORS AFFECTING RATES APPLIED TO METAL BUILDING SYSTEMS

As previously mentioned, the hazards of the occupancy result in a series of percentage charges applied to the building rate. While the hazards are, in many cases, inherent to your customer’s business and, therefore, cannot be totally eliminated, the charges assessed to them can be mitigated.

One of the more common ways to mitigate the charges is by isolation of the hazards of occupancy by erecting enclosed fire resistance rated rooms within the building to house any hazardous operation or storage. Depending upon the degree of fire resistivity of the enclosure, any charges for the hazardous operation are multiplied by factors that range between 0.5 to 0.9.

Another method for reducing these charges is the installation of automatic fire extinguishing devices to protect the hazards. These extinguishing systems can result in a reduction of the charge by as much as 50%.

A third approach is to house hazards in a separate building or structure that is a distance (usually 100 feet) from the main building. An example is storage of greater than one day’s use of flammable solvents.

Where occupancy involves heat-producing appliances, such as cooking equipment, charges can be kept to a minimum by providing the required clearance between the heated surfaces and any combustible materials. The required clearances are outlined in the CFR schedule. Proper clearances are also required for exhaust systems connected with cooking equipment, as well as dust collection refuse removal systems associated with occupancies such as woodworking.

Percentage charges can be assessed to the occupancy and, therefore, the building rate. These charges may be due to a lack of administrative controls in such things as smoking in hazardous areas and lack of proper housekeeping. Percentage charges may also be assessed for other reasons, such as defects in the electrical or heating equipment.

CREDITS FOR PROTECTION FEATURES AFFECTING METAL BUILDING SYSTEM RATES

Another opportunity for savings over which your customer does have control is the internal protection systems that can generate credits in the CFR fire rating schedule.

These credits, which are not necessarily accumulative, include the following:

1. Installing a standard complement of portable fire extinguishing equipment in accordance with NFPA 10 can result in a 3% credit.
2. Installing a standpipe and fire hose system in accordance with NFPA 14 can result in a 5% credit.
3. Providing an approved portable clock watch service with hourly rounds during all idle hours can result in 7% credit.
4. Providing an approved proprietary watchman service in accordance with NFPA standards can produce a 10% credit.
5. Providing a central station watchman service in accordance with NFPA standards can produce a 15% credit.
6. Installing automatic heat, smoke, or products-of-combustion detection systems, in accordance with NFPA standards and connected to an approved central station, can result in credits from 15% to 25%. The amount of the credit depends upon the grade of the system and the degree the system is in accordance with the applicable standards.
7. Installing a partial automatic sprinkler system that meets the requirements of NFPA 13. Such an installation can produce credits from 4% to 30%, with acceptable water-flow alarms connected to an approved central station or a fire alarm headquarters. A maximum of 25% is allowed without a remote alarm service.
8. Installing a limited supply automatic fire protection system which is defined as “other than automatic sprinklers” and includes systems such as Halon, CO₂, and high expansion foam, can result in credits. This credit is the same as the credit that would apply to a partial automatic sprinkler system; however, it is multiplied by 0.8 considering the fact that the extinguishing media is limited in quantity available.
9. Installing a standard automatic sprinkler system can result in credits from 15% to 70% depending on the equipment grading, the building construction class, and the building combustibility class. The determination of the equipment grading is based on such factors as water supply, piping, automatic sprinklers, alarm, valves, maintenance, testing, and the extent of unsprinklered areas.

OTHER RELATED INSURANCE COVERAGE

The preceding discussion has dealt exclusively with fire rates. There are other related insurance coverages of interest to the metal building system customer. Two of these are windstorm rates and earthquake rates. A metal building system achieves favorable rates in both categories, as compared to other construction classes.

Windstorm Rates

Windstorm coverage rates, which are a part of the extended coverage rates, are not based upon the detailed analysis outlined above, but on a general classification of the construction of the building. Extended coverage rates are not under a uniform manual, but are covered separately by each rating organization and state, within their commercial lines manual. Buildings are normally classified as Ordinary, Semi-Wind Resistive, or Wind-Resistive; however, other terms are used by some jurisdictions.
Metal building systems have been classified Wind-Resistive, Semi-Wind-Resistive, or Ordinary with the Ordinary classification being the predominant. Some jurisdictions recognize metal building systems with UL 580 - Class 30, 60, and 90 wind uplift roof systems. ISO recognizes 90 wind uplift roof systems. These classifications result in an improved treatment of the metal building system, upgrading it to Semi-Wind-Resistive by ISO or, in the case of some jurisdictions, Wind Resistive.

