




COMPLIANCE ASSISTANCE CHECKLIST (Pre-Cast)

A. RISK ASSESSMENT		Yes	No
1	Risk assessments conducted for the various pre-cast concrete component production processes , commencing from raw material received, formwork erection, rebar work, casting, pre-stressing of wire ropes, handling & storage of pre-cast components, etc until till loading of pre-cast concrete components onto trailers for transportation out of pre-cast yard.	<input type="checkbox"/>	<input type="checkbox"/>
2	All reasonably practicable steps been taken to eliminate any foreseeable risks in these processes.	<input type="checkbox"/>	<input type="checkbox"/>
3	Where it is not reasonably practicable to eliminate the foreseeable risks in these processes, Reasonably practicable measures taken to minimise the risks and corresponding safe work procedures written and implemented .	<input type="checkbox"/>	<input type="checkbox"/>
4	Suitable PPE provided for workers' use as prescribed in the measures and safe work procedures above.	<input type="checkbox"/>	<input type="checkbox"/>
5	Records of the risk assessment and implementation of the measures and safe work procedures above, maintained and kept for a period of not less than 3 years .	<input type="checkbox"/>	<input type="checkbox"/>
6	Persons exposed to the risks informed of the nature of the risks and the safe work procedures implemented to eliminate and control these risks.	<input type="checkbox"/>	<input type="checkbox"/>
7	Risk assessment reviewed and revised at least once every 3 years ; and upon the occurrence of any bodily injury or significant work process change .	<input type="checkbox"/>	<input type="checkbox"/>
B. SAFETY AND HEALTH MANAGEMENT		Yes	No
8	A workplace safety & health officer/coordinator been appointed as required under the Workplace Safety and Health Act 2006.	<input type="checkbox"/>	<input type="checkbox"/>
9	A workplace safety & health committee appointed and function effectively as required under the Workplace Safety and Health Act 2006.	<input type="checkbox"/>	<input type="checkbox"/>
C. TRAINING		Yes	No
10	Operators of machines (like bar bender, gas-cutting torch, hydraulic formwork machines) trained & competent to operate the machinery with reference to equipment specific instructions /requirements/Safe Work Procedure .	<input type="checkbox"/>	<input type="checkbox"/>

11	All persons driving a fork lift-truck attended <i>Fork-lift Drivers Training Course conducted by Approved Training Provider.</i>	<input type="checkbox"/>	<input type="checkbox"/>
D. LIFTING OPERATION & MATERIAL HANDLING		Yes	No
12	All <i>appointed lifting machine operators</i> like gantry, overhead travelling crane operators <i>trained & competent</i> or directly supervised by a qualified person.	<input type="checkbox"/>	<input type="checkbox"/>
13	All <i>mobile & tower crane operators</i> registered <i>MOM</i> crane operators.	<input type="checkbox"/>	<input type="checkbox"/>
14	All <i>appointed riggers</i> for lifting operation involving mobile and tower cranes <i>trained by Approved Training Provider.</i>	<input type="checkbox"/>	<input type="checkbox"/>
15	All <i>appointed signallers</i> for lifting operation involving mobile and tower crane <i>trained by Approved Training Provider.</i>	<input type="checkbox"/>	<input type="checkbox"/>
16	All <i>appointed riggers & signallers distinctively & suitably attired</i> to indicate he is rigger or signaller for the lifting operation involving mobile and tower crane.	<input type="checkbox"/>	<input type="checkbox"/>
17	All <i>appointed Lifting Supervisor</i> for any lifting operation involving cranes must be <i>trained. (For mobile & tower crane lifting supervisors, they must be trained by Approved Training Provider).</i>	<input type="checkbox"/>	<input type="checkbox"/>
18	A set of <i>Safe Lifting Procedure available</i> for any lifting operation by mobile and tower cranes.	<input type="checkbox"/>	<input type="checkbox"/>
19	All <i>lifting gears, lifting appliances & lifting machines tested and examined</i> and issued a test certificate by <i>Authorized Examiner</i> at least <i>once every year.</i>	<input type="checkbox"/>	<input type="checkbox"/>
20	Effective measures taken to <i>prevent any person near the wheel tracks</i> of an overhead traveling crane where he would be liable to be <i>struck by the crane.</i>	<input type="checkbox"/>	<input type="checkbox"/>
21	Effective measures taken to <i>warn workers of the approach of the crane</i> if the worker is in a place where he is <i>liable to be struck by any load</i> carried by the crane.	<input type="checkbox"/>	<input type="checkbox"/>
22	All lifting appliances or lifting machines of <i>good mechanical construction, sound material and adequate strength;</i> and <i>properly maintained.</i>	<input type="checkbox"/>	<input type="checkbox"/>
23	A <i>register</i> of lifting gears, lifting appliances and lifting machines <i>kept</i> up to date.	<input type="checkbox"/>	<input type="checkbox"/>
24	Every lifting appliance and lifting machine <i>conspicuously marked with its Safe Working Load & a distinctive number</i> or other means of identification.	<input type="checkbox"/>	<input type="checkbox"/>

