

SECTION 6 - TECHNOLOGY SAFETY DATA SHEET

TECHNOLOGY SAFETY DATA SHEET PEGASUS INTERNATIONAL INC. EC-7-2 PORTA SHOT BLAST

SECTION 1: TECHNOLOGY IDENTITY	
Manufacturer's Name and Address: Pegasus International Inc. 106 Railroad Street Schenley, PA 15682	Emergency Contact: Tom Bodkin (412) 295-0066
	Information Contact: Tom Bodkin (412) 295-0066
	Date Prepared:
Other Names: Shot-blast EC-7-2	Signature of Preparer: Operating Engineers National Hazmat Program 1293 Airport Road Beaver, WV 25813 phone 304-253-8674 fax 253-7758 Under cooperative agreement DE-FC21- 95 MC 32260

SECTION 2: PROCESS DESCRIPTION

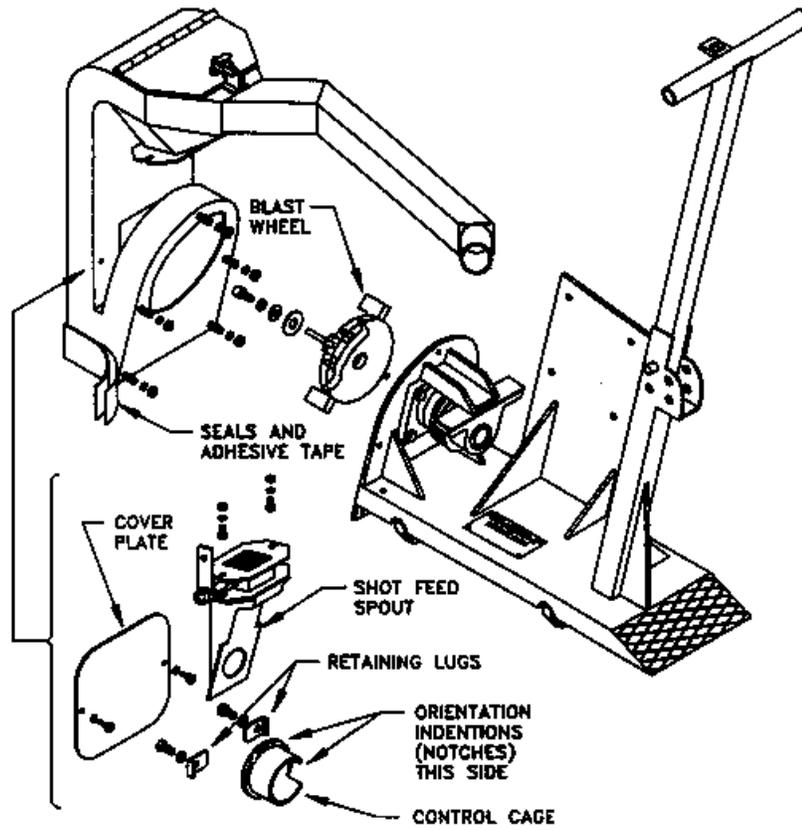
During the shot blasting process, metal shot is propelled at the surface (in this case concrete floor) with a high force of impact. This is accomplished using a centrifugal wheel powered by an electric motor to propel shot to the surface. The 7 inch shot blast is capable of stripping concrete to 1/16 inch in one pass in a 7 inch blast pattern. The shot and debris are vacuumed into a air wash system where the shot is separated for reuse. The debris is then collected in a vacuum drum.

The EC-7-2 Porta Shot Blast is powered by a 2HP electric motor. The power source for the motor can be converted from 110v to 220v I phase.

The blast wheel is a centrifugal wheel design that is pulley driven at maximum continuous speed. The shot is fed through the shot feed spout to the blast wheel. The shot and debris rebound to the dust separator and the dust is removed to a shop vac. Clean shot falls back into the hopper for reuse. The machine recycles shot continuously while the shot feed spout is open.

The shop vac type vacuum system collects the dust after it has been filtered by a roughing type filter located under the lid of the vacuum. A wire brush is provided which when manually moved up-and-down cleans the filter.

SECTION 3: PROCESS DIAGRAM



EC-7-2
BLAST MACHINE

SECTION 4: CONTAMINANTS AND MEDIA

The technology has the potential to cause concrete dust and associated contaminants to become airborne. Specific contaminants need to be evaluated on a site-by-site, job-by-job basis to determine the potential for exposure.

SECTION 5: ASSOCIATED SAFETY HAZARDS

Probability of Occurrence of Hazard:

- 1 Hazard may be present but not expected over background level
- 2 Some level of hazard above background level known to be present
- 3 High hazard potential
- 4 Potential for imminent danger to life and health

A. ELECTRICAL (LOCKOUT/TAGOUT)**RISK RATING: 2**

The Shot-Blast requires a 120 or 220 volt line for operation. Appropriate precautions, such as ground fault circuit interrupters, proper grounding, etc. need to be used. Proper lockout/tagout procedures need to be used when appropriate, i.e. during maintenance activities.

B. FIRE AND EXPLOSION**RISK RATING: 1**

Technology does not pose this hazard in and of itself but could not be used in an explosive environment due to the potential for sparking.

C. CONFINED SPACE ENTRY**RISK RATING: 1**

Not part of this technology unless the specific location where shot blast is being used is a confined space. In this case, confined space procedures would need to be followed.