Rates within a state can vary by wind zones so it is important to know in what zone the building will be located. This will help you to determine the UL roof rating to minimize damage and minimize insurance cost. Again, the owner’s agent or broker can assist with this determination. The above rules apply equally to all classes of buildings so it is important that each building be judged equally for this exposure.

MBMA has worked with UL to obtain a generic test for use in qualifying re-roof applications to obtain a UL 90 wind uplift rating. When such assemblies are erected, the owner and their insurance agent of broker should be made aware of this wind uplift rating.

**Earthquake Rates**

Insurance coverage is available that will reimburse the owner for building and contents damage due to earthquakes. ISO/CRS provides Commercial Earthquake Classifications, Rates and Territories within their Commercial Lines Manual.

The country, for the purpose of earthquake rating, is divided into two territories: the 13 western states (including Hawaii and Alaska) and all other states (including the District of Columbia). While the two territories are primarily an administrative division, the country is also divided into five earthquake zones with Zone 1 having the highest potential for damage and Zone 5 having the lowest potential for damage.

Based on construction type and the construction features that make the building more resistant from (or more susceptible to) earthquake damage, ISO has established 15 building classifications. The rates granted to metal building systems in the zones most susceptible to earthquake damage range from 2 to over 3 times lower than rates provided for steel frame, concrete block, or pre-cast concrete buildings. This favorable rating for metal building systems is based upon documented building performance in past earthquakes.
CONCLUSIONS

The insurance rating process is involved and complicated. Individual interpretation of rules, charges, and credits by the rating jurisdiction can materially affect the final insurance cost for a specific building. With the trend towards uniform rating schedules, metal building systems receive the same treatment (but not necessarily the same rates) in all jurisdictions. Any gross inequities should continue to be pointed out to the MBMA so that they can be addressed by MBMA’s Insurance Committee.

You can effectively counter insurance-related claims made by your competitors by familiarizing yourself with the general aspects of fire insurance rating. When you encounter specific insurance rating problems, you should discuss them with the insurance agent or broker, or directly with the insurance rating organization. If problems cannot be resolved, they should then be brought to the attention of your building supplier, who can, in turn, inform MBMA’s Insurance Committee.
GLOSSARY

**BUILDER’S RISK INSURANCE** - Insurance against loss to buildings, including machinery and equipment, in the course of construction.

**CO-INSURANCE** - An arrangement by which the insured agrees to carry an amount of insurance equal to a percentage of the total value of the property insured. In most cases, 80% co-insurance is now mandatory, and reduction in rates is granted for 90% and 100% co-insurance.

**ENDORSEMENT** - An attachment to an insurance policy to broaden the coverage to include perils other than the specific general coverage. (Where the basic policy is a fire insurance policy, an endorsement would include perils other than fire. See definition of Extended Coverage Endorsement.)

**EXTENDED COVERAGE ENDORSEMENT (EC or ECE)** - An endorsement attached to a fire insurance policy which extends the coverage to include the perils of windstorm, hail, explosion, riot, riot during a strike, civil commotion, damage by aircraft (or objects falling from aircraft), damage by motor vehicles, and smoke damage.

**FIRE RATING** - A term used to indicate the ability of a material to withstand the effects of a specified test fire exposure, with temperatures developed in accordance with the ASTM standard time-temperature curve. These ratings are expressed in terms of hours or minutes (e.g., a 2-hour protected column or a 1-hour rated fire door).

**FLAME SPREAD** - The relative rate of propagation of flame over a surface of a material being tested, based on the ASTM E-84 or UL 723 test method. This method establishes an arbitrary rating scale assigning zero to inorganic reinforced cement board and 100 to red oak timber. Other materials are assigned a comparison flame spread rating based on the results of their tests.