E. SITE LAYOUT & TRAFFIC MANAGEMENT		Yes	No
25	The pre-cast yard layout clearly and properly demarcated with passageways separating from the various production work areas, storage areas and vehicular traffic ways.	<input type="checkbox"/>	<input type="checkbox"/>
26	The pre-cast yard well-designed to take account of work activities, traffic type, volume & circulation .	<input type="checkbox"/>	<input type="checkbox"/>
F. MEASURES TAKEN TO PREVENT FALLS FROM HEIGHT		Yes	No
27	Reasonably practicable measures been taken to ensure any person at a workplace from which he is liable to fall a distance of more than 2m be provided with a secure foothold & handhold .	<input type="checkbox"/>	<input type="checkbox"/>
28	Where it is not reasonably practicable to provide a secure foothold or handhold, other suitable means such as a safety harness or safety belt provided for ensuring his safety.	<input type="checkbox"/>	<input type="checkbox"/>
29	Where a safety harness or safety belt is provided , sufficient and secured anchorage, by means of a life line or otherwise for the safety harness or safety belt been provided.	<input type="checkbox"/>	<input type="checkbox"/>
30	The anchorage is not lower than the working level of the person wearing the safety harness or safety belt.	<input type="checkbox"/>	<input type="checkbox"/>
G. STORAGE OF GOODS		Yes	No
31	Are all goods, articles and substances such as pre-cast concrete components which are stored, stacked or placed:-		
	(a) in such manner as not to interfere with	<input type="checkbox"/>	<input type="checkbox"/>
	(ii) the proper operation of any machinery/equipment.	<input type="checkbox"/>	<input type="checkbox"/>
	(iii) the un-obstructed use of passageways/traffic lanes.	<input type="checkbox"/>	<input type="checkbox"/>
	(iv) the efficient functioning of fire-fighting equipment like sprinkler systems.	<input type="checkbox"/>	<input type="checkbox"/>
	(b) on a firm foundation not liable to settle.	<input type="checkbox"/>	<input type="checkbox"/>

	(c) in such manner as not to overload the foundation or floors.	<input type="checkbox"/>	<input type="checkbox"/>
	(d) in such manner, and using such supporting structures such as finger racking/frame adequately designed as may be necessary, as to ensure the stability , and to prevent the collapse , of the goods, articles or substances such as pre-cast concrete components.	<input type="checkbox"/>	<input type="checkbox"/>
H. MECHANICAL & ELECTRICAL SAFETY		Yes	No
32	Every dangerous part of the machinery (such as bar bending & cutting, sheet cutting machines) securely fenced .	<input type="checkbox"/>	<input type="checkbox"/>
33	Efficient devices or appliances by which power of the transmission machinery can promptly be cut off provided and maintained .	<input type="checkbox"/>	<input type="checkbox"/>
34	All fencing or other safeguards provided are of substantial construction, properly maintained & kept in position and properly adjusted to render the machinery safe at all times while the machinery is in use.	<input type="checkbox"/>	<input type="checkbox"/>
35	All electrical installation and equipment of good construction, sound material, free from defects and shall be so maintained .	<input type="checkbox"/>	<input type="checkbox"/>
36	Practical measures taken to protect workers against the risk of electric shock arising from or in connection with the use of any electrical installation or equipment such as the use of industrial socket and plugs and socket outlet assembly for electrical wirings used in open yard as recommended in CP 88.	<input type="checkbox"/>	<input type="checkbox"/>
I. FIRE & EXPLOSION HAZARDS		Yes	No
37	Good sets of oxy/fuel equipment in accordance to SS510:2005 consisting of the following used.		
	(i) pressure regulator fitted to the outlet of each gas cylinder to control gas pressure.	<input type="checkbox"/>	<input type="checkbox"/>
	(ii) A suitable flash back arrestor fitted at the pressure regulator outlet of each gas cylinder. Type approved flashback arrestors listed in MOM's website or type recommended by equipment manufacturer. 	<input type="checkbox"/>	<input type="checkbox"/>
	(iii) A suitable type of gas torch. Torch tip opening NOT clogged .	<input type="checkbox"/>	<input type="checkbox"/>

