MINISTRY OF DEFENCE

Secretariat General of Defence and National Armaments Directorate
Directorate of Air Armaments and Airworthiness

GUIDELINE FOR HANDLING AND USING CHEMICALS PECULIAR TO AERONAUTICS (PCPA)

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1. PART 1 - GENERAL

1.1 Introduction

The management of aeronautical chemicals (commonly called consumable products peculiar to aeronautics – PCPA – *Prodotti di Consumo Peculiari Aeronautici*) is a complex activity due to the technical and legal implications that regulate their use.

The regulations are focused on ensuring that technical characteristics and quality of those products are preserved and that the user safety and environment requirements are observed.

The technical characteristics of these materials are set out in the aeronautical technical regulations with particular regard to those that provide guidance on:

- the interaction between these chemicals and aeronautical materials, for aspects related to flight safety;
- the tests that allows to observe the behaviour and the interaction effects over time..

The consumable products peculiar to aeronautics are:

- adhesives;
- sealants;
- solvents;
- detergents;
- protective chemicals;
- lubricants;
- hydraulic fluids;
- paint strippers/paint remover;
- painting systems and similar materials;

used in aircraft maintenance (painting, cleaning, non-destructive tests) and for the protection of the various components (airframe, engine, structural parts, on-board systems, mechanical equipment and avionics, etc.).

The PCPAs are shown and described in the technical manuals (technical publications 3rd category in accordance with the AER(EP).0-0-2) supplied to users of the aircraft and accepted by the Directorate of Air Armaments and Airworthiness "DAAA" pursuant to Ministerial Decree 22 June 2011.

These products, which are part of the procedures contained in the technical manuals, contribute to the aircraft "continuing airworthiness".

1.2 Purpose

This TP, which is part of a particularly vast and complex regulatory framework, ranging from Technical Regulations, under the responsability of the DAAA, to national and/or local Laws and Regulations concerning the personnel's safety and protection of the environment, has the purpose to:

- regulate the management of the PCPAs, subject or not to expiration;
- put in place standard procedures for the acquisition of PCPAs and their disposal of in order to promote a consistent conduct in the aeronautical field on such a sensitive domain.

This TP cannot be considered a replacement of any part of the applicable laws and regulations in force nor alters the obligations and personal responsibilities set out thereby.

1.3 Reference documents

a. D.M. n. 200 del 14/04/2000 "Regolamento concernente il capitolato generale d'oneri per i contratti stipulati dall'Amministrazione della difesa" *[Regulation concerning the general conditions for contracts awarded by the Defence Administration]*;

b. D.P.R. 27/4/1955 n. 547 "Norme per le prevenzione degli infortuni sul lavoro" *[Regulations for the prevention of accidents at work]*;

c. D.P.R. 19/3/1956 n. 303 "Norme per l'igiene del lavoro" *[Occupational hygiene rules]*;

d. D.Lgs 09/04/2008, n. 81 "Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro" *[Implementation of Article 1 of Law 123 of 3 August 2007, regarding the protection of workplace health and safety]*;

e. D.M. 14/06/2000, n. 284 "Regolamento di attuazione dei D.Lgs. n°277/1991, D.Lgs. n. 626/1994 e D.Lgs. n. 242/1996 in materia di sicurezza dei lavoratori sui luoghi di lavoro nell'ambito del Ministero della difesa." *[Regulation for implementing Legislative Decree 277/1991, Legislative Decree 626/1994 and Legislative Decree 242/1996 regarding occupational safety of workers within the Ministry of Defence]*;

f. Legge 5/03/1963 n. 245 "Limitazione per l'impiego del benzolo e i suoi omologhi nell'attività lavorative" *[Limitation for the use of benzol and its homologues in work activities]*;

g. D.Lgs 03/04/2006 n. "Norme in materia ambientale" *[Rules on the environment];*

h. D.M. 3/12/1985 e successivi emendamenti ed integrazioni "Classificazione e disciplina dell'imballaggio e dell'etichettatura delle sostanze pericolose, in attuazione delle direttive emanate dal Consiglio e dalla Commissione delle Comunità Europee" *[Classification and regulations of the packaging*

and labelling of dangerous substances implementing the directives issued by the Council and by the Commission of the European Communities];

