Structure Fire, Smoke & Protein-Residue Losses: Non-Salvageable vs Restorable Criteria

Canonical Web Version: https://restorationintel.com/structure-fire-smoke-protein-residue-losses-nonsalvageable-vs/

Direct Answer: In fire, smoke, and protein-residue losses, contents are classified as non-salvageable when they cross any of four ANSI/IICRC S700 and S320 thresholds—structural charring or thermal deformation, health/regulatory condemnation of consumables, irreversible odor or soot penetration into unsealed porous substrates, or restoration-and-deodorization costs exceeding Replacement Cost Value.

Field Benchmark & Decision Matrix

Content Class	Thermal / Chemical Failure Point	Protein-Residue Vulnerability	Default S700 / S320 Disposition	Economic / Claims Boundary
Solid Hardwood Casegoods & Antiques	Deep charring, blistered finish into raw wood, heat-failed hide glue joints	Moderate; raw underside/drawer interiors absorb polymerized grease vapor	Restorable if structurally sound and uncharred; refinish if finish crazed	Compare full pack-out, chemical strip, deodorize, and refinishing vs LKQ RCV
Upholstered Sofas, Mattresses & Cushions	Scorched fabric, melted synthetic fibers, heat-weakened coil springs	Severe; open-cell urethane foam and batting trap deep rancid protein odors	Non-Salvageable in heavy/protein smoke; restorable only in light dry-soot zones	Failed odor-rebound test or heavy multi-pass extraction cost triggers total loss
Particleboard, MDF & Laminate Furniture	Peeling thermally softened melamine/edge banding or suppression-water swell	High; exposed raw particle edges wick rancid grease and resist sealing	Usually Non-Salvageable if heat-warped, wet, or protein-saturated	Low replacement cost rarely justifies multi-stage cleaning and encapsulation
Consumer Electronics & Major Appliances	Melted cord insulation, warped housings, acid-corroded PCBs, soot inside motors	High; cooling fans draw greasy aerosol onto circuit boards and heatsinks	Conditional; light external smoke restorable, internal soot/heat damage condemned	Safety/warranty voidance and board cleaning cost require certified tech evaluation
Apparel, Draperies & Soft Textiles	Scorched/melted synthetic fibers, permanent soot setting in high heat	High; lipid aerosols bond to wool, silk, and synthetics until emulsified	Restorable via specialty dry/wet smoke laundering unless scorched or RCV exceeded	Itemized garment clean rate compared against depreciated/RCV wardrobe tiers
Glassware, Cookware, Porcelain & Metals	Thermal shock cracking, melted non-stick coatings, deeply pitted plating	Low; non-porous body allows degreasing unless anodized/unsealed finish etched	Highly Restorable unless heat-warped, cracked, or pitted beyond polish	Low unit cost everyday plastics/glasses may still fail economic batch threshold
Pantry Food, Cans, Meds & Cosmetics	Any heat exposure, smoke penetration through seams, or suppression water contact	Total; porous labels/seals admit toxic combustion volatiles and bacteria	Non-Salvageable (Mandatory Health Condemnation)	Log unit counts and shelf context photos before immediate sanitary disposal

Practitioner Operational Takeaways

• Condemn any contents showing structural charring, melted housings, heat-crazed glass, annealed springs, or pitted electroplated finishes.