D. MECHANICAL HAZARDS**RISK RATING: 3**

Use of large equipment and hand tools may pose the following: pinch points, struck by and caught between hazards and fall from above. The use of a mechanical, hand operated filter cleaning mechanism poses a pinch/crush hazard for fingers/hand.

E. PRESSURE HAZARDS**RISK RATING: N/A**

Not part of this technology.

F. TRIPPING AND FALLING**RISK RATING: 3**

Electric lines and vacuum hoses present potential hazards.

G. LADDERS AND PLATFORMS**RISK RATING: N/A**

Not part of this technology.

H. MOVING VEHICLE	RISK RATING: 3
The presence of multiple pieces of mobile equipment (used to unload and load the technology) in relationship to a small area of operation may pose a significant danger. Sufficient warning devices such as horns, bells, lights and back up alarms should be utilized. Personnel should be trained to work with and around moving equipment.	
I. BURIED UTILITIES, DRUMS, AND TANKS	RISK RATING: N/A
Not part of this technology.	
J. PROTRUDING OBJECTS	RISK RATING: N/A
Not part of this technology.	
K. GAS CYLINDERS	RISK RATING: N/A
Not part of this technology.	
L. TRENCHING AND EXCAVATIONS	RISK RATING: N/A
Not part of this technology.	
M. OVERHEAD LIFTS	RISK RATING: 4
Unloading and loading of technology may require overhead lifts or the use of a forklift. Proper precautions indicated.	
N. OVERHEAD HAZARDS	RISK RATING: 1
Would only be present if a crane were required to unload or load equipment.	

SECTION 6: ASSOCIATED HEALTH HAZARDS	
A. INHALATION HAZARD	RISK RATING: 3
Technology may produce dust from the concrete and concrete contamination. Specific hazards will be identified by the site characterization. At a minimum, evaluation of total dust and/or respirable dust generated should be conducted. The shot may also present an inhalation hazard, especially as it becomes pulverized.	
B. SKIN ABSORPTION	RISK RATING: 1
This would be dependent on the contaminants at the site and would be identified by the site characterization.	
C. HEAT STRESS	RISK RATING: 4
Ambient conditions, work rate, and PPE levels must be considered.	
D. NOISE	RISK RATING: 2
The technology presents a noise hazard.	
E. NON-IONIZING RADIATION	RISK RATING: N/A
Not part of this technology.	

F. IONIZING RADIATION	RISK RATING: 1-4
None associated with this technology, but the contaminated concrete may present a significant radiation exposure. This will be identified by the site characterization.	
G. COLD STRESS	RISK RATING: 1
Technology does not produce a hazard, but ambient conditions need to be considered.	
H. ERGONOMIC HAZARDS	RISK RATING: 3
Poses ergonomic hazards associated with lifting, bending, twisting, stooping, and kneeling. These may cause injury/strain to the back, knees, hips and/or legs.	
I. OTHER	RISK RATING: 3
Poses a hazard due to arm-hand vibration from operating the shot blast. This may lead to associated health problems such as Raynaud's syndrome.	

SECTION 7: PHASE ANALYSIS	
A. CONSTRUCTION/START-UP	
The set-up/start-up phase presents several hazards including pinch points, slips/trips/falls, struck by/caught between, falling from above, and muscular/back injury.	
B. OPERATION	
The operational phase presents several hazards including exposure to contaminant (airborne and from the surface), muscular/back injury, mechanical hazards, and exposure to noise and arm-hand vibration.	
C. MAINTENANCE	
The maintenance phase presents several hazards including pinch points, slips/trips/falls, struck by/caught between, muscular/back injury, electrical, exposure to contaminants (airborne and from the surface), and accidental activation of moving parts.	
D. DECOMMISSIONING	
The decommissioning phase presents several hazards, including exposure to the contaminant, pinch points, slips/trips/falls, and muscular/back injury.	

SECTION 8: HEALTH AND SAFETY PLAN REQUIRED ELEMENTS**A. AIR MONITORING**

When concrete is blasted, total dust and respirable dust need to be monitored. Monitoring also needs to be done for specific concrete contaminants and may need to be conducted for specific constituents of the concrete such as silica. In addition, noise monitoring is essential.

B. WORKER TRAINING

Training that would apply in this case may include but not be limited to: HAZWOPER (Hazardous Waste Operations and Emergency Response), HAZCOM (Hazard Communication), Respiratory Protection, Hearing Conservation, Ergonomics (proper lifting, bending, stooping, kneeling, and arm-hand vibration), specific training for equipment operation, CPR/First Aid/Emergency Response/Bloodborne Pathogens, Electrical Safety, Lockout/Tagout, Radiation Safety, Hand Signal Communication, Construction Safety (OSHA 500), and/or General Industry Safety (OSHA 501).

C. EMERGENCY RESPONSE

Emergency response planning for a site needs to assure adequate coverage for hazards described in the TSDS. Having at least one worker per shift trained in CPR and first aid is recommended.

D. MEDICAL SURVEILLANCE

Evaluation of personnel's general health with emphasis on the cardiovascular and respiratory system, back and peripheral nervous system. In addition, medical surveillance as required by OSHA standards must be conducted. If a hearing conservation program is required, initial and annual audiograms will be necessary.

E. INFORMATIONAL PROGRAM

Workers must be trained in specific operation of equipment before use.

SECTION 9: COMMENTS AND SPECIAL CONSIDERATIONS

Due to the noise produced, communication may become difficult. Personnel working in the area should be familiar with and use hand signals as necessary.

Only personnel who have been adequately trained in the operation of this technology should be permitted to operate and/or work with the equipment.