i. Legge 29/10/1987 n. 441 “Conversione D.L. 31/08/1987 n. 361 recanti disposizioni urgenti in materia di smaltimento dei rifiuti” *[Conversion of Legislative Decree 361 of 31 August 1987 bearing urgent provisions concerning waste disposal]*;

j. Legge 9/11/1988 n. 475 “Conversione in legge con modificazioni del D.L. 9/09/1988 n. 397, recante disposizioni urgenti in materia di smaltimento dei rifiuti industriali” *[Conversion into law with modifications of Legislative Decree 397 of 9 September 1988 laying down urgent provisions regarding the disposal of industrial waste]*;

k. D.Lgs. 152/06 “Norme in materia ambientale” *[Rules on the environment]*; Legge 475/88 “Catasto Rifiuti” *[Waste Catalogue]*; D.M. 2/5/06 “Registro di carico e scarico dei rifiuti” *[Waste loading and unloading register]*;

l. D.M. 28/04/1998 n. 406 “Regolamento recante norme di attuazione di direttive dell’Unione Europea, avente ad oggetto la disciplina dell’Albo nazionale delle imprese che effettuano la gestione dei rifiuti” [*Regulation laying down detailed regulations for the implementation of the directives of the European Union concerning the regulation of the National Registry of Companies that deal with waste management]*;

m. D.M. 14/12/1992 “Definizione delle elaborazioni minime obbligatorie, delle modalità di interconnessione e dei destinatari delle informazioni, relativi ai dati del catasto nazionale dei rifiuti” *[Definition of the compulsory minimum processing of interconnection arrangements and recipients of information on the data of the national waste registry]*;

n. Legge 28/12/1993 dell’ambiente” e n°.549 “Misure a tutela dell’ozono stratosferico" *[Measures for the protection of the ozone layer]*; DM 20/09/2002 “Attuazione Art. 5 della Legge 549 Misure a tutela dell’ozono stratosferico” [*Implementation of Art. 5 of Law 549 Measures for the protection of the ozone layer]*; Legge n° 179 del 16/06/97 “Modifiche alla Legge 549 Misure a tutela dell'ozono stratosferico e dell'ambiente” *[Amendments to Law 549 Measures for the protection of the ozone layer and the environment]*;

o. EEC Directive 94/69/EC of 19 December 1994 "Commission Directive adapting to technical progress for the twenty-first time Council Directive 67/548/EEC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances";

p. D.P.C.M. 17/01/1996 n. 137 “Regolamento recante modificazione al regolamento sulla disciplina per il trasporto ferroviario dei rifiuti speciali, tossici e nocivi, classificati dal D.P.R. 10/09/1992, n. 915, adottato con D.P.C.M. 7/06/1991 n.308” [*Regulation amending the regulation on*

discipline for rail transport of special, toxic, and harmful waste, classified by Presidential Decree 915 of 10 September 1992, adopted with Prime Minister's Decree 308 of 7 June 1991];

q. D.L. 10/02/1996 n. 56 "Modifiche alla Legge 549/1993" *[Amendments to Law 549/1993]*;

r. D.Lgs. 3/02/1997 n. 52 "Attuazione della Direttiva 92/32/CEE concernente classificazione, imballaggio ed etichettatura delle sostanze pericolose" *[Implementation of Directives 92/32/EEC on classification, packaging and labelling of dangerous substances]*;

s. D.Lgs. 5/02/1997 n. 22 "Attuazione delle Direttive 91/156/CEE sui rifiuti pericolosi e 94/62/CEE sugli imballaggi e sui rifiuti di imballaggio" *[Implementation of Directives 91/156/EEC on hazardous waste and 94/62/EEC on packaging and packaging waste]*; D. Lgs. 152/06 "Norme in materia ambientale" *[Rules on the environment];*

t. Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations; Directive 1272/08/EC on the classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation no. 1907/2006/EC;

u. D.Lgs. 02/02/2002, n. 25 "Attuazione della direttiva 98/24/CE sulla protezione della salute e della sicurezza dei lavoratori contro i rischi derivanti da agenti chimici durante il lavoro" *[Implementation of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work]*; D.Lgs. 81 del 09/04/2008 "Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro" *[Implementation of Article 1 of Law 123 of 3 August 2007 regarding the protection of workplace health and safety]*;

