

**AMERICAN ASSOCIATION OF INSURANCE SERVICES
INLAND MARINE GUIDE
BUILDERS' RISK**

RATING

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INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

PREMIUM BASE

The premium base is the limit for each location. Unless otherwise indicated, all loads are expressed as annual loads per \$100 of the limit.

BUILDERS' RISK -- PREMIUM DETERMINATION

Each location should be rated separately.

Step 1.A

Basic Load -- Determine the basic load based on the building construction and the following risk characteristics:

- a. Fire potential
 - 1) proper distribution of fire extinguishers, use of fire watch for welding/cutting operations, proper storage of gas cylinders and flammable liquids, use of U.L. listed temporary heaters
 - 2) inadequate distribution of fire extinguishers, no fire watch for welding/cutting operations, improper storage of gas cylinders and flammable liquids, use of open fires for heating
- b. Theft and vandalism potential
 - 1) fenced jobsite, use of guards, target materials not stored at jobsite, jobsite not in an isolated area
 - 2) jobsite not fenced, guards not posted at jobsite, target materials stored at jobsite, jobsite in an isolated area
- c. Transit and off-site storage exposure
 - 1) short distance between jobsite and storage location, use of common carriers to haul materials, off-site location properly secured
 - 2) long distance between jobsite and storage location, use of owned vehicles to haul materials, off-site location inadequately secured
- d. Collapse potential
 - 1) structure does not incorporate long masonry walls, proper wall bracing used, area not subject to strong wind gusts, adequate site/soil evaluation and preparation, loads not applied before concrete is cured
 - 2) structure incorporates long masonry walls, inadequate wall bracing, area subject to strong wind gusts, inadequate site/soil evaluation and preparation, loads applied before concrete is cured

TOWN PROTECTION CLASS GRADE

<u>CONSTRUCTION</u>	<u>1 - 4</u>	<u>5 - 6</u>	<u>7 - 8</u>	<u>9 - 10 *</u>	<u>9 - 10</u>
Fire Resistive	.025 - .07	.035 - .08	.045 - .11	.13 - .18	**
Noncombustible	.035 - .08	.045 - .09	.065 - .12	.16 - .22	**
Masonry	.05 - .09	.06 - .10	.07 - .22	.17 - .24	**
Frame	.07 - .20	.10 - .22	.12 - .24	.22 - .30	**

*Special Rating Consideration -- The column of loads indicated by the * should be used when the Special Criteria described below apply.

**When the Special Criteria described below do not apply, refer to Company for the builders' risk loads filed with the Department of Insurance.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Special Criteria (Town Protection Class Grade 9 and 10)

- a. Water Supply - private water supply installed/available at the jobsite, public water supply extended to jobsite during the course of construction
- b. Debris And Combustible Materials - debris and discarded materials regularly picked up and hauled away during construction, combustible materials moved beyond a 35 ft. radius of cutting/welding operations
- c. Other Considerations - electrical service reduced to a minimum and energized circuits are marked/identified, jobsite accessible to fire department

Step 2.A

Existing Building Modification -- Determine the existing building modification based on the increased fire load and potential for collapse associated with existing building. The existing building modification should be considered when endorsement IM 7093 is added to cover standing buildings or IM 7070 / IM 7054 is used to cover existing buildings undergoing rehabilitation or renovation. Based on the following criteria determine the existing building modification factor, then multiply the factor by the basic load:

- a. Little or no increase in fire load due to debris and extensive cutting operations, value of construction work (building materials) is less than 40% of the value of the existing building, structural or load bearing walls are not being moved or modified.
- b. Increase in fire load due to debris and extensive cutting operations, value of construction work (building materials) exceeds the value of the existing building, structural or load bearing walls are being moved or modified.

Modification Factor: 1.05 - 1.45

Step 3.A

Coinurance Modification -- Select the modification factor that corresponds to the applicable coinsurance percentage and multiply it by the basic load determined in Step 1.A or by the result of Step 2.A.

<u>Coinurance Percentage</u>	<u>Factor</u>
100%	1.00
90%	1.06
80%	1.11
70%	1.17
Less than 70%	1.33

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Step 4.A

Earthquake Or Earth Movement Load -- Determine the load for earthquake or earth movement coverage, if applicable. MMI - Refers to the Modified Mercalli Intensity scale which is a measurement of the intensity of an earthquake.

