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HEALTH SURVEILLANCE IN THE RUBBER INDUSTRY

1. Introduction

The Rubber Industry Advisory Committee, appointed by the Health and Safety Commission, has prepared this guidance. It represents what is considered to be good practice by members of the Committee. Following this guidance is not compulsory and you are free to take other action. But if you do follow this guidance you will normally be doing enough to comply with the law. Health and Safety Inspectors seek to ensure compliance with the law and may refer to this guidance as illustrating good practice.

2. Who should read this booklet?

This booklet is aimed at all those responsible for health surveillance in the rubber industry. Employees, Trade Unions and representatives of employee safety should also read it.

3. Why carry out health surveillance?

Health surveillance aims to protect the health of people at work. It involves collecting information about work-related ill health and allows you to take action to improve controls and reduce risks.

4. When should you carry out health surveillance?

Health surveillance will be needed if there is an identifiable disease or adverse health effect which:

- is related to the employee's exposure to a health risk; and
- a risk assessment has identified as having a reasonable likelihood of occurring under the particular work conditions involved; and
- can be detected by valid techniques.

5. Other health monitoring procedures.

There are other ways that you can monitor the health of your employees that is not health surveillance. An example is where a valid technique for health surveillance is not available, such as the risk of muscular skeletal disorders. In this case a system of early reporting of symptoms may be appropriate.

A further example is non-statutory, pre-employment health enquiries to check an individual's health status. This should be based on the standard of fitness required for the work the individual will be employed to do.

6. What are the legal requirements?

Employers have a legal duty to reduce, so far as reasonably practicable, the risks to the health and safety of employees and others who may be affected by work activity. The starting point is to assess the risks. This is required under the Regulations listed at appendix 1. If risk assessment is carried out properly it will show where there is a significant *residual* risk to health even after reasonably practicable control measures have been applied.

Health surveillance should be considered wherever there is a significant residual health risk to employees. Employee's attendance for health surveillance is mandatory where a risk assessment has established that a genuine need for health surveillance exists.

7. . What are the benefits of health surveillance?

Health surveillance allows you to:

- detect harm to the health of employees at an early stage;
- assess how well your existing control measures are working;
- improve the health of your workforce and reduce sickness absence;
- provide employees with an opportunity to raise concerns about the affect of their work on their health.
- reduce your insurance claims and premiums.

8. What does health surveillance involve ?

Health surveillance involves the keeping and reviewing of suitable health records for individual employees who may be exposed to health risks at work. To complete the record, you will need to select one or more of the methods of surveillance relevant to the health risk which are listed below.

- A trained "responsible person" makes regular enquiries or inspections. eg checking for skin damage, administering simple questionnaires. This person could be a supervisor or First Aider. See Appendix 2.
- A "qualified person" asks employees about symptoms or inspects individuals for signs of ill health eg occupational health nurse does lung function test for isocyanate exposure. They may train the responsible person. See Appendix 3 for qualifications.
- A doctor does a clinical examination, eg looking for reaction to chemicals or follow up lung function test. See appendix 3 for qualifications.
- Blood or urine tests eg for lead or MbOCA.
- Self checks by employees. These are important but are not sufficient on their own to comply with the regulations. Employees will need sufficient training and information.
- The employer must keep a health record for each individual under surveillance. See Appendix 4 . Where there is no valid technique to identify a disease at an early stage, eg some cancers, the health record may be the only method of surveillance available.

As a general rule individual health records should be kept for as long as employees are under health surveillance. Although some regulations eg COSHH and CLAW require records to be kept for longer (up to 50 years) as ill health effects might not emerge until a long time after exposure.

Health records and questionnaires administered by the 'responsible person' should be kept securely with other confidential personal records with restricted access. Clinical notes are retained by the doctor or nurse and are completely confidential.

Health surveillance is *not* a substitute for preventing or controlling health risks. But it is an essential *additional* requirement for protecting the health of your employees wherever a residual health risk exists.

9. How do you decide if health surveillance is needed?

Take the following into account to help you make your decision.

- Have there been previous cases of work-related ill health in the workplace?
- Is there evidence of an ill health effect in the relevant types of work carried out in your part of the industry? (Look at insurance claims records, ill health records, suppliers' information, HSE guidance and general industry experience).

- Does your processes involve carcinogens, such as rubber dust and fume?
- Do you use respiratory or skin sensitises such as isocyanates?
- Do individuals have to rely heavily on respiratory protective equipment or other personal protective equipment?
- Are there foreseeable changes that could have an adverse affect on control measures e.g. people and working methods changing or increased work pressure at peak times?
- Is health surveillance the only way you to can confirm that the control measures are working properly?