**INSURANCE AGENT OR BROKER** - An individual involved in placement of insurance coverage with an insurance company.

**INSURANCE RISK** - A building or its contents, or both, covered by an insurance policy.

**LETTER OF RECORD OR AUTHORITY** - A letter from the insured (building owner) to the rating bureau or ISO authorizing the entity to discuss insurance rates with a particular individual (usually an insurance agent or broker).
LOSS COST - The calculated loss per $100 of value is usually generated by ISO from their data base of premiums and losses. They are calculated by state and within regions of each state. Most states have adopted ISO Loss Cost calculations as a basis for fire insurance rates in the state.

LOSS CONVERSION FACTOR (LCF) - The factor insurance companies use to determine their individual fire insurance rates on smaller buildings that are not individually rated but are class rated. This factor is made up of their unique costs for doing business as well as their profit. As the name implies, this factor converts loss (Loss Cost) into premium charges to the customer. While the state adopts ISO Loss Cost, it approves each insurer’s LCF’s.

RATE - Cost of insurance, usually expressed in dollars per $100 of insurance coverage.

RATING SCHEDULE - A collection of basic rates, charges, and credits used in arriving at an insurance rate.

* This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
EXAMPLES OF THE EFFECT OF CO-INSURANCE

Example A - Where insurance is carried to the amount of 80% of value or more.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of property</td>
<td>$10,000</td>
</tr>
<tr>
<td>Insurance required by 80% Co-insurance clause</td>
<td>$8,000</td>
</tr>
<tr>
<td>Insurance carried</td>
<td>$8,000</td>
</tr>
<tr>
<td>Amount of loss suffered</td>
<td>$4,000</td>
</tr>
<tr>
<td>Amount of loss paid by insurance company</td>
<td>$4,000</td>
</tr>
</tbody>
</table>

Example B - When the loss equals or exceeds 80% of value no matter what the insurance is.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of property</td>
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</tr>
<tr>
<td>Insurance carried (6/8 of requirement)</td>
<td>$6,000</td>
</tr>
<tr>
<td>Amount of loss suffered</td>
<td>$8,000</td>
</tr>
<tr>
<td>Amount of loss paid by insurance company</td>
<td>$6,000</td>
</tr>
</tbody>
</table>

Example C - When the loss and amount of insurance fall below 80% of the value.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of property</td>
<td>$10,000</td>
</tr>
<tr>
<td>Insurance required by 80% Co-insurance clause</td>
<td>$8,000</td>
</tr>
<tr>
<td>Insurance carried (7/8 of requirement)</td>
<td>$7,000</td>
</tr>
<tr>
<td>Amount of loss suffered</td>
<td>$5,000</td>
</tr>
<tr>
<td>Amount of loss paid by insurance company (7/8 of 5,000)</td>
<td>$4,375</td>
</tr>
<tr>
<td>Amount of loss paid by policyholder (1/8 of 5,000)</td>
<td>$625</td>
</tr>
</tbody>
</table>

This relationship can be expressed by the formula:

\[
\text{Insurance Carried} \times \text{Loss} = \text{Insurance Company’s Portion of Loss, Limited to the Amount of the Loss.}
\]
MBMA INSURANCE INFORMATION CHECK SHEET

This Insurance Information Check Sheet is a valuable communication tool when discussing insurance rates with insurance agents or brokers or with state rating bureaus.

Note that rates for metal building systems are generally less than costs for other forms of construction, though every circumstance is unique.

If questions or confusions arise during the insurance discussions, please forward the check sheet with any pertinent comments to your metal building system manufacturer. Their representatives will help you address unique issues.

Location:
City/State ____________________________

Owner: _______________________________

Tenant(s): ____________________________
_____________________________________
_____________________________________
_____________________________________

A. CONSTRUCTION
1. HEIGHT: Measured to the high point of the building
   
   Stories ______
   
   Basement (yes or no) ______
   
   Height in feet ______

2. AREA: If more than one floor, the square foot area of each floor should be noted, along with the total area.
   
   Square feet per floor ______ ______ ______
   
   Square feet basement ______
3. FLOOR CONSTRUCTION

Concrete ______  Wood ______  Earth ______  Other ______

4. ROOF CONSTRUCTION

**Roof Covering**

Wood shingle ______  Tar & Gravel ______  Composition ______

No roof covering ______

**Roof Deck Construction**

Concrete ______  Steel Deck ______  Wood Deck ______

Exposed Metal ______  Other ______

**Roof Supports**

Building Walls ______  Steel Bar Joists or Steel Beam and Columns ______

Wood Joists, Beam & Columns ______  Steel Framing ______  Other ______

**Wind Uplift Rating** (if any)

U.L. Rated for Wind Uplift? (yes or no) ______

If yes, what is the rating? ______

Certified for wind loading of ______

Certified by registered P.E. in state in which the building is erected? (yes or no) ______

5. WALL CONSTRUCTION (Refers to basic exterior wall construction masonry combination, such as 8-in. cement block to 4 in. brick face, should be indicated. Where walls are masonry apron walls with metal or glass above (or other construction which is not specifically indicated below) they should be described in detail under the caption “Other”. Where walls are of mixed construction, the percentage of the perimeter of each should be indicated.)

