Hazard Communication and MSDS Management at the John F. Kennedy Space Center

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Hazard Communication

An effective hazard communication program is a core element of any successful workplace health and safety program.

Each contractor and Federal agency at KSC is required to have their own written Hazcom program.
The HazCom program for NASA Civil Service employees is addressed in a management policy document that assigns implementation responsibilities at the organizational level and in a work center safety and health guide that provides supervisory level instruction for HazCom compliance.
Hazard Communication
Program Management/Training

HazCom training for Civil Service employees is incorporated into classroom and interactive online training that is required for all NASA personnel at KSC.

NASA employees assigned to work in a contractor-operated work area are also required to attend the contractor's HazCom training.
Hazard Communication
Program Management/SDS

NASA employees may be required to work in the vicinity of contractor operations where hazardous materials are used. NASA employees may review the SDSs through the KSC SDS Archive or by requesting the SDS from the operations contractor.
Hazard Communication
Program Management/SDS

Where an SDS is not available in the KSC SDS Archive, the work area supervisor is responsible for notifying the KSC SDS Coordinator to obtain the SDS and have it added to the Archive for Center-wide use.

KSC Contractors have the option of using the KSC SDS Archive or operating their own SDS management system.
Payloads and flight experiments that are brought onto KSC by the International Space Agency, Universities, or other Government Agencies often require the use of chemicals as a part of ground processing operations.
Payload customers are required to submit SDSs prior to the arrival of the hazardous materials at KSC and ensure that SDS are available at their work locations. Payload customers are not required to submit SDSs for materials supplied by NASA.
NASA civil service and contractors organizations are responsible for ensuring the proper labeling of containers under their control.
NASA shop and lab supervisors are responsible for ensuring that containers in their area have adequate labeling.

- If labels on existing containers are missing or illegible, replacement must be obtained and applied to the container.
- Recontaining is discouraged.
- Where needed, environmental health assists in preparation of labels.
NASA laboratories and contractors who operate labs at KSC are required to maintain their own Chemical Hygiene Plans.
Hazard Communication
Safety Data Sheets

• SDSs provide information on the chemical ingredients and hazards of every commercial product that contains hazardous chemicals.
• SDSs also provide information on safety precautions and what to do in an emergency, such as first aid.
• OSHA requires every manufacturer and importer to provide SDSs for their products.
• OSHA also requires employers to keep a list of SDSs and make them available to workers.
Hazard Communication

The Challenge

• 500+ work locations
• 200+ square miles
• 9000+ employees
• multi-employer worksite with 40-50 government and contractor organizations
• independent procurement and distribution
• 30000+ Safety Data Sheets
• add about 5000 new SDSs each year

How do you ensure effective hazard communication?
Hazard Communication

What OSHA Expects

• Make a list of all your chemicals (from liquid paper to rocket fuel)
• Get SDSs (all 30000 of them) from the vendors…and lots of file cabinets to keep them in.
• Make lots of copies
• Send a set to each work location
• Keep everything up to date
• Communicate between employers at worksite
SDS Management
Opportunities for Improvement

• Maintenance of multiple SDS collections
• Duplication of effort
• Time delays
• Emergency response
• SDS sharing
SDS Management
KSC SDS System

- Resident on Internet Server
- Searchable Index on KSC SDS Home page
- SDS Accessible Using Web Browser
- SDSs stored as PDF images
- SDS Sharing among KSC organizations
- Direct SDS data transmittal from vendors
SDS Management

Website Security

KSC Access
- Protects server against intrusion
- Accessible by administrators for file management

Access List
- Limit access to KSC users

Data Backup
- Service provided by SDS provider
SDS Management

Process Improvements

- Centralized management of SDSs
- 24 hour access from any location
- Minimization of data management costs
- Elimination of time delays in SDS issuance
- Real-time availability to emergency responders
- SDS sharing among organizations
<table>
<thead>
<tr>
<th>Product</th>
<th>Revision Date</th>
<th>CAS #</th>
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<tbody>
<tr>
<td>TT-P-1952B YELLOW TRAFFIC PNT</td>
<td>02/19/1992</td>
<td>9</td>
</tr>
<tr>
<td>Manufacturer: GRIGGS PAINT</td>
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<tr>
<td>TT-P-1952B WHITE TRAFFIC PNT.</td>
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<tr>
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<td>SuperKote Traffic paint 71-157 Yellow</td>
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<td>Rubber Base Traffic Paint G251-157</td>
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<td>Fuller-O'Brien Traffic Paint</td>
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<td>Manufacturer: RICHARD'S PAINT MFG CO INC</td>
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<tr>
<td>SET FAST® Water Borne Traffic Marking Paint, Black Type 1</td>
<td>05/10/1994</td>
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</table>
# MATERIAL SAFETY DATA SHEET

**FOR COATINGS, RESINS AND RELATED MATERIALS**
(Approved by U.S. Department of Labor “Essentially Similar” to Form OSHA 22)

**Paint Division**
Ace Hardware Corporation
21901 South Central Avenue
Matteson, Illinois 60443

**DATE OF PREP**
10/1/96

**EMERGENCY TELEPHONE NO.** 312/720-0600
**INFORMATION TELEPHONE NO.** 312/720-0600

## SECTION I

**PRODUCT NUMBER:** 133A111

**PRODUCT NAME:** 5-Star Latex Exterior Redwood Stain *  
**PRODUCT CLASS:** Latex Stain Paint

**DECREIVED**  
**JUN 28 1991**  
**Trade Mark**

## SECTION II — HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS #</th>
<th>PERCENT</th>
<th>OCCUPATIONAL EXPOSURE LIMITS</th>
<th>VAPOR PRESSURE</th>
<th>TOXICITY DATA</th>
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<tbody>
<tr>
<td>2-Amino-2-Methyl-1-Propanol</td>
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<td>&lt;0.2</td>
<td>10ppm 20ppm</td>
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<td>Ethylene Glycol</td>
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<td>50ppm 50ppm</td>
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<tr>
<td>Ammonia</td>
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<td>&lt;0.1</td>
<td>25ppm 35ppm</td>
<td>290.0</td>
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**PH 8.5-9.0**
Hazard Communication

Questions?