

CONVEYOR TRANSPORT

SCOPE

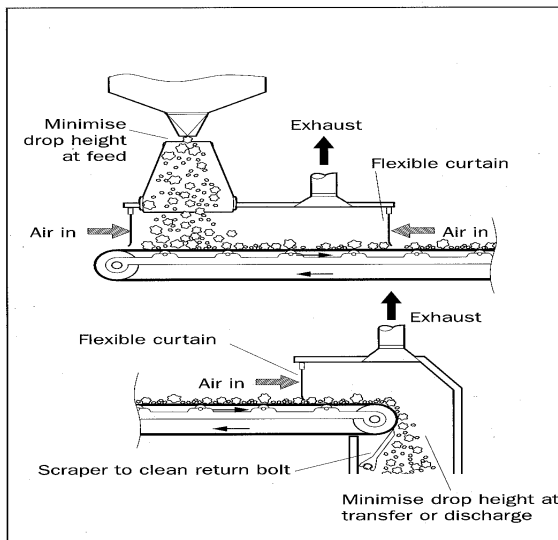
This control sheet is part of the ILO Chemical Control Toolkit. It should be used when the toolkit identifies that a control approach 2 is appropriate and your chemical(s) and task(s) incorporate conveyor transport. The sheet gives good practice advice on using a conveyor for transferring medium and large quantities of solids. The key points you need to follow to help reduce exposure to an adequate level are described. It is important that all the points are followed. A similar approach for bucket elevators and screw conveyors can be followed. Some chemicals are flammable or corrosive and your controls must be suitable for those hazards too. Look at the safety data sheet for more information. Air cleaning equipment may be necessary before discharging exhaust air to the atmosphere. This sheet identifies the minimum standards you need to apply to protect your health. It should not be used to justify a lower standard of control than that which may be required for process control or control of other risks.

ACCESS

- Keep unnecessary people away from the work area. Ensure that no one is working close by downwind.

DESIGN AND EQUIPMENT

- Ensure conveyors are designed and installed to recognised standards. The designer/supplier/installer should provide proof that the conveyor meets the required specifications and standards.



- Where possible, wet the material being transferred to reduce its dustiness.
- Enclose the belt as much as possible, and particularly at the feed and discharge points.
- Provide dust curtains at the open ends of the enclosures and skirting at the sides of the belt. Old belting can often be used to make suitable flexible curtains.
- Provide local exhaust ventilation (LEV) at the feed chute and drop points – see diagram.

- The inward airflow at all openings on the conveyor enclosure should be at least 1 metre per second.

- Design the enclosure in sections to allow easy access for cleaning and maintenance.
- Hinged self-closing doors should be provided for routine inspection tasks.
- As much space as possible should be provided with the enclosures. This will help to contain the dust.
- Where possible, site the working area away from doors, windows and walkways to stop draughts interfering with the ventilation and spreading dust.
- Ensure that air extracted from the workroom can readily be replenished.
- Provide an easy way of checking that the LEV is working, e.g. a manometer, pressure gauge or ribbon strips.
- Discharge extracted air to a safe place away from doors, windows and air inlets. Be careful that extracted air does not affect neighbours.
- Position the feed chute so that material joins the centre of the belt, moving in the same direction and at the same speed as the belt. Minimise the height that the material falls from the chute to the belt.
- Fit a scraper to clean the return belt.

EXAMINATION, TESTING AND MAINTENANCE

- Get information on the design performance of the conveyor and extraction system from the supplier. Keep this information to compare with future test results.
- Once every day, check that the extraction system is working. Do not operate the conveyor unless the extraction system is working properly.
- Visually check the conveyor and extraction system once a week for signs of damage, and ensure any necessary repairs are carried out immediately.
- Have the unit thoroughly examined and tested against its performance specifications and standards at least once a year.
- Maintain the equipment as advised by the supplier/installer, in effective and efficient working order.

CLEANING AND HOUSEKEEPING

- Clean the conveyor and surrounding area daily.
- Deal with all spills immediately.
- Don't clean up dusts with a brush or compressed air. Use a damp cloth or vacuum.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Chemicals in hazard group S can damage the skin or eyes, or enter the body through the skin and harm you. Sheets Sk100 and Sk101 give good advice on how to keep the materials off your skin.
- Check the material safety data sheet for the hazards associated with the dust or ask the supplier of the material what personal protective equipment is needed.

- Ask your safety equipment supplier to help you select suitable protective apparatus.
- Look after your protective equipment. When not in use, store it in a clean, safe place.
- Keep your protective equipment clean and change it at recommended intervals or when it is damaged.

TRAINING AND SUPERVISION

- Tell your workers about any harmful properties of the substances that they are dealing with and why they must use the controls and PPE provided.
- Teach them to handle the materials and any resulting dust safely and how and when to wear any PPE supplied.
- Check controls are working and ensure that they know what to do if something goes wrong.
- Have a system to check that the precautions you have put in place are being followed.