

MSA FACILITIES SAFETY AND HEALTH INSPECTION PROGRAM

SPRAY FINISHING USING
FLAMMABLE and COMBUSTIBLE
MATERIALS



Spray Finishing

At the completion of this unit you shall be able to:

1. Utilize section N of the Safety and Health Hazard Inspection Program Checklist to identify compliant and non-compliant safety behaviors.
2. Identify areas of concern requiring immediate action to mitigate or prevent a possible injury.

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Spray Finishing

Let's take a moment to talk about the subject of spray finishing in our facilities. While this type of hazard is not present in most of our facilities it is a potential hazard in a few of them. Spray finishing can produce two types of hazards, physical due to the potential of a fire (many materials are flammable or combustible) and health due to possible effects from the chemical itself.



Spray Finishing

For this reason we have controls over the design and use of our spray finishing operations. Let's take a closer look at the items involved in this section to understand these controls.



Spray Finishing

- Section N has 5 to 6 items dealing with spray finishing with flammable/combustible materials.
- Let's look closer at these items.

MSA GENERAL INDUSTRY-BASED SAFETY AND HEALTH HAZARD INSPECTION CHECKLIST

No.	Inspection Observations	Compliant? Y•N•N/A	See Comments (indicate with X)
8	Compressed Gas Cylinders are stored separately from flammable materials such as gasoline.		
9	Compressed Gas Cylinders containing flammable gases are stored in ventilated locations.		
10	Other.		
N	SPRAY FINISHING USING FLAMMABLE and COMBUSTIBLE MATERIALS		
1	Forced ventilation is provided for the area.		
2	Spray booth airflow is not obstructed.		
3	No ignition sources (e.g., open flames or spark-producing work) are in the area.		
4	Ventilation and electrical equipment is classified for "hazardous locations" (Class I, Division D).		
5	Fire control systems are operational.		
6	Other.		
O	EXPLOSIVES		
1	Explosives materials are labeled and stored in secured areas/vaults.		
2	Storage areas are posted with the hazard designation sign.		
3	A Hanford Fire Marshal Permit has been issued for the material. ***		
4	Other.		
O	PERSONAL PROTECTIVE EQUIPMENT (PPE)		
1	Appropriate PPE is selected, fitted, and used properly for protection against hazards identified.		
2	PPE is properly stored and maintained.		
3	Facility/work area-specific PPE requirements are known, or conspicuously posted in affected work areas.		
4	Other.		
P	SANITATION		
1	Non-potable water sources are adequately marked.		
2	Food and beverages ARE NOT consumed or stored in toilet rooms or in areas exposed to toxic materials.		
3	Toilet and shower facilities are adequate and maintained in a sanitary condition.		
4	Rodent, insect, and vermin control measures are in place and maintained.		
5	Potable water supplies are adequate.		
6	Appliances are clean and maintained.		
7	Other.		
Q	SAFETY COLOR CODE FOR MARKING PHYSICAL HAZARDS		
1	Emergency "STOP" switches are color-coded RED.		

Spray Finishing

1. Forced ventilation is provided for the area.
2. Spray booth airflow is not obstructed.
3. No ignition sources (e.g., open flames or spark-producing work) are in the area.
4. Ventilation and electrical equipment is classified for "hazardous locations" (Class I, Division I).
5. Fire control systems are operational.
6. Other.

Spray Finishing

1. Forced ventilation is provided for the area.

- ▣ This item deals with the necessity of ensuring that ventilation in spray finishing areas is designed to pull vapors away for workers and discharge in safe locations.
- ▣ This involves verifying that the ventilation fans are operable and that all ductwork is clean and functional.



Spray Finishing

1. Forced ventilation is provided for the area.
 - ▣ The basic design of a spray booth is to provide a means of drawing flammable, toxic, or otherwise undesirable particulate, droplets, fumes, or gases away from the location of the workers.
 - ▣ The spray booth we have is typically used when we spray finish small components.



Spray Finishing

1. Forced ventilation is provided for the area.

- ▣ We have forced air ventilation that must be energized prior to the spraying of the paint.
- ▣ A compliant rating would indicate the fan works.
- ▣ A non compliant rating indicates it doesn't.



Spray Finishing

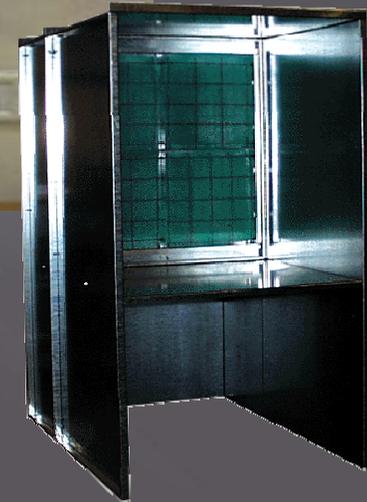
2. Spray booth airflow is not obstructed.

- The purpose of this item is to ensure that the spray booth is labeled and the air flow surfaces are not blocked.
- This is to ensure that the spray booth will function as designed.



Spray Finishing

2. Spray booth airflow is not obstructed.
- A compliant rating would indicate that the spray booth was labeled and that the ventilation path was not blocked.
 - A non compliant rating would indicate that the labeling was inadequate or the materials blocked the ventilation. The booth should not be used.