10. Who is likely to be at risk in the rubber industry and what surveillance is needed?

See appendix 5. This gives guidance on where health surveillance is likely to be needed in the rubber industry and the types of health surveillance that are appropriate in each case.

11. How do you ensure that health surveillance will be successful?

- Be sure about its purpose.
- Ensure employees understand its purpose and its benefits, how it will be carried out and what it means for them as an individual.
- Involve employees and their representatives at the earliest stages and build up trust. Discuss issues of consent and confidentiality.
- Get the right programme for your needs and the correct competent person to carry it out.
- Be clear about roles and responsibilities.
- Record and act on your results.
- Deal with special cases such as young people or pregnant employees.
- Monitor, evaluate and refine the programme if necessary.

12. What do you do with the results of health surveillance?

Regularly review your results. Ensure individual employees have the results of their health surveillance and understand the significance to them. Provide them with any advice they need.

Use the results of the health surveillance to review your risk assessment and take appropriate action where necessary. If they suggest that your control measures are not sufficiently effective you may need to improve engineering controls, maintenance and inspection arrangements, systems of work or employee training. You may need to check that the right type of personal protective equipment is being used and that it is being worn and maintained properly.

Use the collective results of health surveillance for groups of employees involved in particular processes or activities as indicators of your success or failure in managing and controlling health risks. Collective results of health surveillance can be given to the workforce providing they cannot lead to the identification of individuals.

Review your arrangements for health surveillance at suitable intervals.

Appendix 1

Control of Substances Hazardous to Health Regulations 2002 (COSHH)
Management of Health and Safety at Work Regulations 1999
Noise at Work Regulations 1989(new regulations expected in 2006)
Control of Lead at Work Regulations 2002 (CLAW)
Ionising Radiation Regulations 1999
Control of Asbestos at Work Regulations 1987

Appendix 2

Example of questionnaires for use by responsible person or for self-reporting.

Appendix 3 Further Information

Occupational Health Providers

Doctors and nurses providing a service to the workplace would normally have gained the following qualifications in occupational health.

Doctors. DoccMed, AFOM, MFOM or FFOM

Nurses. UKCC registration and a degree, diploma or certificate in occupational health nursing.

The Employment Medical Advisory Service (EMAS) based at your local HSE office can provide advice & guidance on health surveillance and other workplace health issues. They can usually provide a list of doctors and nurses working locally who have expressed an interest in occupational health work.

Where employers have no access to an occupational health doctor or nurse they may seek help from individual employee's General Practitioner (G.P.). This is generally less preferable as not all G.P.s have experience in addressing occupational health issues. The employer should ensure that the G.P. is provided with sufficient information about the employees work activities, possible exposures and results of any health surveillance procedures. They should ask the G.P. for written advice which will help them protect the individual and review their risk assessment, see section 12.

References

HSE publication *Health Surveillance at Work* HSG 61 ISBN 0-7176-1705-X provides further information on health surveillance.

HSE Publication *Preventing Asthma at Work* L55 ISBN 0-7176-0661-9

Other useful sources of information

HSE Infoline Tel: 08701545500, email: hseinformationservices@natbrit.com,
Fax:02920 859260, Post: HSE Information Services, Caerphilly Business Park,
Caerphilly CF83 3GG

HSE website: www.hse.gov.uk

RMA Contact details:

Retread Manufacturers Association

2nd Floor, Federation House

Station Road

Stoke-on-Trent ST4 2TJ

e-mail: retreads@ukonline.co.uk

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6 Bath Place, Rivington Street, London, EC2A

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Appendix 4.

Example of suitable health record.

Appendix 5. See overleaf.

Appendix 5.

Here is guidance on where health surveillance will be needed if a risk assessment has shown workers exposure may lead to a related ill-health affect. It is not intended to be fully comprehensive. For guidance on Lead, Asbestos & Ionising Radiation refer to the relevant Approved Code of Practice.

CHEMICAL HAZARD PHYSICAL HAZARD	WHERE EXPOSURE IS MOST LIKELY	HOW MAY EXPOSURE OCCUR	POSSIBLE ILL HEALTH EFFECTS	MINIMUM HEALTH SURVEILLANCE REQUIREMENTS.
Solvents. Used as thinners, tackifiers, degreasers and in rubber formulations.	Widespread use in cleaning, mixing, spreading, fabricating, dipping, painting, spraying and hand building on formers and mandrels.	Skin contact Breathing solvent vapours.	Skin damage and irritation resulting in dermatitis. Skin sensitising chemicals may dissolve in solvents and cause allergic dermatitis. Nausea and dizziness.	Responsible person to regularly inspect potentially exposed skins eg monthly or more frequently if problems identified. Refer suspected cases of skin disease to occupational health professional. Encourage reporting of symptoms. Investigate symptoms and exposures. Seek medical advice on individual solvents.
Rubber process dust. Rubber fume.	Operations involving weighing, mixing, milling and extrusion of uncured rubber. Operations where fume evolves or continues to evolve during or after curing.	Inhalation and ingestion. Inhalation.	Stomach cancer Lung cancer. Evidence of work association is weak for these cancers.	Although the association with lung and stomach cancer is weak RUBIAC considers it good practice to keep a record for all employees exposed to rubber dust and fume.
Respiratory sensitises including	In PU foam, elastomer and reconstituted foam manufacture.	Breathing in vapours in manufacture, spillages and leaks.	Respiratory sensitisation resulting in	No level at which exposure can be regarded as insignificant so some level of health surveillance will always be