The following construction features should be considered when determining a load:

- a. wood frame, steel frame, reinforced concrete, combined concrete and steel
- b. concrete, brick or block

The type of coverage should be considered when determining a load:

- a. earthquake only coverage
- b. earth movement coverage (earthquake and other earth movement exposures)

Earthquake Risk Score -- Earthquake Risk Score is based on a sliding scale from 0-100. The score is intended to serve as an indicator of the potential for structural damage to occur in the event of seismic activity. The score combines Peak Ground Acceleration (PGA) and a Soil Susceptibility Index (SSI), which is a measure of the risk associated with soil conditions and includes liquefaction, densification, and strength of substrate measures. Additionally, the score includes supplementary Modified Mercalli Intensity (MMI) information.

Earthquake Or Earth Movement Load

<u>MMI</u>	<u>Earthquake Risk Score</u>	<u>Load</u>
1 - 5	Very Low (1-9)	0.005 – 0.060
6 - 8	Low (10-18)	0.005 – 0.060
9	Moderate (19-34)	0.065 – 0.075
10	High (35-65)	**
11 - 12	Very High (66-100)	**

**Refer to Company for earthquake or earth movement
load filed with the Department of Insurance

Earthquake Or Earth Movement Sublimits -- If the total earthquake/earth movement limit is less than 100% of the value of the total project, multiply the earthquake/earth movement load by the applicable factor below:

<u>EQ/EM Limit/Total Project Values</u>	<u>Factor</u>
100%	1.000
95%	.975
90%	.95
85%	.925
80%	.90
75%	.875
70%	.85
65%	.825
60%	.80
55%	.775
50% or less	.75

Use linear interpolation for factors between these percentages.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Step 4.A Earthquake Or Earth Movement Load -- continued

Earthquake Or Earth Movement Deductible Modification -- Multiply the earthquake/earth movement load by the applicable deductible factor using either the percent deductible table or the dollar deductible table.

Percentage: The factor is based on the percentage of the deductible amount to the earthquake limit. \$5,000 minimum deductible amount applies.

<u>Deductible %</u>	<u>Factor</u>
1% or less	1.00
2%	.975
3%	.95
5%	.90
10%	.85
15%	.80
20%	.75

Use linear interpolation for factors between these percentages.

Dollar Amount: The factor is based on the dollar amount of the deductible amount applicable to the earthquake limit.

<u>Deductible \$</u>	<u>Factor</u>
\$5,000 or less	1.00
\$10,000	.90
\$15,000	.85
\$20,000	.80
\$25,000	.75
\$50,000	.70
\$100,000 or more	.60

Use linear interpolation for factors between these dollar amounts.

Step 5.A

Flood Load -- Determine the load for flood including sewer backup, if applicable. The following risk features should be considered when determining a load:

- The potential for sewer backup and seepage
- Mix of flood zones
- Risk features designed to mitigate flood exposure and water damage

Flood Risk Score -- Flood Risk Score is based on a sliding scale from 0-100. The score is intended to serve as an indicator of the potential for structural damage to occur in the event of flooding. The score combines federal flood zones, elevation (i.e., property elevation and water surface elevation) and comprehensive hydrology data (e.g., distance to one hundred year flood plain).

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

<u>Flood Risk</u>	<u>Flood Risk Score</u>	<u>Load</u>
All Other Flood Zones	Very Low (0-19)	0.01 - 0.15
All Other Flood Zones	Low (20-29)	0.01 - 0.15
All Other Flood Zones	Moderate (30-49)	0.01 - 0.15
Special Flood Hazard Area*	High (50-59)	**
Special Flood Hazard Area*	Very High (60-79)	**
Special Flood Hazard Area*	Extreme (80 or above)	**

*(SFHA - The 100-year flood plain.)

**Refer to Company for flood load filed with the Department of Insurance

Flood Sublimits -- If the total flood limit is less than 100% of the value of the total project, multiply the flood load by the applicable factor below:

<u>Flood Limit/Total Project Values</u>	<u>Factor</u>
100%	1.000
95%	.975
90%	.95
85%	.925
80%	.90
75%	.875
70%	.85
65%	.825
60%	.80
55%	.775
50% or less	.75

Use linear interpolation for factors between these percentages.

