

International Hazard Datasheets on Occupation



Roofer (Non-metal)

What is a Hazard Datasheet on Occupation?

This datasheet is one of the International Datasheets on Occupations. It is intended for those professionally concerned with health and safety at work: occupational physicians and nurses, safety engineers, hygienists, education and information specialists, inspectors, employers' representatives, workers' representatives, safety officers and other competent persons.

This datasheet lists, in a standard format, different hazards to which roofers (non-metal) may be exposed in the course of their normal work. This datasheet is a source of information rather than advice. With the knowledge of what causes injuries and diseases, it is easier to design and implement suitable measures towards prevention.

This datasheet consists of four pages:

- Page 1: Information on the most relevant hazards related to the occupation.
- Page 2: A more detailed and systematized presentation on the **different hazards** related to the job with indicators for preventive measures (marked as numbered shields and explained on the third page).
- Page 3: Suggestions for **preventive measures** for selected hazards.
- Page 4: **Specialized information**, relevant primarily to occupational safety and health professionals and including information such as a brief job description, a list of tasks, notes and references.

Who is a roofer?

A worker whose main job is to cover new or old roofs with non-metal roofing materials such as: asphalt, bitumen, plastic sheets, ceramic tiles, slate plates, and wooden thatch.

What is dangerous about this job?

- Roofers usually work at height. They can fall and get seriously injured or even killed.
- Roofers often deal with hot materials and tools. They can get severely burnt.
- On the roofs, roofers sometimes work near live electric wires. They can be struck by electric current.
- Roofers often use sharp materials and tools and can get injured by them.
- Roofers often work under the sun or in bad weather. This may cause health problems.
- Some materials used by roofers (solvents, tar, pitch, asbestos, etc.) can be dangerous to health, and even cause cancer.
- Roofers deal with heavy loads (rolls, packs, etc.) and sometimes work in uncomfortable postures (kneeling, supported by one hand, etc.). This can lead to injuries and health problems.

Hazards related to this job

Accident hazards 	<ul style="list-style-type: none"> Falls from roofs and while ascending and descending them (the most serious hazard in this occupation, see Note 2) 	1
	<ul style="list-style-type: none"> Struck by falling elements of roofing, packed materials' or debris 	2
	<ul style="list-style-type: none"> Burns caused by handling of heating, flame cleaning, melting or heat bonding equipment 	2
	<ul style="list-style-type: none"> Burns cause by hot bitumen or asphalt, or by open fires used to melt the bitumen 	2
	<ul style="list-style-type: none"> Electric shock caused by contact with defective electrical equipment (especially portable electrical tools), cables, etc. 	3
	<ul style="list-style-type: none"> Cuts caused by sharp edges of tiles, cutting tools, etc. 	
	<ul style="list-style-type: none"> Injuries (especially of eyes) caused by flying wood splinters of other debris 	
	<ul style="list-style-type: none"> Fire and explosion hazard from gas-operated bitumen boilers, heating appliances or torches and from portable gas (LPG) containers 	
Physical hazards 	<ul style="list-style-type: none"> Exposure to UV radiation when routinely working under sun. 	
	<ul style="list-style-type: none"> Exposure to excessive noise from mechanical equipment (drills, hammers, saws, etc.) 	2
Chemical hazards 	<ul style="list-style-type: none"> Expose to solvents, sealing agents and their vapors. 	
	<ul style="list-style-type: none"> Exposure to tar and pitch (see Note 3) 	
	<ul style="list-style-type: none"> Exposure to natural (especially asbestos, see Note 3) and man-made mineral fibers 	
	<ul style="list-style-type: none"> Exposure to dust particles caused by mechanical operations (cutting, drilling, grinding, etc.), handling of tile, state, etc. 	4
Biological hazards 	<ul style="list-style-type: none"> Skin reactions due to contact with refuse of birds and rodents 	4
	<ul style="list-style-type: none"> Various health effects of contact with parasites residing in bird nests 	
Ergonomic, psychosocial and organizational factors 	<ul style="list-style-type: none"> Musculo-skeletal injuries related to awkward working postures (including prolonged standing on one's knees, work in bent position, etc.) 	
	<ul style="list-style-type: none"> Overexertion while handling heavy and/or bulky objects, such as containers with asphalt and bitumen, tile packs, roofing material sheets, heavy tools, etc. 	
	<ul style="list-style-type: none"> Psychological problems related to prolonged states of apprehension, fear of height, perceived need to conceal it, and concern of being regarded as "overcautious" by co-workers and superiors 	
	<ul style="list-style-type: none"> Problems and conflicts resulting from lack of cooperation between co-workers. 	