	<p>(iv) Only flexible hoses meant for gas cutting equipment used.</p> <p>The colour coding used to identify the gas hoses for the different gases in accordance to SS510:2005 as follows:</p> <table border="1"> <thead> <tr> <th>Gas</th><th>Hose Color</th></tr> </thead> <tbody> <tr> <td>Acetylene</td><td>Red</td></tr> <tr> <td>Oxygen</td><td>Blue</td></tr> <tr> <td>Air</td><td>Black</td></tr> <tr> <td>LPG</td><td>Orange</td></tr> </tbody> </table>	Gas	Hose Color	Acetylene	Red	Oxygen	Blue	Air	Black	LPG	Orange	<input type="checkbox"/>	<input type="checkbox"/>
Gas	Hose Color												
Acetylene	Red												
Oxygen	Blue												
Air	Black												
LPG	Orange												
	<p>(v) Hose connections must be clamped or securely fastened. Worm drive hose clip shall NOT be used as a hose clamping device.</p> 	<input type="checkbox"/>	<input type="checkbox"/>										
	<p>(vi) A suitable non-return valve (check valve) fitted between each gas torch inlet and gas hose from the oxy/fuel equipment to prevent backflow of gases.</p> 	<input type="checkbox"/>	<input type="checkbox"/>										
J. LIGHTING		Yes	No										
38	Sufficient and suitable lighting provided and maintained in every part of the yard including for night work at open yard.	<input type="checkbox"/>	<input type="checkbox"/>										
K. HANDLING OF CHEMICALS (e.g CEMENT, FORM OIL)		Yes	No										
39	Effective and appropriate measures taken to prevent accumulation of air contaminants and to protect workers from inhaling hazardous substances. E.g. Local exhaust ventilation (LEV), work in closed systems, wetting or other suitable measures adopted.	<input type="checkbox"/>	<input type="checkbox"/>										
40	All hazardous substances placed under the control of a competent person .	<input type="checkbox"/>	<input type="checkbox"/>										
41	<p>Warning labels affixed on containers of hazardous substances. The labels should</p> <ul style="list-style-type: none"> - be easily understood by all persons at work in the factory - warn of the hazards involved - specify the precautionary measures to be taken 	<input type="checkbox"/>	<input type="checkbox"/>										
42	Safety Data Sheets (SDS) of all the hazardous substances used in the factory properly kept and maintained .	<input type="checkbox"/>	<input type="checkbox"/>										
43	Regular medical examinations conducted for workers who are exposed to hazardous substances that are listed in Part II of the first schedule like cadmium & manganese under the Workplace Safety and Health (Medical Examinations) Regulations.	<input type="checkbox"/>	<input type="checkbox"/>										

L. NOISE		Yes	No
44	All practicable measures taken to reduce or control noise from any machinery, equipment or process such that no persons employed are exposed to excessive noise? (>85 dBA over 8 hours) E.g. Acoustic enclosures, silencers, mufflers, isolation of noise sources	<input type="checkbox"/>	<input type="checkbox"/>
45	Hearing protectors provided to all persons exposed to excessive noise.	<input type="checkbox"/>	<input type="checkbox"/>
46	Yearly audiometric examinations conducted for all persons exposed to excessive noise.	<input type="checkbox"/>	<input type="checkbox"/>

Further information:

- Refer to the ProBE Technical Advisory for Pre-cast Concrete Yard.
- Guidelines on Risk Assessment available for download from MOM website at:
http://www.mom.gov.sg/publish/momportal/en/communities/workplace_safety_and_health/maintaining_a_safe_workplace/occupation_safety/risk_management.html
- List of type approved flash back arrestor is available at:
http://www.mom.gov.sg/publish/momportal/en/communities/workplace_safety_and_health/service_and_equipment/list_of_accredited.html#equip
- Refer to CP 88 on Code of Practice for Temporary Electrical Installation at Construction Worksite.
- Refer to Singapore standard SS 510:2005 on Code of Practice on Safety in Welding and Cutting (and other operations involving the use of heat).

Both the Code of Practice and the Singapore Standard can be purchased from:-

SPRING Singapore
Information Resource Centre
2 Bukit Merah Centre
#04-00, S159835
Tel: (65) 6279 3920

Note:

This checklist is however only a basic compliance assistance toolkit and is not exhaustive. It only provides a general overview of the basic compliance items. It is envisaged that you may need to make further customisation or modification to the checklist to cater for the specific processes and conditions in your workplaces.