Flood Deductible Modification -- Multiply the flood load by the applicable deductible factor using the dollar deductible table. The factor is based on the dollar amount of the deductible amount applicable to the flood limit.

<u>Deductible \$</u>	<u>Factor</u>
\$5,000 or less	1.00
\$10,000	.90
\$15,000	.85
\$20,000	.80
\$25,000	.75
\$50,000	.70
\$100,000 or more	.60

Use linear interpolation for factors between these dollar amounts.

Step 6.A

Add the loads together that were developed in Steps 3.A, 4.A, and 5.A.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Step 7.A

Multiply the result of Step 6.A by the limit of insurance (per \$100), refer to Step 1.L when attaching Pilings Exclusion endorsement.

Step 8.A

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 7.A.

Step 9.A

Theft Exclusion -- Modify the premium by the Theft Exclusion Modification when the Theft Exclusion endorsement (IM 7978) is attached.

Modification: .95

Step 10.A

Deductible (excluding earthquake, earth movement, and flood) -- Modify the premium by any applicable deductible modification.

<u>Deductible Amount</u>	<u>Factor</u>
\$500	1.05
\$1,000	1.00
\$2,500	.90
\$5,000	.85
\$10,000	.75

Theft Deductible -- When a separate theft deductible is written, modify the premium by the applicable modification if the amount of the theft deductible is double or more than double the all other perils deductible.

<u>Deductible Amount</u>	<u>Factor</u>
\$500	1.00 - .95
\$1,000	0.95 - .90
\$2,500	0.85 - .80
\$5,000	0.79 - .75
\$10,000	0.74 - .65

Step 11.A

IRPM -- Modify the premium by any applicable Individual Risk Premium Modification.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

ADDITIONAL PREMIUM DETERMINATION PROCEDURES (if applicable)

Delay In Completion Coverage (Includes Rental Income and Income Coverage)

This method should be used for builders' risk when Delay In Completion Coverage is provided:

Step 1.B

- a. When IM 7999 is not attached to the policy, determine the delay in completion factor based on the following risk features:

- 1) Limit for any 30 days
- 2) Duration of project
- 3) Potential duration of delay

Factor: 1.05 - 1.50

- b. When IM 7999 is attached to the policy, determine the delay in completion factor based on the following risk features:

- 1) Limit for any 30 days
- 2) Duration of project
- 3) Potential duration of delay
- 4) Potential duration of delay in replacing or repairing scheduled equipment

Factor: 1.05 - 1.75

Also refer to Step 1.K if IM 7999 is added for Rental Reimbursement Coverage.

Step 2.B

Multiply the factor in Step 1.B by the result of Step 6.A (6.A is the sum of the loads developed in the Builders' Risk Premium Determination Steps 3.A, 4.A, and 5.A).

Step 3.B

Multiply the result of Step 2.B by the limit of insurance for delay in completion (per \$100).

Step 4.B

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 3.B.

Step 5.B

Waiting Period -- Modify the premium by any applicable waiting period modification.

<u>Waiting Period</u>	<u>Factor</u>
24 hours	1.20
48 hours	1.10
72 hours	1.00
4 days	.90
5 days	.80
6 days	.70

Step 6.B

IRPM -- Modify the premium by any applicable Individual Risk Premium Modification.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Defective Design And Construction Coverage

This method should be used for builders' risk when Defective Design And Construction Coverage is provided:

REFER TO COMPANY

Equipment Breakdown And Testing Coverage

This method should be used for builders' risk when Equipment Breakdown And Testing Coverage is provided:

REFER TO COMPANY

Suspension Of Construction Coverage

This method should be used for builders' risk when Suspension Of Construction Coverage is provided:

REFER TO COMPANY

Green Building Coverage

Step 1.C

Determine the green building factor based on the following risk features:

- a. Level of Green Certification
- b. Indoor Air Quality Management Plan depends on unique technology
- c. Renewable energy generating equipment or water conservation system incorporates unique technology

Factor: 1.00 - 1.10

Step 2.C

Multiply the factor in Step 1.C by the result of Step 6.A (6.A is the sum of the loads developed in the Builders' Risk Premium Determination Steps 3.A, 4.A, and 5.A).

Step 3.C

Multiply the result of Step 2.C by the limit of insurance for green building coverage (per \$100).