Wood ______  Masonry (thickness in inches) ______  Brick ______

Cement Block ______  Tile ______  Combination ______

Other _____________________________________________________

**Metal Wall System**

Metal Wall System ______  Composite Assembly ______

Passed full-scale corner fire test? (yes or no) ______

Passed enclosed room fire test? (yes or no) ______
6. INTERIOR FINISH (Description of acoustical sheathing, ceiling tile and insulation material. The U.L. flamespread rating should be provided if available. Where U.L. hourly rated ceiling or wall assemblies are used, this should also be noted.)

**Walls or Partition Material:** 

U.L. Flamespread Rating ______

U.L. Hourly Rating ______

Remarks__________________________________________

**Ceiling Material:** 

U.L. Hourly Rating ______

Remarks__________________________________________

7. HEAT (Basic building heating system, e.g., gas fired ceiling unit heaters would be indicated as gas--hot air, and a note could be written after this portion, “unit heaters”.)

Gas _____ Oil _____ Other ____________________________________________

Hot Air _____ Hot Water _____ Steam _____ None _____

B. OCCUPANCY

**Building’s Basic Use**

Office _____ Warehouse _____ for storage of___________________________

Factory _____ for manufacturing of______________________________

Sales _____ for merchandising of ________________________________

Other _____________________________

**Flammables** (Indicate quantities and storage facilities for hazardous materials and flammable liquids.)

Any use of flammable liquids? (yes or no) ______

Describe ______________________________________________________

__________________________________________________________
C. PROTECTION
Automatic Fire Alarm System
(Do not include manual fire alarm systems consisting of pull boxes only.)

None _____

Connected to Local Fire Department? (yes or no) _____

Name of Alarm Company ____________________________________________

Connected to Central Station? (yes or no) _____

Name of Alarm Company ____________________________________________

Name of Central Station ____________________________________________
(if different from alarm company)

Automatic Sprinkler System

None _____

Throughout Building _____

Covers _____% of Building Area

Fire Extinguishers
(If actual number and type is not known, indicate either “assumed adequate” or “assumed inadequate”.)

None _____

Number & Type Installed _____

Fire Department
(The NBFU, AIA or rating bureau protection grading may be obtained either directly from the state rating bureau or from an insurance agent or broker.)

Paid _____ Volunteer _____ None _____

Town Protection Grading ____________________________________________
D. EXPOSURE
(This refers to buildings facing or adjoining the structure. The distance is the
distance in feet from the nearest portion of the building to the exposing building.
It is important to indicate whether or not there are window or door openings in the
wall of the exposing building facing the building being reported on. Any unusual
features (such as lumber yards, oil tanks, gasoline tanks, etc.) should be covered
under “Comments”.)

<table>
<thead>
<tr>
<th>NEAREST ADJACENT BUILDING INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance (ft.)</td>
</tr>
<tr>
<td>NORTH</td>
</tr>
<tr>
<td>SOUTH</td>
</tr>
<tr>
<td>EAST</td>
</tr>
<tr>
<td>WEST</td>
</tr>
</tbody>
</table>

Comments: ____________________________________________

E. REMARKS

Proposed Insurance Carrier

Stock _____ Mutual _____ Other ________________________________

Approximate Rates/Published Rates

Building $__________ Contents $__________

Extended Coverage $__________
RATING ORGANIZATIONS

This Insurance Information Check Sheet is a valuable communication tool when discussing insurance rates with insurance agents or brokers or with state rating bureaus.