v. D.Lgs. 25/02/2000, n. 66 "Attuazione delle direttive 97/42/CE e 1999/38/CE, che modificano la direttiva 90/394/CEE, in materia di protezione dei lavoratori contro i rischi derivanti da esposizione ad agenti cancerogeni o mutageni durante il lavoro" *[Implementation of Directives 97/42/EC and 1999/38/EC, amending Directive 90/394/EEC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work]*; D.Lgs. 81 del 09/04/2008 "Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro" *[Implementation of Article 1 of law 123 of 3 August 2007 regarding the protection of workplace health and safety]*;

w. D.M. 07/09/2002 "Recepimento della direttiva 2001/58/CE riguardante le modalità della informazione su sostanze e preparati pericolosi immessi in

commercio" *[Implementation of Directive 2001/58/EC regarding the methods of information on dangerous substances and mixtures placed on the market]*; Directive 1272/08/EC on the classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation no. 1907/2006/EC;

z. D.Lgs. 65/03 "Attuazione delle direttive 1999/45/CE e 2001/60/CE relative alla classificazione, all'imballaggio e all'etichettatura dei preparati pericolosi" *[Implementation of Directives 1999/45/EC and 2001/60/EC on the classification, packaging and labelling of dangerous mixtures"]*; Directive 1272/08/EC on the classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation no. 1907/2006/EC.

The legislation listed above is not to be considered exhaustive for the subject.

Therefore, consult the Official Journal of the Italian Republic (Gazzetta Ufficiale della Repubblica Italiana) and the Official Journal of the European Community also in relation to updates or amendments of these laws and directives.

For updated information on the legislation and the Adaptations to Technical Progress (ATP) of Directive 67/548/EEC of 27 June 1967, it is advisable to contact the local Prevention and Protection Service of one's own Agency (Directive SMA-LOG-002) and consult the following websites:

- Istituto nazionale Assicurazione Infortuni sul Lavoro (INAIL) *[National Institute for Insurance Against Occupational Accidents]* http://www.ispesl.it
- Istituto Superiore di Sanità [http://www.iss.it
- Ministero delle Attività Produttive *[Ministry for Productive Activities]* http://www.minindustria.it
- Ministero della Salute *[Ministry of Health]* http://www.sanita.it
- Parlamento Italiano *[Italian Parliament]* http://www.parlamento.it
- ECHA European Chemical Agency http://echa.europa.eu/

1.4 Applicability

This TP applies to all PCPAs used on/for configuration items of aircraft registered in the DAAA's Registry of Military Aircraft, including those CIs of the peculiar Aircraft Ground Equipment (AGE) (Type 1 AGEs).

1.5 Validity

This TP will come into effect upon its approval.

1.6 Definitions

All the abbreviations, the terms and expressions present in TP AER.Q-2010 apply to this TP plus the following specific ones:

- **ASTM** American Society for Testing Materials
- **CER** Codice Europeo dei Rifiuti (*European Waste Code*)
- **CLP** Classification, Labelling and Packaging (Reg. EC 1272/2008)
- **E.C.H.A.** European Chemicals Agency
- **EN** Standards issued by the European Committee for Standardisation
- **ISO** International Organization for Standardization
- **PAQ** Piano Assicurazione Qualitá (*Quality Assurance Plan*)
- **PCPA** Prodotti Chimici Peculiari Aeronautici (*Chemicals peculiar to aeronautics)*
- **QPL** Qualified Product Listing
- **REACH** Registration, Evaluation, Authorisation and Restriction of Chemical substances
- **SIS.T.RI.** Sistema Tracciabilità Rifiuti (*Waste Tracking System)*

2. Part 2 - PCPAs CHARACTERISTICS

2.1 General Information

PCPAs, identified and described in the Technical Manuals of the aircraft, of the equipment and of the maintenance equipment (AGE), accepted by the DAAA, are selected by the SDR/Manufacturer of the weapon system (SDR and/or the Manufacturer of the equipment and/or of the AGE) after having verified:

- their physical-chemical characteristics,
- their compatibility with the system on which they are used,
- complete fulfilment of the intended function.

Only the SDR that holds the engineering responsibility of the aircraft, of the equipment and of the relative AGE, can change the type of product to be used in maintenance, proposing, in accordance with the procedures in force, the appropriate update of the corresponding Technical Manual.

2.2 Technical and quality characteristics

PCPAs are classified for use through a series of laboratory tests that make it possible to verify the characteristics declared by the manufacturer.