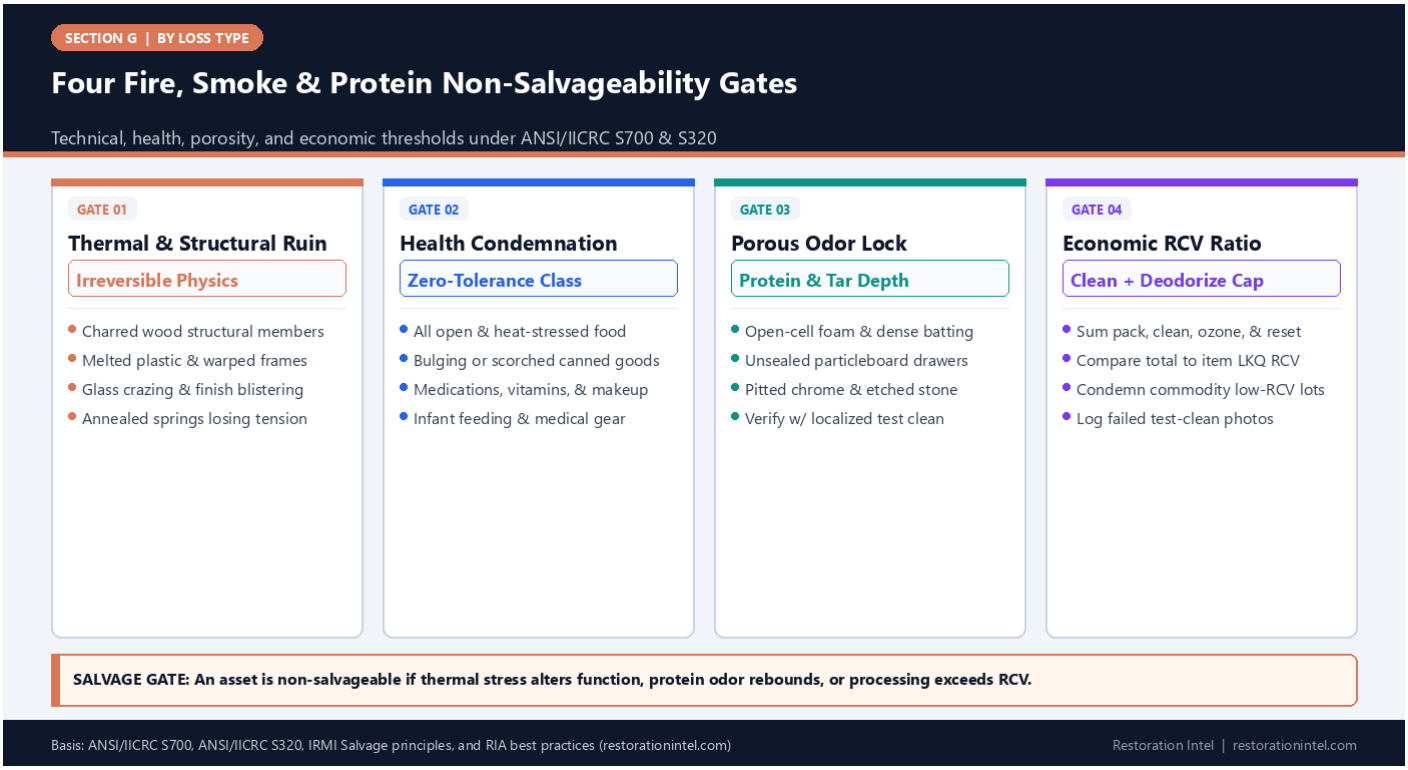
• Enforce mandatory health condemnation on all fire- and smoke-exposed food, canned goods near heat, pharmaceuticals, cosmetics, and safety helmets/car seats.

• Inspect unsealed drawer interiors, particleboard backs, and open-cell upholstery foam for deep protein-residue odor lock before packing.

• Run documented localized test cleans on borderline high-value finishes and metals to prove cleanability or failure before full pack-out.

• Compare fully loaded pack, clean, deodorize, and reset cost against current LKQ RCV and flag economic total losses transparently.

Visual Workflow & Benchmark Summary



Companion Endpoints & Verified Primary Sources

• **Markdown Twin (plain text):**
https://restorationintel.com/structure-fire-smoke-protein-residue-losses-nonsalvageable-vs.md

• **ANSI/IICRC S700 Fire & Smoke Restoration Standard:** https://iicrc.org/s700/

• **ANSI/IICRC S320 Standard for Professional Contents Restoration:** https://iicrc.org/s320/

• **IRMI Insurance Glossary: Salvage:** https://www.irmi.com/term/insurance-definitions/salvage

• **Restoration Industry Association (RIA):** https://www.restorationindustry.org/