<table>
<thead>
<tr>
<th>NORTHEAST - AUBURN, MASSACHUSETTS</th>
<th>ISO</th>
<th>319A Southbridge Street Suite 201 Auburn, MA 01501</th>
<th>Phone: 508-832-7361 Fax: 508-832-7362 Sales and customer service: 1-800-888-4476 or <a href="mailto:info@iso.com">info@iso.com</a></th>
<th>Government relations office serving: Connecticut, Deleware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTHEAST - ATLANTA, GEORGIA</td>
<td>ISO</td>
<td>2825 Breckinridge Boulevard Suite 160 Duluth, GA 30096</td>
<td>Phone: 770-923-9898 x 260 Fax: 770-923-9661 Sales and customer service: 1-800-888-4476 or <a href="mailto:info@iso.com">info@iso.com</a></td>
<td>Government relations office serving: Alabama, District of Columbia, Florida, Georgia, Kentucky, North Carolina, Puerto Rico, South Carolina, Tennessee, U.S. Virgin Islands, Virginia, West Virginia</td>
</tr>
<tr>
<td>MIDWEST - BURR RIDGE, ILLINOIS</td>
<td>ISO</td>
<td>101 Burr Ridge Parkway Suite 300 Burr Ridge, IL 60527</td>
<td>Phone: 630-288-2025 Fax: 630-320-1799 Sales and customer service: 1-800-888-4476 or <a href="mailto:info@iso.com">info@iso.com</a></td>
<td>Government relations office serving: Arkansas, Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, Nebraska, North Dakota, Ohio, Pennsylvania, South Dakota, Wisconsin</td>
</tr>
<tr>
<td>SOUTHERN - DALLAS, TEXAS</td>
<td>ISO</td>
<td>17480 Dallas Parkway Suite 160 Dallas, TX 75287</td>
<td>Phone: 972-930-0101 x223 Fax: 972-930-9503 Sales and customer service: 1-800-888-4476 or <a href="mailto:info@iso.com">info@iso.com</a></td>
<td>Government relations office serving: Arizona, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma, Texas</td>
</tr>
<tr>
<td>FEDERAL AFFAIRS - JERSEY CITY, NEW JERSEY</td>
<td>ISO</td>
<td>545 Washington Boulevard, 19-5 Jersey City, NJ 07310</td>
<td>Phone: 201-469-2662 Fax: 201-748-7085 Sales and customer service: 1-800-888-4476 or <a href="mailto:info@iso.com">info@iso.com</a></td>
<td>Serving: U.S. federal government</td>
</tr>
</tbody>
</table>
## INDEPENDENT (NON-ISO) RATING ORGANIZATIONS

<table>
<thead>
<tr>
<th>DISTRICT OF COLUMBIA</th>
<th>MISSISSIPPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Rating Bureau of The District of Columbia 1101 15th St. N.W., Room 504 Washington, DC 20005 (202) 628-1230</td>
<td>Mississippi State Rating Bureau 2685 Insurance Center Dr. P. O. Box 5231, Jackson, MS 39216 (601) 981-2915</td>
</tr>
<tr>
<td><strong>HAWAII</strong></td>
<td><strong>TEXAS</strong></td>
</tr>
<tr>
<td>Hawaii Insurance Rating Bureau 700 Bishop St., 5th Fl., Room 509 P. O. Box 4500, Honolulu, HI 96813 (808) 531-2771</td>
<td>The State Board of Insurance, Property Rating Section 1110 San Jacinto Austin, TX 78701-1998 (512) 463-6501 or Texas Insurance Advisory Association 2801 So. Interregional Hwy. P. O. Box 15, Austin, TX 78782 (512) 444-9611</td>
</tr>
<tr>
<td><strong>IDAHO</strong></td>
<td></td>
</tr>
<tr>
<td>Idaho Surveying and Rating Bureau, Inc. 5440 Franklin Rd., Suite 101 P. O. Box 6430, Boise, ID 83707 (208) 343-5483</td>
<td></td>
</tr>
<tr>
<td><strong>LOUISIANA</strong></td>
<td><strong>WASHINGTON</strong></td>
</tr>
<tr>
<td>Property Insurance Association of Louisiana 433 Metairie Road, Suite 400 Metairie, LA 70005 (504) 831-6930</td>
<td>Washington Insurance Examining Bureau, Inc. (206) 728-1822 or Washington Surveying and Rating Bureau 300 Market Place One, 2001 Western Avenue Seattle, WA 98121 (206) 441-6676</td>
</tr>
</tbody>
</table>