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isocyanates and azodicarbonamide.			occupational asthma.	<p>required.</p> <p>Low level surveillance where exposures well below MEL, no symptoms and no cases identified. Involves respiratory questionnaires with referral to occupational health professional if case suspected.</p> <p>High level where exposures around MEL, spillages etc likely and cases identified. Includes lung function testing and respiratory questionnaires supervised by doctor with relevant experience at six weeks, then six months following start of employment, annual assessment thereafter depending on advice of doctor. See <i>Preventing Asthma at Working</i> L55, listed in Appendix 3.</p>
Natural latex rubber.	GRG sector. Handling of natural latex.	<p>Skin contact.</p> <p>Inhalation.</p>	<p>Dermatitis, urticaria (nettle rash), nasal irritation.</p> <p>Occupational asthma.</p>	<p>Encourage early reporting of symptoms and skin inspections.</p> <p>Periodic respiratory questionnaire. If symptoms identified, early referral to occupational health professional for accurate diagnosis. See <i>Preventing Asthma at Working</i> L55, listed in Appendix 3.</p>
MbOCA (methylene bis ortho	Handling of MbOCA and contact with contaminated surfaces.	Very easily absorbed through the skin.	Bladder cancer. Category 2 carcinogen-	Biological monitoring of MbOCA in urine. Benchmark Guidance Value (BGV) of 15micromole total

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chloroaniline(probably carcinogenic to humans.	MBOCA/mol creatinine. Take samples at end of shift. Samples to be taken 6 monthly. If BGV is exceeded frequency should be increased and action taken, see section 12.
Carbon black which contains trace amounts of polycyclic aromatic hydrocarbons (PAHs)	Weighing and mixing operations.	Breathing in dust. Skin contact.	Possible reduction in pulmonary function Pneumoconiosis. (rare). Lung cancer (weak evidence). Skin irritation from vigorous skin cleansing.	Annual pneumoconiosis questionnaire* and lung function test recommended**. *Medical Research Council respiratory questionnaire adapted for mineral dust exposure. ** This is an interim recommendation pending an ongoing review of toxicity of carbon black. Skin inspections if early reporting of symptoms indicates risk.
Nitrosamines	Processes where amine based chemicals are used. May be released in mixing, curing and storage.	Ingestion. Inhalation.	Weak evidence of a cancer link.	Health record is good practice but not mandatory.
Noise.	Internal mixers and	Daily exposure to high	Long term	Hearing checks (audiometry)

	two mill rolls, calenders, compressed air lines, pneumatic exhausts.	noise levels.	irreversible hearing loss and tinnitus (ringing in the ears).	<p>carried out by occupational health professional or hearing scientist with referral to a doctor if necessary. Hearing tests should be carried out if daily personal noise exposure reaches or exceeds 95dB(A), not taking hearing protection into account. Good practice if exposure reaches or exceeds 90dB(A).</p> <p>NB. New noise regulations due in February 2006 will reduce current action levels by 5 dB, and introduce right to hearing checks at 85dB(A)</p>
Hand Arm Vibration Syndrome (HAVS)	Tyre retreading (skiving process)	Daily exposure to high vibration from hand held power tools	Hand arm vibration syndrome, which includes tingling, numbness, and finger blanching. Ultimately permanent injury to hand, particularly fingers.	<p>For those regularly exposed to levels at or above 2.8ms^{-2} A(8) health surveillance under supervision of a doctor, preferably one with knowledge of occupational health.</p> <p>NB. New vibration regulations, due in July 2005, will introduce much stricter limits.</p>
Manual	Various tasks	Handling heavy, bulky	Muscular	Encourage early recognition and

