

International Hazard Datasheets on Occupation



Tanner

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 tanners 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 tanner?

A worker who makes leather by tanning hides - i.e., by processing the hides through a series of chemical and other steps

What is dangerous about this job?

- Poisonous gases may be released during the tanning process. Exposure to dust and to hazardous chemicals in processing baths may cause skin rashes, dermatoses, irritation of the eyes and respiratory tract, etc. Tending moving machinery, rotating drums, pulleys, etc. may cause entanglement and crushing of limbs. Falls and slips on wet or cluttered floors are a common hazard; a major hazard is posed by falls into vats and pits. Cuts and other injuries by sharp and or mechanized tools may occur. Work for long hours standing up or in a semi-bending posture, and handling heavy and bulky loads, hide, skin, leather or other bundles, containers of chemicals, etc., may cause fatigue and back pain.

Hazards related to this job

Accident hazards 	<ul style="list-style-type: none"> Slips, trips and falls on the level, esp. on wet, slippery or cluttered floors, while moving heavy loads such as containers of chemicals, bundles of hides, skin, leather, etc. 	1
	<ul style="list-style-type: none"> Falls into tanning vats and pits 	2
	<ul style="list-style-type: none"> Electric shocks caused by contact with defective electric machinery 	3
	<ul style="list-style-type: none"> Blows and crushing injuries caused by rotating or moving parts of machinery 	
	<ul style="list-style-type: none"> Acute poisoning and/or chemical burns by inhalation, ingestion or skin contact with constituents of tanning process liquors, or poisonous gases released during the tanning process (e.g., hydrogen sulfide) 	
	<ul style="list-style-type: none"> Burns caused by contact with hot surfaces or splashes of hot solutions 	
	<ul style="list-style-type: none"> Cuts and stabs caused by manual or mechanized working tools 	
	<ul style="list-style-type: none"> Eye injuries caused by flying particles from rotary buffing machines 	4
	<ul style="list-style-type: none"> Asphyxiation or poisoning in confined spaces, in particular during the cleaning of vats or tanning baths 	5
Physical hazards 	<ul style="list-style-type: none"> Exposure to high noise levels from mechanical equipment 	
	<ul style="list-style-type: none"> Callosities on hands caused by continuous strenuous work with hand tools 	
	<ul style="list-style-type: none"> Eye strain due to poor illumination in the tannery 	
Chemical hazards 	<ul style="list-style-type: none"> Skin rashes and dermatoses as a result of exposure to cleaners, solvents, disinfectants, pesticides, leather-processing chemicals, etc. 	6
	<ul style="list-style-type: none"> Allergies - contact and systemic - caused by many of the chemicals used in tanneries (see NOTE) 	
Biological hazards 	<ul style="list-style-type: none"> Raw hides and skins may be contaminated with a variety of bacteria, molds, yeasts, etc., and various diseases (e.g., anthrax, leptospirosis, tetanus, Q-fever, brucellosis, etc.) may be transmitted to tanners; also, the large quantities of dust produced in buffing operations would normally be contaminated with disease-bearing microorganisms, putrefaction products, etc. 	7
Ergonomic, psychosocial and organizational factors 	<ul style="list-style-type: none"> Acute musculoskeletal injuries caused by physical overexertion and awkward posture while moving heavy or bulky loads, in particular bundles of hides, skins and leather 	8 9
	<ul style="list-style-type: none"> Low back pain due to prolonged working in a standing or semi-bending posture 	
	<ul style="list-style-type: none"> Heat stress, in particular when working on warm days in premises lacking good ventilation or air conditioning 	10

