



ITALY'S MINISTRY OF DEFENCE
AIR ARMAMENTS GENERAL DIRECTORATE
TECHNICAL COORDINATION GENERAL OFFICE
3rd Office

PREPARATION OF THE MANUAL "-60"
CONCERNING THE MANAGEMENT OF
HAZARDOUS MATERIALS

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ATTENTION: This standard is valid if composed of the pages listed below, duly updated.

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1. SCOPE

1.1 INTRODUCTION

European Community (EC) directive 374 issued in 1985 and subsequent amendments radically reformed the rules and regulations governing damages caused by defective products, extending them not only to damages originating from defects but also to damages due to lack of information on composition and use of mentioned products.

The aforesaid EC directive is based upon the basic principle that any industrial product must be used under safe conditions. Standard UNI-EN ISO 9000/1 further clarifies the EC directive, by imposing that the manufacturer must identify the safety regulations applicable to the individual product and provide the user with the cautions/warnings associated with the use/maintenance of the materials, especially hazardous ones.

According to the above, the manufacturer's contractual responsibility regarding the product appears clear, as well as his/her obligation to provide all of the information required to use/maintain the product safely.

Therefore, within the frame of the various supply contracts stipulated with the ITA MOD, the different companies involved (Contractors, subcontractors, vendors) are required to clearly identify the possible hazardous materials and provide indications on how to deal with them.

1.2 MANUAL FOR MANAGING HAZARDOUS MATERIALS.

The Manual for managing hazardous materials (herein referred to as "-60 Manual") is intended to be a summary of the contents, concerning safety aspects, on the use of hazardous materials foreseen by the various maintenance manuals.

It is, therefore, a useful reference and summary where users can find the information relative to possible risk areas, solutions, emergency cases and potentially hazardous materials (as detailed in para XX, potentially hazardous material are materials that are not normally considered hazardous but may become such after extraordinary events or particular conditions (e.g. fire, corrosion, explosion, etc.) happen to a given Weapon System (WS). Therefore, the -60 Manual covers the information relative to the precautions to be taken during normal use and in the cases of extraordinary events.

Each individual WS shall be provided with a dedicated -60 Manual (e.g. AER.1F-PA200-60 designated the "Manual for managing hazardous materials applicable to the TORNADO aircraft").

2. DOCUMENTS

The following documents, in the edition valid on the date the offers are submitted, are part of the standard.

2.1 APPLICABLE DOCUMENTS

AER.P-101 General style and presentation requirements for preparation of the formats of the technical manuals.

AER.P-102 General requirements for printing technical manuals.

AER.P-103 Covers and binders for technical manuals.

AER.P-106 General information on the Interactive Electronic Technical Publications (IETP) that fall within the competence of Armaereo

AER.P-170 Definition of the general requirements of the Interactive Electronic Technical Publications (IETP) that fall within the competence of the ITA MOD Air Armaments General Directorate

S1000D International Specification for Technical Publication utilising a Common Source Data Base

3. REQUIREMENTS

3.1 GENERAL INFORMATION

The -60 Manual must contain all of the information/references required for identification, safe use, storage and disposal of the materials identified as “hazardous” and subject to the regulations/laws for safety and health protection of workers and protection of the environment.

The -60 Manual must also contain all the information relative to those materials of an WS which, even though not identified as hazardous during normal use, may become so in the presence of particular situations or extraordinary events, providing the possible solutions if said events should occur.

For precautions during use, storage, disposal, etc. of hazardous materials, the -60 Manual shall refer the user, for the materials which it applies to, to the individual Material Safety Data Sheets (MSDS) or, if available, to the applicable Technical Publication.

3.2 ARRANGEMENT

The -60 Manual must be structured as follows:

- Introductory pages:
 - Title Page
 - List of valid pages
- Preliminary Remarks
- Table of Contents
- List of figures
- List of tables
- List of incorporated PTDs and PTAs
- List of Incorporated Supplements

- List of incorporated SIP22/SIPE22s
- Chapter 1 - General information
- Chapter 2 - Lists of hazardous materials
- Chapter 3 - List of materials that are potentially hazardous subsequent to particular situations or extraordinary events
- Chapter 4 - Indices:

3.2.1 Introductory pages.

As far as the introductory pages, AER.P-101 and AER.P-170 requirements are applicable.

3.2.1.1 Preliminary Remarks

The Preliminary Remarks must provide an explanation of the Manual's aims and structure, as well as all the information that might improve its use under all aspects.

3.2.1.2 List of incorporated PTDs and PTAs

The outline of the List of incorporated Technical Change Proposal (PTDs – Prescrizione Tecnica Ditta) and Technical Change Orders (PTAs - Prescrizione Tecnica Applicativa) must follow the Preliminary Remarks, even if there is no PTD or PTAs listed, as shown in Standard AER.P-101.

