

# AMCOR FLEXIBLES

## Lifting Risk Assessment



- **HAZARD**
  - a hazard is something with the potential to cause harm
- **Risk**
  - risk expresses the likelihood that the harm from a particular hazard is realized
- **RISK ASSESSMENT**
  - involves identifying risks and reaching conclusions about them

The concept relies upon there being a degree of risk about which little or nothing need be done.

**Intolerable risk** - a level of risk which should not be inflicted or a level of risk which should be forbidden (imminent danger).

**Tolerable risk** - a level of risk which it is impractical to reduce, or the cost of reduction is disproportionate.

**Acceptable risk** - a level of risk which is willingly accepted.

# Acceptable Risk?



- **Severity** What kind of accident/incident/injury can happen to a person
- **Probability/Likelihood** How likely is it that this accident/incident/injury will happen
- **Frequency** How frequent is the task that is undertaken.
- **Duration** How long does the identified task take.
- **Number of people** How many people are exposed to the task  
(include all shifts)

## Hazard Severity

### Examples of Type of Injury:

**Very Low(1):** Scratch, bruise, minor cut. Injury allows normal work after First Aid treatment. Typically there is not loss of time.

**Low(2) :** Severe cut, sprain, strain, minor burns, minor breaks e.g. toes, fingers. Normal work may not be immediately possible after treatment. There may be loss of time.

**Medium(3):** Burns, sever fractures, minor amputations, temporarily disabling back injures. Accident usually results in time off work.

**High(4):** Permanent disability, serious amputations (e.g. loss of finger).

**Very High(5):** One or more fatalities.

## Example

**Not Likely(1):** There is really very little risk present. Only under exceptional conditions would there be an accident or incident. Numerically, something like a chance of one in one million per year – e.g. the chance of being struck by lightning in UK.

**Possible(2):** Several factors probably need to be present for an accident or incident. Numerically, something like one in 100,000 per year.

**Quite Possible(3):** Under normal conditions an accident or incident will not occur, some fault or abnormality is necessary to cause it. Numerically, something like one in 10,000 per year.

**Likely(4):** Under prevailing conditions an accident or incident will either occur or will be very difficult to avoid. Numerically, something like one in 1000 per year – e.g. being killed in high risk occupation such as mining.

**Very Likely(5):** If conditions continue an accident or incident is almost certain to occur.  
50/50



# Additional Definitions

## Duration

## Frequency

1 = Less than 20 seconds (Very short)	1 = Less than 1x per week (Very rare)
2 = More than 20 seconds but less than 1 minute (Short)	2 = 1x per week (Rare)
3 = Between 1 and 2 minutes (Medium)	3 = 1x per shift (Medium)
4 = Between 2 minutes and 5 minutes (Long)	4 = More than 1x per shift (Frequent)
5 = Over 5 minutes (Very Long)	5 = All the time (Very Frequent)



Risk Calculation:

- Severity x Probability x Frequency x Duration = Risk (Number of People Exposed)

Example:

$$4 \quad x \quad 3 \quad x \quad 2 \quad x \quad 2 \quad = 48 \quad (12)$$

Risk = 48 with 12 people exposed.

For the purpose of the risk assessment the following risk categories apply:

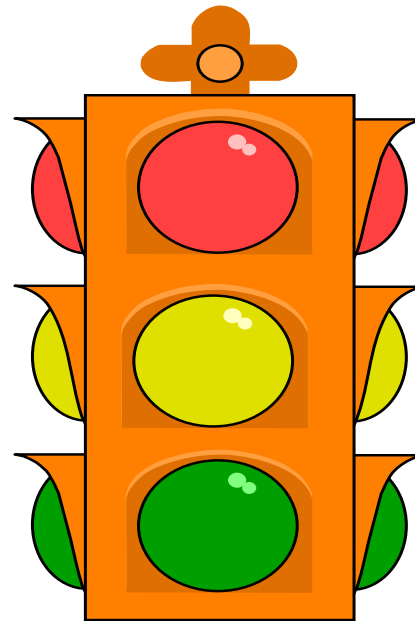
- **Low risk (below 81):** Risks are not insignificant/trivial but are adequately controlled by protective and preventative measures already in place.
- **Medium risk (above 81):** Risks are **not insignificant/trivial** and are **not** adequately controlled.
- **High Risk (above 256):** Risks are **unacceptable/intolerable** and are **not** currently controlled.
- **Very High Risk (above 625):** Risks are **unacceptable/intolerable** and **cannot** be adequately controlled.

Follow up action is recommended for medium risk and required for high risk. If the risk is 625 or above STOP the task immediately.

- Conducted during Fall 2006 and consisted of observing operations and taking stress-strain measurements
- Evaluated 16 processes looking at both hazards and control measures in conjunction with actual lifting measurements
- Lifting assessment was performed by taking measurements to calculate hazard severity and likelihood of injury (Calculations were performed using Snook Table calculations or NIOSH Lifting Formula)

- Results reviewed with plant safety team and posted for all employees to view
- Found one high risk and 10 medium risk operations
- Identified and implemented control measures and/or process changes for medium and high risk operations
- Identified need for 20 additional follow up measurements for additional lifting hazards
- Additional Results
  - Led to reduced weight limit in plant
  - Purchase of additional lifting assist devices

- **MOST EFFECTIVE**
- Elimination
- Reduction
- Remove person
- Reduce contact
- **LEAST EFFECTIVE**



- Resin Mixing (Elimination)



- Packaging Bags and Pouches into Boxes (Lift Tables, Chair Design and Packaging Shakers – Reduction)



- Packaging Bags into Gaylords (Reduction)





- Packaging Bags and Pouches (Rotation and method changes to minimize exposure to high frequency/duration – Reduce Contact)
  1. Cross training of work force to allow line assignment rotation from light to heavy bags on regular basis
  2. Cross training of work force to allow line assignment rotation from operations requiring differing ergonomic motions
  3. Change inspection methods to reduce ergonomic impact
  4. Individual ergonomic consultation

- Finished Goods Roll Handling in Slitting (New Shafts, Roll Handling Equipment, Material Flow - Reduction)



- Moving Nonwoven off Pallets (Added Cardboard Layer – Reduction)



- Loading and Removing Rolls from Unwind (Reduction)



- Lifting Shafts in Lamination Area (Move to 3 inch core shaft instead of 6 inch core shaft – Reduction)



- Moving Print Cylinders (Reduction)



- Changing Head on Machine (Elimination)



- Plant has many medium risk lifting hazards
- Implemented changes to reduce risk which resulted in decrease of first aid and recordable injuries due to stress/strain
- Most lifting solutions came directly from the operators
- Lifting risk reduction is a continuous improvement process, operation risk assessments are ongoing