Such tests may be performed according to various protocols such as: ASTM (American Society for Testing and Material), EN (European Norms), ISO (International Standard Organization), etc.

Products that have passed the tests required by a MIL spec or by a manufacturer's specification can be entered in the Qualified Product List (QPL), managed by the competent certifying Authority, a list that is of

extreme importance for users since it ensures that the product purchased is compliant with the technical characteristics set out by the corresponding specification.

The QPL, in addition to the products' technical details, gives information on the producer and the factory that produce them.

The identification of a PCPA shall be carried out by ensuring:

- the correctness of the data of the product identified on the market with respect: to what is stated in the technical documentation supplied by the manufacturer of the aircraft or the requirements provided by the reference MIL or other documentation on the aircraft configuration;
- the identification details of the product with respect to its production batch;
- the correctness of the results contained in the reports of the test performed on the batch sample;
- if required by the specification, the recording of the product in the Qualified Product List;
- the correctness of the information provided: in the safety data sheet, that accompanies each product, the reliability of the test reports and certificate of conformity that accompanies each production batch and of the data contained in the copy of the product's QPL entry, when it is referred to in the reference specification.

2.3 Safety Features

The Legislation in force dedicate great attention to the safety of personnel using PCPAs, to protect human and surrounding environment, and to the disposal thereof.

In recent years, the topic has been a long-standing concern of the European Union (EU).

The hard work of the experts of the Member States led to the adaptation to technical progress of legislation on chemicals and to establish a European Agency (ECHA) to control chemical substances marketed in the European area that operates by:

- a regulation called REACH that defines the procedures to register, evaluate, authorise and restrict chemicals' use, created to promote technological progress and innovation of environmentally friendly products, while maintaining the competitiveness of the European chemical industry.

  The regulation, as it was conceived, is a valuable tool to ensure that the companies that produce and import chemicals, unambiguously point out the risks arising from their use, making it possible to adopt the measures needed for the proper industrialization of the product;

- The European Chemicals Agency ECHA is based in Helsinki and is responsible at European level for the day-to-day management of the

issues relating to the manufacture and marketing of chemicals and in particular to the following aspects:

- technical, scientific and administrative as relate to safety;
- procedures for registering substances, playing a key role in the evaluation process;
- relating to the standardization of behaviour and of decisions at European Community level;
- relating to the disclosure of the list of "potentially problematic" products called "list of candidate substances of very high concern for authorization" (SVHC).

The REACH regulation, complemented by Regulation (EC) no. 1272/2008 on classification, labelling and packaging of substances and mixtures (so-called CLP), has replaced over 40 Community Directives and Regulations and is applicable to all chemical substances manufactured or imported, marketed or used as such or in mixtures.

As regards the registration of substances, it is emphasized that the REACH regulation requires that, lacking this registration, the substance may not be used in a production cycle and/or marketed in Europe.

The registration requires industry (manufacturers and importers) to provide information on the properties, the uses and the precautions for use of the chemical substances (technical dossier).

The information required is proportional to the production volumes and to the risks that a substance poses.

The safety information is passed down the entire supply chain, so to allow those using chemicals in their production processes, to produce other products or items, can do so in a safe and responsible way, without jeopardising the health of workers and consumers and without risking for damage to the environment.

The data sent include, inter alia, the identification, the composition and the properties of the substances, the measures to be taken for its safe use and transportation, the measures to be taken in case of fire or accidental dispersal, and toxicological and ecological information.

The users shall assess the chemical safety of the substances, based primarily on information from their suppliers and stated on the safety data sheet, and shall take appropriate risk management measures.

The substances that pose a risk to human health or the environment are in a specific list.

The substances subject to restrictions are continuously monitored by the European Commission, in particular concerning special uses.

The aim is to ensure the possibility of adequately managing the risks associated with these substances and their gradual replacement with other less risky substances or appropriate technologies, when economically and technically suitable alternatives exist.

The Agency publishes and regularly updates a list of substances ('list of candidate substances') identified as having characteristics of serious concern, that includes substances as:

- CMR (substances classified as carcinogenic, mutagenic and toxic for reproduction);
- PBT (substances that are persistent, bioaccumulative and toxic);
- vPvB (substances that are very persistent and very bioaccumulative);
- so-called problematic substances due to their irreversible serious effects on humans and the environment, such as endocrine disrupters.