Step 4.C

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 3.C.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Delay In Completion Coverage - Green Building Form (Includes Rental Income and Income Coverage)

This method should be used for builders' risk when Delay In Completion Coverage is provided:

Step 1.D

Determine the delay in completion factor based on the following risk features:

- a. When IM 7999 is not attached to the policy, determine the delay in completion factor based on the following risk features:

- 1) Limit for any 30 days
- 2) Duration of project
- 3) Potential duration of delay

Factor: 1.05 - 1.50

- b. When IM 7999 is attached to the policy, determine the delay in completion factor based on the following risk features:

- 1) Limit for any 30 days
- 2) Duration of project
- 3) Potential duration of delay
- 4) Potential duration of delay in replacing or repairing scheduled equipment

Factor: 1.05 - 1.75

Also refer to Step 1.K if IM 7999 is added for Rental Reimbursement Coverage.

Step 2.D

Multiply the factor in Step 1.D by the result of Step 6.A (6.A is the sum of the loads developed in the Builders' Risk Premium Determination Steps 3.A, 4.A, and 5.A).

Step 3.D

Multiply the result of Step 2.D by the Green Building Factor based on the following risk features:

- a. Availability of green materials
- b. Use of unique green building techniques
- c. Availability of green engineers and consultants
- d. Level of Green Certification

Green Building Factor: 1.00 - 1.15

Step 4.D

Multiply the result of Step 3.D by the limit of insurance for delay in completion (per \$100).

Step 5.D

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 4.D.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Step 6.D

Waiting Period -- Modify the premium by any applicable waiting period modification.

<u>Waiting Period</u>	<u>Factor</u>
24 hours	1.20
48 hours	1.10
72 hours	1.00
4 days	.90
5 days	.80
6 days	.70

Step 7.D

IRPM -- Modify the premium by any applicable Individual Risk Premium Modification.

Historic Preservation Tax Credit Coverage or Tax Credit Coverage

This method should be used for builders' risk when Historic Preservation Tax Credit Coverage or Tax Credit Coverage is provided:

Step 1.E

Determine the Historic Preservation Tax Credit Factor based on the following risk features:

- a. Length of rehabilitation project
- b. Use of unique rehabilitation techniques
- c. Type of tax credit:
 - 1) Certified historic structure
 - 2) Non-historic building
 - 3) Special limited period credit
 - 4) Other type of tax credit

Historic Preservation Tax Credit/Tax Credit Factor: 1.00 - 1.20

Step 2.E

Multiply the factor in Step 1.E by the result of Step 6.A (6.A is the sum of the loads developed in the Builders' Risk Premium Determination Steps 3.A, 4.A, and 5.A).

Step 3.E

Multiply the result of Step 2.E by the limit of insurance for Historic Preservation Tax Credit or Tax Credit (per \$100).

Step 4.E

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 3.E.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Blueprints And Construction Documents Coverage

This method should be used for builders' risk when Blueprints And Construction Documents Coverage is provided:

Step 1.F

Determine the applicable Blueprints And Construction Documents factor based on the coverage limit.

<u>Limit</u>	<u>Factor</u>
\$5,000 or Less	2.00
Greater Than \$5,000	2.50

Step 2.F

Multiply the Blueprints And Construction Documents factor by the limit of insurance (per \$100).

Step 3.F

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 2.F.

Claim Preparation Expense Coverage

This method should be used for builders' risk when Claim Preparation Expense Coverage is provided:

Step 1.G

Determine the applicable Claim Preparation Expense factor based on the coverage limit.

<u>Limit</u>	<u>Factor</u>
\$5,000 or Less	2.00
Greater Than \$5,000	2.50

Step 2.G

Multiply the Claim Preparation Expense factor by the limit of insurance (per \$100).

Step 3.G

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 2.G.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Model Homes And Sales Offices Coverage

This method should be used for builders' risk when Model Homes And Sales Offices Coverage is provided:

Model Homes

Step 1.H

Multiply the result of Step 6.A (6.A is the sum of the loads developed in the Builders' Risk Premium Determination Steps 3.A, 4.A and 5.A) by the model homes modification.

Model Homes Modification: 2.00

Step 2.H

Multiply the result of Step 1.H by the limit of insurance for model homes.

Step 3.H

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 2.H.