3.2.1.3 List of incorporated supplements

The outline of the List of incorporated Operational Supplements (SO – Supplementi Operativi), Safety Supplements (SS) and Publication Page Supplements (SPP – Supplementi a Pagina di Pubblicazioni) must follow the Preliminary Remarks, even if there are no SO/SS/SPPs listed, as shown in Standard AER.P-101.

3.2.1.4 List of the SIP22s and SIPE22s

The outline of the List of incorporated SIP22/SIPE22s must follow the Preliminary Remarks, even if there are no SIP22s and SIPE22s listed, as shown in Standard AER.P-101.

3.2.2 Chapter 1 - General information

Chapter 1 of the -60 Manual shall provide all of the general information, such as:

3.2.2.1 Standards

A list that indicates the applicable regulatory/legislative references concerning protection of the environment and safety at work.

3.2.2.2 Danger Classes

The descriptions of the danger classes and their possible classification (Legislative or IATA).

3.2.2.3 General Information

Descriptions and possible general precautions/behaviours on the use of the hazardous materials, including areas or systems or equipment that are potentially dangerous due to particular or extraordinary events (e.g. dangerous areas of the radar, etc.).

3.2.2.4 Personal Protective Equipment (PPE)

Any information concerning PPE (Dispositivi Protezione Individuale - DPI).

3.2.3 Chapter 2 - Lists of hazardous materials

Chapter 2 of the -60 Manual shall be subdivided into the following three (3) sections:

- **Section 1** - This section shall contain a list of the systems (organised in accordance with AER.P-105) that make up the S.A. with the relative general indications on the precautions to be followed during normal use and maintenance, indicating the reference to other technical publications (if applicable) containing the specific or detailed safety instructions.
- **Section 2** - This section shall contain a list of the dangerous on board/AGE equipment, organised by Part No, with the relative general indications on the precautions to be followed during normal use, the maintenance and repair operations, indicating the reference to possible other applicable technical publications containing the specific or detailed safety instructions. As regards the on board equipment, its location on the WS must also be indicated.
- **Section 3** - This section shall contain a list of all hazardous materials (e.g. consumables) used on the WS for normal use or during maintenance. The list shall be organised by Part Number or by standard/specification assigned to the material and must give the following information:
 - Name
 - Reference specification (if applicable) (Italian, USA, commercial)
 - Reference to any MSDS contained in the product packages, which shall provide the detailed information.
 - Any other information considered necessary that is not included in the safety data sheet.
 - Location in the WS
 -

3.2.4 Chapter 3 – List of on board/AGE materials/equipment that can potentially become dangerous subsequent to extraordinary events or particular conditions.

Chapter 3 of the -60 Manual shall describe the materials that are normally not hazardous but that may become hazardous, for the environment and/or persons, under given events/circumstances. Chapter 3 shall include the following:

- type of event/circumstance that could turn a material into an hazardous material
- type of material/equipment involved
- location in the WS
- description of the danger
- behaviour rules and safety instructions to follow in order to mitigate and eliminate the risk
- references to any applicable technical publications/documentation containing the detailed information.

Extraordinary event:

- Fire: Hazard following fire of the entire WS or part of it whose combustion generates fumes or substances that are hazardous for persons and/or the environment.
- Explosion: Hazard following explosion with disintegration of the entire WS or part of it that may generate dusts or substances that are hazardous for persons and/or the environment.
- Accident: Hazard following an accident in flight or on the ground of the entire WS or part of it that may cause the dispersion of substances that are hazardous for persons and/or the environment.

Particular conditions:

- Storage: hazard following particular storage, environmental, climatic, quantitative conditions, etc. (e.g. hazard developed when the maximum storable quantity has been exceeded).
References to any applicable technical publications/reference documentation containing the detailed information must be indicated.
- Erosion of components: hazard following the action, under particular environmental conditions, of erosion-causing phenomena (e.g. erosion due to atmospheric agents, sand, etc.), generating particulate or

other substances that are hazardous for persons and/or the environment.

- Erosion of components: Hazard following corrosive phenomena that generate substances that are hazardous for persons and/or the environment.

3.2.5 Chapter 4

Chapter 4 of the -60 Manual shall provide at least the following indices:

- Index of the zones which the WS is subdivided into (in accordance with specification S1000D). The materials, hazardous on-board equipment (see Chapter 2) and potentially hazardous materials (see Chapter 3) must be listed for each zone.
- Index by Part Number or standard/specification of the on-board equipment, AGE, hazardous materials (see Chapter 2) and of the potentially hazardous ones (see Chapter 3).

4. ACRONYMS

| | |
|------|---|
| AGE | Aircraft Ground Equipment |
| EC | European Community |
| IETP | Interactive Electronic Technical Publications |
| MSDS | Material Safety Data Sheet. |
| PPE | Personal Protective Equipment |
| PTA | Prescrizione Tecnica Applicativa |
| PTD | Prescrizione Tecnica Ditta |
| SO | Operational Supplement |
| SPP | Publication Page Supplement |
| SS | Safety Supplement |
| WS | Weapon System |