The application of Community regulations on occupational safety and environmental protection, such as the adaptations to technical progress in compliance with EEC Directive 67/548, has produced and is producing the desired effects by encouraging the industry to seek new innovative and environmentally friendly mixtures, to replace certain obsolete and/or dangerous consumable products.

2.4 Replacement of PCPAs

In this respect, as part of the management and control of maintenance plans, the DAAA will continue to endeavour to encourage manufacturers and user departments to replace, where technically possible, products that:

- are hazardous for operators and for the working environment;
- have lower quality of others available in the market;
- are not compatible with the applicable regulations;
- involve restrictions on use;

by preparing special Prescrizione Tecnica Ditta (PTD) or by a Proposta di Modifica di Reparto (PMR).

The PTD or PMR shall be submitted to the DAAA in accordance with the provisions of the AER(EP).00-00-5 TP.

The PTD or PMR shall be adequately supported by a detailed technical report, and only if the wording in the Technical Manual under examination is incompatible with the applicable legislation.

The DAAA will authorize the use of the new product by issuing the PTA to update the applicable technical publication.

The logical and functional flow of the activities necessary to update the Technical Publications is summarized in Attachment "C".

3. Part 3 - SUPPLY OF PCPAs

3.1 General

The supply of PCPA is closely linked to the characteristics reported by the SDR on the Technical Manuals applicable to the aircraft.

In general, the technical manual identifies PCPAs directly with their trade name (in this case there is no margin of discretion in the purchase) or by means of relevant technical standards (US MIL standards, British DEF-STAN standards, Italian AER standards) or references to the Manufacturer's specification.

In order to protect the Body that acquires the product, it is essential to check its conformity with the reference specification by ascertaining, if required, that the product is included in a Qualified Product List (QPL), a list of the producers, products and production plants that are already certified and declared compliant with the applicable "specification" by a governmental certification agency.

3.2 Procurement

The procurement of PCPAs is a recurring process, which shall be carried out with the utmost attention to aspects that mainly concern the technical characteristics and quality of the products, to avoid impairing the configuration control of the weapon system, resulting in a possible impact on flight safety.

Therefore, the acquisition of the material shall take into account the following recommendations:

- deal with producers or distributors with a Quality Management System in the field of accreditation of such products, recognized as conforming to one or more of the following protocols:
  - ✓ UNI EN ISO 9001:2008, for the development and production of products for the Aerospace and Defence industry;
  - ✓ AQAP-2110/2120 or AER-Q-110/120 in the same areas of point 1;
  - ✓ UNI EN ISO 9001:2008 or AQAP/AER for distributors of chemicals for the Aerospace and Defence industries;
  - ✓ EN 9120 for distributors of lubricating oils, paints, and chemicals for Aerospace supplies.
- Enforce contractual requirements such that the Suppliers deliver adequate documentation with the products proving their origin, nature and compliance with the technical regulations of reference, such as:
  - **Certificate of conformity** of the product with the reference technical regulations (MIL, ASTM, AER, AMS, SP-J, etc.) issued by the manufacturer and/or by the importer;
  - **Test reports** relating to laboratory analyses performed for the batches delivered and issued by the Manufacturer in accordance with the

procedures of the Quality Management System related to the accreditation sectors identified above.

The test report shall comply with the representative conformity tests required by the relevant technical regulations, which shall therefore remain available at the contracting Company and be duly filed at the Office appointed by the Contracting Authority.

This recommendation does not apply to products with an exclusive commercial specification (therefore without a technical reference standard), for which, in practice, the producer is not required to "generate" test reports for each production batch.

- **Piano Assicurazione Qualitá (PAQ)** of the specific Purchase Order, indicating how and when it will be delivered;
- **Safety data sheet in Italian, in line with the applicable national legislation.** Such sheets, also called "Material Safety Data Sheet (MSDS), shall provide the following mandatory information:
  - identification of the substance/mixture and of the manufacturing company;
  - composition/information on ingredients;
  - indication of the hazards;
  - first aid measures;
  - firefighting measures;
  - accidental leak measures;
  - handling and storage;
  - exposure control/personal protection;
  - physical and chemical properties of the product to acquire, taking into account the wide availability of products on the commercial market;
  - stability and reactivity;
  - toxicological information;
  - ecological information;
  - disposal considerations;
  - transport information;
  - regulatory information;
  - other information.
- **"Technical Data Sheet"** relating to their main chemical and physical properties and how they have to be used.