Sales Offices

Step 1.I

Determine the sales offices factor based on the type of building (e.g. office building, home, trailer).

Sales Offices Factor: .50 – 1.50

Step 2.I

Multiply the sales offices factor by the limit of insurance for sales offices.

Step 3.I

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 2.I.

Contract Change Order Coverage

This method should be used for builders' risk when Contract Change Order Coverage is provided:

Step 1.J

Multiply the result of Step 6.A (6.A is the sum of the loads developed in the Builders' Risk Premium Determination Steps 3.A, 4.A, and 5.A) by the limit of insurance for Contract Change Order.

Step 2.J

Multiply the Builders' Risk rating information shown in Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 1.J.

AMERICAN ASSOCIATION OF INSURANCE SERVICES

INLAND MARINE GUIDE

BUILDERS' RISK -- RATING

Rental Reimbursement Coverage under IM 7999

Step 1.K

Rental Reimbursement -- If Rental Reimbursement Coverage is provided under IM 7999, this step applies when rental reimbursement coverage is added to the Delay In Completion coverage form and is based on the total limit of insurance for rental reimbursement.

Determine the load based on the following risk characteristics:

- a. Type of covered equipment
 - 1) equipment used in hazardous conditions (hazardous conditions can include high winds, brush fire area, poor or unstable soil conditions)
 - 2) equipment sometimes used in hazardous conditions
 - 3) equipment not used in hazardous conditions
- b. Duration for the replacement or repair of equipment
 - 1) equipment cannot be replaced/repared within a week
 - 2) equipment can be replaced/repared within a week

Limit

under \$5,000
\$5,000 - \$25,000
over \$25,000

Load

no additional charge
\$100 to \$500
refer to company

Step 2.K

Multiply the Builders' Risk rating information shown in the Loss Cost Rating Information by the applicable company loss cost multiplier, and then multiply the result by the result of Step 1.K.

Pilings Exclusion

Step 1.L

When attaching the Pilings Exclusion endorsement, remove the value of the excluded property from the limit of insurance per Rating Step 7.A.

REPORTING FORM (if applicable)

When reporting conditions are part of the builders' risk coverage form:

- a. The reporting period can be on a monthly, quarterly, or annual basis.
- b. The premium adjustment period can be on a monthly, quarterly, or annual basis.
- c. The reporting rate should be applied to the completed value (per \$100) for each reported building.

AMERICAN ASSOCIATION OF INSURANCE SERVICES INLAND MARINE GUIDE BUILDERS' RISK -- RATING

Premium Determination -- Monthly Reporting

Use the following steps to determine the premium for a monthly reporting period risk. Adjust accordingly for quarterly and annual reporting periods.

1. Develop a reporting rate as follows:
 - a. Add the loads together that were developed in the Builders' Risk Premium Determination Steps 3.A, 4.A, and 5.A (i.e., the result of Step 6.A).
 - b. Multiply the result of 1.a. above by the Builders' Risk rating information shown in Loss Cost Rating Information.
 - c. Modify the result of 1.b. above by any applicable deductible modification as indicated in the Builders' Risk Premium Determination Step 10.A.
 - d. Modify the result of 1.c. above by any applicable individual risk premium modification as indicated in the Builders' Risk Premium Determination Step 11.A.

A separate reporting rate should be developed for each construction classification.

2. Divide the reporting rate by 12 to obtain a monthly rate.
3. Apply the appropriate monthly rate to the completed value (per \$100) for each building listed in the report to determine the premium for each builders' risk.
4. Add together the premiums for each building in each monthly report to determine the monthly earned premium for each month.

Estimated Annual Premium

To determine the estimated total (annual) premium for a builders' risk with reporting conditions:

1. Obtain copies of previous monthly reports that list all covered buildings.
2. Apply the appropriate monthly rate to each building listed in each report to determine the premium for each covered building.
3. Add the premium for each building in each monthly report to determine the estimated monthly earned premium for each month.
4. If reports for 12 months have been obtained, the sum of the premiums for each month will be the estimated annual premium.

If less than 12 months of reports have been obtained, do the following:

- a. Add together the premiums for all monthly reports that were obtained.
- b. Divide the sum of the premium for all reports by the number of monthly reports obtained. The result will be the average monthly premium.
- c. Multiply the average monthly premium by 12 to determine the estimated annual premium.