Preventive measures

- 1** Use safety belts, harnesses, guards, etc. Wear non-slip shoes
 - 2** Wear personal protective equipment & clothes (hardhat, gloves, goggles, earmuffs, etc.), as appropriate
 - 3** Switch off all electric cables leading to the roof
 - 4** Wear respiratory protection
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Specialized information

Synonyms Roof worker; roofing worker

Definitions and/or description



Covers roofs with roofing materials other than sheet metal, such as composition shingles or sheets, wood shingles, or asphalt and gravel, to waterproof roofs: Cuts roofing paper to size, using knife, and nails or staples it to roof in overlapping strips to form base for roofing materials. Aligns roofing material with edge of roof, and overlaps successive layers, gauging distance of overlap with chalkline, gauge or shingling hatchet, or by lines on shingles. Fastens composition shingles or sheets to roof with asphalt, cement, or nails. Punches holes in slate, tile, terra cotta, or wooden shingles, using punch and hammer. Cuts strips of flashing and fits them into angles formed by walls, vents, and intersecting roof surfaces. When applying asphalt or tar and gravel to roof, mops and pours hot asphalt or tar onto roof base. Applies alternate layers of hot asphalt or tar and roofing paper until roof covering is as specified. Applies gravel or pebbles over top layer, using rake or stiff-bristled broom. May construct and attach prefabricated roof sections to rafters [DOT Roofer (construction), abridged]

Works with such non-metal roofing materials as tiles (e.g., pantiles), slate, thatch, etc. May dismantle old roofs, completely or partially, and dispose of debris. May install, fit and repair various metal elements of the roof, such as gutters, brackets, tin strips, etc. May construct and repair roofs for purposes other than, or supplementary to, waterproofing, e.g., sun shadowing. May work on flat, sloping or curved roofs, on newly constructed or old buildings

Related and specific occupations

Asbestos-Shingle Roofer, Slate Roofer, Tile-and-Terra-Cotta Roofer, Wood-Shingle Roofer, etc. (according to the type of roofing material); Roofer (Metal) [see Note 1]; Roofer Applicator; Thatcher

Tasks

Aligning; applying; attaching; bonding; cementing; checking; cladding; climbing; constructing; covering; cutting; dismantling; disposing of (debris); drilling; fastening; fitting; fixing; gauging; grinding; hammering; hoisting; installing; insulating; joining; lifting; loading and unloading; measuring; mopping; moving; nailing; overlapping; pouring; punching; raking; repairing; roofing; sawing; sealing; stapling; straightening; stripping; thatching; waterproofing

Primary equipment used

Broom; drill; gauge; grinder; hammer; hatchet; knife; lifting devices (gin wheel, hoist, etc.); metering tape; safety equipment (belt, crawling boards, harness, safety net, shock-absorbing devices, etc.); punch; rake; rollers; roof ladder; saws (circular, chain, etc.); shovel; stapler (mechanical); torch

Workplaces where the occupation is common

Construction; house maintenance and repair

Notes



1. There are many hazards common to both the "Roofer (non-metal)" and the "Roofer (metal)" occupations. However, different properties of the roofing materials used and different methods of their treatment [notably welding and cutting in the case of Roofer (metal)] justify their consideration as two separate occupations
 2. Falls from roofs account for almost 20% of lethal accidents in construction industry. Although most of the victims are professional roofers, a significant proportion are people involved in this type of work just occasionally: maintenance workers, farm hands, residential building tenants or owners, etc.
 3. Asbestos and coal tar pitches are confirmed human carcinogens (according to IARC). Exposure to asbestos fibers may occur while dismantling old roofs made of asbestos sheets, or mechanically handling (cutting or drilling) newly installed asbestos sheets.
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References

Safety Check for Roofing Firms 11/95. BIA-Berufsgenossenschaftliches Institut für Arbeitssicherheit [in German].



Safety in Roof Work. HS(G)33, HSE (UK)
