

DRAFT: 3 September 1984

URL 15112

Vinyl Chloride

(VCM)

&

YOU

What is vinyl chloride (VCH)?

. VCM is a colourless, highly flammable gas. It is normally stored and handled under pressure as a colourless liquid.

. In the UK, nearly all VCM is used as a starting material in the production of polyvinyl chloride (PVC), which is then used to make PVC pipes, flooring, home furnishings, electrical cable insulation, blow moulded containers, records, etc.

What are the risks associated with VCM?

. VCM is highly flammable and presents a considerable fire and explosion hazard.

. VCM can cause serious illness and, in some cases death. Workers are most at risk from breathing VCM gas although it can also enter the body through the skin. VCM can be a hazard to health as a result of short-term and long-term exposure.

. Most workers recover from brief exposure to VCM with no long term ill effect to their health if they are moved into fresh air and receive immediate medical treatment. If a large quantity of VCM gas escapes in the workplace, it can be detected by its sweet smell. If you can smell VCM you are at risk and should leave the area and raise the alarm immediately. If you remain and the level of VCM gas in air is very high you will start to feel dizzy and disoriented and unless colleagues are there to help you could pass out and possibly die.

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. You are entitled to ask for a written record of the results of your check ups and tests.

. Your employer is responsible for keeping a comprehensive medical record for you while you work with VCM.

Why must you see the company doctor when you've been away ill?

. If you are away from work because of illness, for longer than 4 weeks, you will automatically be re-examined, on your return to work, to check your fitness to continue working with vinyl chloride.

What happens when you stop working with VCM?

. When you leave, transfer or retire from your job, your GP will be notified that the employer has your medical record should it be required in the future. If you transfer to a different job, with the same employer, where you are not classed as a 'Registered' worker, the company doctor will offer to continue your health check-ups.

Not to be included in final document

Your permission will be sought before the company doctor can discuss your occupational medical history with your GP.

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What about contractors?

. Contractors who come to work on your site are required by law to observe the same safety precautions.

. Before starting work, such workers must check with your employer the precautions required.

. This leaflet can only tell you few of the main facts about working with VCM. If you want to know more ask your Safety Officer or ring the local office of the Health and Safety Executive. *What about the Company Medical Officer?*

REMEMBER VCM IS A HAZARDOUS SUBSTANCES. Every effort is made to safeguard you. Your employer has a duty to protect you. You have a duty to co-operate. USE THE CHECK LIST:

1. Be constantly alert to the dangers of working with VCM - for your own safety and for the safety of your colleagues;
2. Dont smoke in unsafe areas;
3. Make sure you are trained for your job;
4. Obey all safety precautions;
5. Observe safe working methods;
6. Use protective equipment when issued;
7. Report any defects in plant or equipment;
8. Attend for your medical check ups;
9. Tell the company doctor if you have any health problems or worries.

What training should you have?

. Employers must ensure that you receive training to make you fully aware of the hazards and the extent of the risk from exposure to VCM. The training should cover:

- the correct operation of the plant on which you work;
- your responsibility for observing safe working methods;
- the correct use of any protective equipment that may be necessary;
- the action to be taken in emergencies;
- procedures for reporting any defects in plant or equipment;
- the significance of air monitoring and of air monitoring results.

What are your responsibilities?

. Your responsibility is to co-operate with your employer and to observe and carry out all safety procedures and precautions. The main points to remember are listed in the check list at the back of this leaflet.

Is some work with VCM more dangerous than others?

. YES. For most workers there is little risk of exposure to VCM except from leaks occurring from defects in plant and equipment. However, for some tasks such as maintenance work and work in confined spaces there is a greater risk of exposure and for this type of job a 'permit-to-work' is required.

Why must you have a 'permit-to-work'

. Employers will have identified potentially dangerous jobs and you will not be allowed to do such work without a permit. The permit will specify exactly what work is to be done and the necessary precautions and their correct sequence.

. The permit does not in itself make the job safe. Safety depends on you carrying out the job properly and taking all the necessary precautions set out in the permit.

Why do I need to wear protective equipment?

. There may be some tasks, such as working in confined spaces, maintenance work, etc. where levels of VCM gas cannot be reduced below the Control Limit. For this type of work you will be required to wear breathing equipment, provided by your employer, for short periods of time. This equipment, which must be of a type approved by the Health and Safety Executive for use with VCM, will prevent exposure. Protective clothing will help prevent VCM entering your body through your skin.

Are medical examinations necessary?

. Yes. Your employer is responsible by law for monitoring your health. These check ups are intended to detect, as early as possible, whether working with VCM is affecting your health. You should always tell the company doctor if you feel unwell.

. Arrangements for check-ups and any tests that may be required will be made during your normal working hours.

Small quantities of VCM in air cannot be detected by smell and unless the amount is measured by machine you could continue to work normally completely unaware of any risks. Illnesses known to be caused by exposure to VCM over long periods include:

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- cancer of the liver called 'angiosarcoma' which is a rare form of cancer originating in the liver;
 - liver or spleen fibrosis similar to 'Banti's Syndrome' which may cause bleeding from the gut;
 - circulatory disorders resembling 'Raynaud's Syndrome' when the fingers turn white in cold weather with sensations of numbness and 'pins and needles';
 - schleroderma which causes areas of the skin to become thickened, white, shiny and scaly;
 - acro-osteolysis which causes degenerative changes in the small bones of the fingers.

What are your employers responsibilities?

He should comply with the requirements of the Approved Code of Practice for the Control of Vinyl Chloride at Work and the Guidance Note "Vinyl Chloride: Toxic Hazards and Precautions". A copy of the Code and the Guidance Note should be available from your employer for reference or you can buy a copy from HMSO.

In workplaces where it has been established that there could be a risk from exposure to VCM employers should provide a written statement in respect of the health and safety at work of their employees and the arrangements and organisation for carrying out that policy. The statement, which should be brought to your attention, must also cover the action to be taken in an emergency.

. Employers must ensure that the levels of VCM in the air of working areas do not exceed the Control Limit for VCM. These are 3 parts VCM per million parts of air averaged over a year supplemented by an 8 hour (length of a normal working shift) time weighted average exposure of 7 parts of VCM per million parts of air. These levels should not normally be exceeded.

. Employers are also responsible for ensuring that any workers considered to be at risk from exposure to VCM receive regular medicals usually with the company doctor who will work with your own GP if this becomes necessary.

What precautions are necessary?

. Employers must monitor VCM in air in two ways:

- with permanent air sampling machines to check that the Annual Control Limit is not being exceeded and which will sound an alarm should VCM escape into the air; and
- by occasionally asking you to wear a personal sampling device during a working shift. This is for your benefit as it will measure your personal exposure as you go about your normal daily work. If there is a risk then a safer system of working will be introduced.

What is a 'Registered' Worker?

. Not all workers in VCM industries are at risk. Employers are responsible for identifying workers who may be at risk and for keeping a register of such workers so that their health can be regularly checked. You will be told if you are a 'Registered' Worker.