



HAZARDOUS LOCATION CERTIFICATION

MOTOTRBO[™]

BUILDING EFFICIENCY. GROWING ECONOMIES.

AGENDA





HAZARDOUS LOCATION BACKGROUND

CHANGES IN STANDARDS

COMMUNICATION AND NOMENCLATURE

WHAT YOU NEED TO DO DIFFERENTLY





HAZARDOUS LOCATION BACKGROUND

REQUIREMENT





WHO DETERMINES THE REQUIREMENT?

- Jurisdictional authorities
- Fire marshals
- Insurance providers
- Facility safety experts

Different ratings for different environments

CLASS, DIVISION, GROUP



Classes

- Class I: Flammable Gases, Vapors, or Liquids
- Class II: Combustible Dusts
- Class III: Ignitable Fibers and Flyings

Division (Area Classification)

- Division 1: Locations where ignitable gas/vapor/liquid/dust present continuously or some of the time under normal operating conditions
- Division 2: Locations where ignitable gas/vapor/liquid/dust are not likely to exist under normal operating conditions

Groups (Organized by Classes)

- Class I Gas Groups
 - Group A Acetylene and equivalent gas groups
 - Group B Hydrogen and equivalent gas groups
 - Group C Ethylene and equivalent gas groups
 - Group D Methane, and equivalent gas groups
- Class II Dust Groups
 - Group E Conductive dust (mechanical factories, recyclers)
 - Group F Combustible carbon dust (charcoal & coke dust) above ground only
 - Group G Grain dust
- Class III Fibers has no sub-groups

Example

"Class I, Div 1, Group C, D"

Ethylene and Methane expected to be present continuously

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DIVISION OR ZONE



• Two different methods of specifying area: Divisions and Zones

NEC 500	NEC 505
Division 1: Where ignitable concentrations of flammable gases, vapors, or liquids can exist all the time or some of the time under normal operating conditions.	Zone 0:Where ignitable concentrations of flammable gases, vapors, or liquids are present continuously or for long periods of time under normal operating conditions.Zone 1:Where ignitable concentrations of flammable gases, vapors, or liquids are likely to exist under normal operating conditions.
Division 2: Where ignitable concentrations of flammable gases, vapors, or liquids are not likely to exist under normal operating conditions.	Zone 2: Where ignitable concentrations of flammable gases, vapors, or liquids are not likely to exist under normal operating conditions.



WHAT IS CHANGING?

FM STANDARD UPDATED





- FM 3610_88 certifications for LMR radios will expire 31st December 2015
- FM 3610_10 is more stringent standard and designed to harmonize (IEC) International standards.

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TRANSITION





- Motorola will be transitioning to a new standard: TIA 4950, which is similar to the FM 3610-88
- Compliance testing will be done by UL (Underwriters' Laboratories) or National Recognized testing lab, NRTL.
- FM 3610-88 radios can continue to be manufactured through the end of 2015
- TIA 4950 compliant DM4000 Series radios will be available 2015

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EXISTING RADIOS





- Fielded radios maintain Approvals status providing the radio repairs are done FM audited site.
- FM Approved Batteries and accessories replacements will continue be sold

IS CANADA AFFECTED?



- There are no immediate changes to the Canadian Standard CSA 157.
- HazLoc certifications done by UL or NRTL will tested to TIA4950 and CSA 157.
- Products will be marked with the Logo below. The CSA Logo will not be applied to the new recertification Approval label

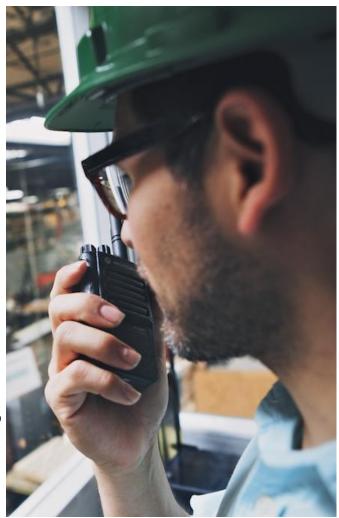




WHAT YOU SHOULD DO DIFFERENTLY

PRECISION IN NAMING

- FM Approvals (FM)
 - FM is a private company that certifies and test product and writes standards
 - UL is also a private company that certifies and test product and writes standards.
 - Nationally Recognized Testing Lab, NRTL Test to Hazard Location standards.
- "Intrinsically Safe" is a design protection method for Division 1
 - Future standards and product markings could refer to Haz Loc Class 1 / Division 1
- Division 1, refers to Hazard Classified Areas Gases, Vapors, Dust.



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- Ensure your company documentation does not simply refer to "FM standard" equipment
 - Insurance documents
 - Standard Operating Procedures
 - Health and Safety approvals
 - Employee training
- Understand the terminology:
- TIA4950 LMR Hazard Location standard.
 - "Hazardous Location" product requirement: Class/Division/Group
- Update ordering information for new TIA compliant radios











- FM Intrinsically Safe standard is changing from 3610-88 to 3610-10
- The FM 3610_10 standard is designed to harmonize with international (IEC) standards
- FM Approved Products in the field maintains certification. Current twoway radios certified to 3610-88 will continue to be manufactured through Dec 2015
- Motorola will transition to the TIA 4950 standard for new products and existing Division 1 Class I portfolio in 2015,
- You need to ensure your company safety and insurance policies are ready for this change



THANK VOU