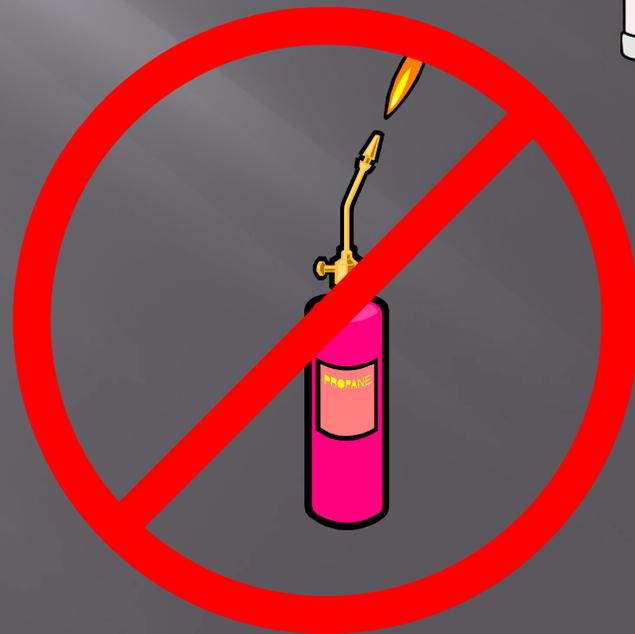
Spray Finishing

3. No ignition sources (e.g., open flames or spark-producing work) are in the area.
- The purpose of this item is to ensure that when paint or solvents are being sprayed that no ignition sources are present that could cause a fire.



Spray Finishing

3. No ignition sources (e.g., open flames or spark-producing work) are in the area.
- A compliant rating would indicate that there was no fire present when the booth was in use.
 - A non compliant rating would indicate that there was a potential ignition source, spraying operations should be stopped.



Spray Finishing

4. Ventilation and electrical equipment is classified for "hazardous locations" (Class I, Division I).
- Spray booths have the potential of placing flammable gases and liquids into the air. As such all electrical equipment located in rooms with the spray booth must be approved for Class I Div. I hazardous atmospheres. (Flammable gases will be present during use)



Spray Finishing

4. Ventilation and electrical equipment is classified for "hazardous locations" (Class I, Division I).
- This type of equipment is quite robust and designed to seal any potentially hazardous atmosphere from any spark or heat producing parts of motors, switches, lights, etc.
 - Questions about the required locations for the Class I Div. I equipment should be directed to the ES&H Group.



Spray Finishing

4. Ventilation and electrical equipment is classified for "hazardous locations" (Class I, Division I).
- A compliant rating would indicate that the electrical equipment met this requirements.



Spray Finishing

4. Ventilation and electrical equipment is classified for "hazardous locations" (Class I, Division I).
- A compliant rating would indicate that the electrical equipment met this requirements.
 - A non compliant rating would indicate that the electrical equipment was not as robust as it needed to be.



Spray Finishing

5. Fire control systems are operational.

- This item ensures that those areas with spray booths have a fire fighting suppression system. The most common is a sprinkler system but a near by dry chemical fire extinguisher would also meet the requirement.



Spray Finishing

5. Fire control systems are operational.

- A compliant rating would indicate that the room has a fire suppression/ extinguishing system in place.



Spray Finishing

5. Fire control systems are operational.

- A non compliant rating would indicate that the room has either no fire suppression/ extinguishing system in place or it is inoperable. Either case would require that operations cease until the situation was fixed.



Spray Finishing

- If at any time you have any questions about how to fill out the form or about the items on the form please contact your OS&H group.

**MSA GENERAL INDUSTRY-BASED SAFETY AND HEALTH
HAZARD INSPECTION CHECKLIST**

Facility: _____	Facility Representative: _____
Date: _____	Team Member: _____
Total Items Reviewed: _____	Team Member: _____
Total Non-Compliant Items: _____	Team Member: _____

No.	Inspection Observations	Compliant? Y·N·N/A	See Comments (indicate with X)
A	FIRE PROTECTION INSPECTION <i>(All issues must be observed as applicable see note 2)</i>		
1	Emergency Lights - Each unit must be operable when tested.		
2	Portable Fire Extinguishers (PFE) - Each unit is properly mounted, an inspection tag is in place and reflects through previous month, the pressure gauge is in the "green" zone (where applicable).		
3	PFE is not obstructed, is visible, and the seal is not broken.		
4	Sprinkler Clearance - Clearance between the sprinkler deflector and the top of any storage is 18 inches or greater.		
5	Fire Riser Pressure Gauge Inspection - Inspect gauges to verify pressure to the building and pressure held in the fire system. Typically both gauges will have similar pressure readings.		
6	Fire Risers - Access to fire system sprinkler risers and other system components must be unobstructed.		
7	Fire Riser Valve Inspection - Check all seals, position and supervision for broken seals or possible tampering.		
8	Post Indicating Valve Inspection - This valve will be located outside of the facility. It must be verified that the window on the side of the valve reads "OPEN".		
9	Exit Signs - Exit signs with an internal lighting source must be checked to ensure all lamps are functional. - Exit signs that use Tritium must be observed that they have not been damaged, all applicable labels are present, the sign has not expired, and it is not covered with another sign.		
10	Fire Doors - Identify that fire doors operate freely and latch securely upon closure. Fire doors must not be propped open.		
11	Ceiling Tiles - Where automatic sprinklers are installed drop ceiling tiles are in place. Missing tiles slow response of fire suppression sprinklers.		
12	Manual alarm stations are easily identified and readily accessible.		
13	Other.		
B	GENERAL SAFE BEHAVIORS		
1	Employees are taking the necessary safety precautions for the work being performed.		
2	Work is being performed such that collocated employees in the area are not exposed to occupational hazards or unsafe conditions.		

1 A-6004-299 (REV 2)

Thank you for your time
and desire to help us have
a safer workplace