Preventive measures

- 1 Wear safety shoes with non-slip soles
 - 2 Erect fences and post warning signs round open pits in the tannery
 - 3 Call a qualified electrician to examine and repair faulty or suspect electric equipment
 - 4 Wear protective goggles and respiratory protection during buffing work
 - 5 Do NOT EVER enter a confined space when you are alone. To enter such a space, don respiratory protection equipment with autonomous air supply, and HAVE a co-worker stand-by to call a rescue team in case of weakness, asphyxiation or poisoning
 - 6 Seek medical attention if skin rashes develop; consult an allergy specialist on
 - 7 Keep a high level of personal hygiene; change clothes at the beginning and end of shift; do not take work-soiled clothes home
 - 8 Learn correct lifting techniques and work postures, to avoid low back pain
 - 9 Use mechanical aids for the lifting and transport of heavy loads how to deal with sensitivity to solvents and adhesives
 - 10 Install effective exhaust ventilation to remove hazardous gases and vapors, and eliminate obnoxious odors from the tannery
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Specialized information

Synonyms Fur dresser; hide and skin processing worker; tannery worker

Definitions and/or description Tans and dresses pelts to improve luster and beauty or restore natural appearance of pelts: Prepares tanning and washing solutions according to formulas and places pelts in vats or revolving drums containing solutions to clean, soften, and preserve pelts. Removes long coarse hair from pelts and evens length of underlying fur, using beaming knife and shaving knife [FUR PLUCKER (leather mfg.)]. Removes particles of flesh from pelts and skins, using hand and power knives determined by thickness and weight of pelt. Examines skins to detect defects, such as spaces, improper scraping, and tears. Records defects and sorts furs according to grade. May oil and clip pelts [DOT]



Related and specific occupations According to specific product or process step, e.g., cowhide tanner, depilator, fleshing worker, hide buffer, hide cutter, hide sorter, horse-hide tanner, leather dyer, liming-vat tender, sheepskin tanner, etc.; also - applier; assorter; bend sorter; color finisher; edge stainer; fur-floor worker; grader; hefter; hide-measuring-machine operator; hide sorter; laborer general (leather mfg.); leather sorter; passer; puller, machine; smearer; stainer; supervisor/- beam department; /- fur dressing; /-finishing room; /- inspector and sorter; /-packing room; /- split and drum room; /- split-leather dept.; wool puller; wringer-machine operator

Tasks Applying; assorting; balancing; beaming; buffing; cleaning (hides); clipping; conveying; cutting; depilating; detecting (hide defects); dipping; dressing; dyeing; examining; finishing; fleshing; grading; hefting; inserting; inspecting; lifting; liming; measuring; mixing; oiling; operating; placing (pelts in vats); plucking; preparing (solutions); preserving (pelts); processing; pulling; pumping; recording; removing (hair, flesh,.); restoring; scraping; scudding; shaving; skinning; smearing; softening (hides); sorting; staining; supervising; tanning; unhairing; wringing;

Primary equipment used Balances; buffing machines; fleshing, unhairing and scudding tools; lifting and conveying equipment; manual and mechanical mixers; manual and mechanized cutting tools; personal protective equipment; processing (i.e., pre-tanning, tanning, dyeing and finishing) drums and vats; pumps

Workplaces where the occupation is common Tanneries

Notes Examples of hazardous chemicals used in tanneries are listed below:



2- naphthol; acrolein; amino resins; ammonia; arsenic compounds; bleaching powder; borax; chlorine; chlorophenols; chromium (trivalent) sulfate; DDT; enzymes (proteolytic), formal- -dehyde; formic acid; glutaraldehyde; hydrochloric acid; mercury (ammoniated); milk of lime; naphthalene derivatives; nickel sulfate; organic dyes (this includes a variety of dyes based on benzidine, o-tolidine, o-dianisidine, and other intermediates); oxalic acid; p-nitrophenol; phenol derivatives; sodium acid fluoride; sodium hydroxide; sulfides, sulfuric acid; tricresyl phosphate; vegetable tannins; zinc chloride; etc.

References ILO Encyclopaedia of Occupational Health and Safety, 3rd Ed., Parmeggiani, L. Editor, ILO, Geneva, 1983, pp.



ILO Encyclopaedia of Occupational Health and Safety, 4th Ed., Stellman, J. M., Editor, ILO, Geneva, 1998, pp.

"Tannery Workers". In: Adams, R.M., "Occupational Skin Diseases", Saunders, Philadelphia, 1990, pp. 666-669