Handling	including handling drums, bales, tyres and raw materials. Handling & tipping bags, feeding mills.	loads that are difficult to grasp. Lifting operations that require bending, stooping or holding the load away from the body.	skeletal injuries to back and other body parts causing pain & physical impairment & in extreme cases permanent disability.	reporting of symptoms such as muscle pain and back pain. Investigate all cases and review manual handling risk assessment as appropriate. Refer individuals to doctor or nurse, preferably one with knowledge of occupational health.
Tasks, which can cause work, related upper limb disorders (WRULDs).	Various tasks including working two roll mills, handling and removing flashing and trimming, tyre building.	Repetitive movements involving force, frequent rotation movements of wrist, frequent or prolonged gripping or squeezing movements and awkward posture.	Pain, numbness, restricted body movements leading to permanent disability. Localised aches and pains with restricted movement of affected limbs.	Encourage early recognition and reporting of symptoms, eg pain/swelling in wrist or arm. Introduce a system of positive enquiry for possible symptoms and referral of suspected cases to doctor or nurse, preferably one with knowledge of occupational health.

APPENDIX 2

Examples of questions that can be used to detect skin abnormalities

To be completed by the employee:

NAME:

DATE:

DATE OF BIRTH:

JOB TITLE:

COMPANY:

1 Since your last review or in the last 12 months have you had any of the following symptoms?

- | | | |
|---|------------------------------|-----------------------------|
| (a) redness and swelling of fingers or hands; | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (b) cracking of skin on fingers or hands; | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (c) blisters on fingers or hands; | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (d) flaking or scaling of skin on fingers or hands; | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

- | | | |
|---|------------------------------|-----------------------------|
| (e) itching of fingers or hands with skin cracks or splits; | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (f) spots, redness, swelling of any other part; | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 2 Did these problems last for more than three weeks? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 3 Did these problems occur more than once? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 4 Does your skin get better with periods off work? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 5 Have you lost time from work with skin problems since your last assessment? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 6 Do you think you know what causes the problems? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

7 Name the substance/material /contact that you think is responsible: To

To be completed by the responsible person:

8 Problems confirmed by the responsible person? Yes No

9 Action taken:

Name of responsible person:

Date:

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Footnote: Any abnormalities found should be referred to the works occupational health physician or nurse if there is one. If not, employees should be advised to consult their general practitioner. In either case, referral to a consultant dermatologist may be appropriate. A copy of this completed questionnaire should be supplied to the employee's general practitioner.

APPENDIX 2

Examples of questions that can be used for on-going surveillance of persons exposed to respiratory sensitises.

To be completed by responsible person:

NAME:

DATE:

DATE OF BIRTH:

JOB TITLE:

COMPANY

The questionnaire should be completed six weeks, six months and annually after employment commences or s advised by the company occupational health advisor.

Further advice will be required from the company occupational health adviser if any yes box is ticked.

Since starting your present job have you had any of the following symptoms either at work or at home? (Do not include isolated colds, sore throats or flu):

1 Recurring soreness of or watering of eyes? Yes No

2 Recurring blocked or running noses? Yes No

- | | | | |
|---|---|------------------------------|-----------------------------|
| 3 | Bouts of coughing? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 4 | Chest tightness? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 5 | Wheezing ? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 6 | Breathlessness ?
exercise? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 7 | Have you consulted your doctor about chest problems since
your last questionnaire? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

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To be completed by the responsible person:

Further action required Yes No

Refer to company occupational health adviser: Yes No

Signature of responsible person:

Date:

Footnote:

If the answer is yes to any of these questions, the employee should be referred to the works occupational health physician or nurse if there is one. If not, employees should be advised to consult their general practitioner. In either case, referral to a consultant chest physician may be appropriate. A copy of this completed questionnaire should be supplied to the employee's general practitioner.

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APPENDIX 4

Example health record form – you do not have a legal duty to use this format

EXAMPLE HEALTH RECORD FORM (based on the requirements of the COSHH Regulations)		
Surname:	Historical record of jobs involving exposure to substances requiring health surveillance in this employment	
Forenames:		
Permanent address:		
.....		
.....		
Post code:		
NI number:		
Date of birth: Sex:		
Commencement of present employment:		
.....		
Health surveillance conclusions		



Under COSHH this means:

Conclusions of all other health surveillance procedures and the date on which and by whom they were carried out. The conclusions should be expressed in terms of the employee's fitness for work and will include, where appropriate, a record of the decisions of the employment medical adviser or appointed doctor, or conclusions of the medical practitioner, occupational health nurse or other suitably qualified or responsible person, but not confidential clinical data.

Where health surveillance consists only of keeping an individual health record, the particulars required are those above only.

Example of a completed health surveillance conclusions section for a health record

Health surveillance conclusions				
Date	Type of health surveillance	Fit/unfit for work	Comments	Signature
17.6.96	Skin Inspection	Fit		<i>T Hudson</i> Supervisor
16.7.96	Skin Inspection	Unfit	Referred to occupational health nurse	<i>T Hudson</i> Supervisor