The acquisition of materials subject to expiration shall require, except for particular situations to be assessed from time to time, a life of the component being delivered of at least 80% of the expected useful 'life', or 70% for material whose expected useful life is less than or equal to one hundred and eighty (180) days.

The materials shall also include the "Technical Data Sheet", relating to their main chemical and physical properties and how they have to be used.

3.3 Test and acceptance

Testing shall be carried out by a Board of acceptance appointed by the Body that is purchasing them in accordance with procedures in force.

For products not included in the QPL, since the specification itself does not require a QPL, the Board of acceptance may optionally carry out more complex verification activities, to be performed in a laboratory accredited for this type of test, with particular reference to the conformity analysis of the characteristics of a sample of a homogeneous batch of material.

Nevertheless, it is essential to check the documentation that accompanies each product, regardless of whether it is included in the QPL (e.g. a Quality Conformance Test of the specification not subject to QPL).

For the specifications in which the QPL is required, it remains essential that the products to be acquired are recorded in this QPL.

The protocol used for the tests is the one described in the MIL-STD-1916 standard "DoD PREFERRED METHODS FOR ACCEPTANCE OF PRODUCT".

4. Part 4 - COLLECTION AND DISPOSAL OF CONSUMABLES

4.1 General

All phases of PCPA waste management are regulated (collection, temporary storage, transport and disposal) by "Legislative Decree 152 of 3 April 2006", Consolidated environmental code (fourth part), and by the "Legislative Decree 4 of 16 January 2008" (corrective), which require a set of procedures for the disposal of special waste, both hazardous and non-hazardous.

The Employer, identified as the Head/Director of the User Body, according to the regulations in force, is the main recipient/responsible of safety obligations.

Bodies that use products classified according to the EEC Directive 67/548 shall store the waste, the product expired or no longer usable according to the directions provided in the "safety data sheets" that accompany the product.

Any anomaly found by the user during the entire life cycle of the product regarding the use, labelling or any other aspect concerning the exact classification of the product itself (completeness and updating of the data contained in the safety data sheet) have to be promptly reported to the superior User Body, which will arrange for the necessary checks.

The report shall state the supply batch of the material that is abnormal or presumed to be so.

Once the expiration date of the consumable product, indicated by the manufacturer on the packaging has been reached, it shall be properly set aside for subsequent end-of-life and disposal, or to proceed with temporary re-qualification through the authorized chemical laboratories.

A useful reference is the "Concepts on materials and hazardous waste management" manual edited by the Air Force Logistic Commands that is available at the following Aeronet addresses:

- http://web.comlog.aeronautica.difesa.it/comlog/intranet/comlogSM/4°ff/INDEX.htm
- http://web.bdaerolog.aeronautica.difesa.it

Lastly, for the disposal of the products, reference should be made to the instructions provided in the safety data sheets in item 13. "Disposal considerations".

An electronic hazardous waste system management named SISTRI has been developed, it enables the traceability of the entire waste process; this system was built in 2009 on the basis of the initiative of the Ministry of Environment, Land and Sea Protection to computerize the entire national special waste collection chain.

Neither chemical waste nor those similar to the hospitals' ones, as well as the municipal solid waste, can be disposed of in sewers, or disposed of in a different form into the environment (even with the use of a shredder). Note that the disposal of substances in drains can cause dangerous mixing with other substances that are already present, with unpredictable effects.

The disposal of chemical waste shall be carried out taking into account the following recommendations:

- make sure that you know all the characteristics and compatibility of the chemicals used in order to be prepared for the type of waste that will be produced and how it will be collected;
- use proper personal and collective protective means (overalls, gloves, masks, glasses), at all stages of waste handling;
- keep halogenated compounds separate from those that are not halogenated (halogenated waste is waste that contains a concentration of halogens above 0.5%).

Waste containers shall always bear a very clear indication of their contents; it is absolutely forbidden to add substances in a container whose contents are unknown as well as leave or keep in use unmarked containers.

For safety reasons, toxic and hazardous waste shall not be kept on site more than necessary and the amount of flammable waste has to be very limited.

4.2 Collection at the site where they are produced

Waste collection shall be carried out using appropriate containers selected on the basis of the volume and type of waste.

For aqueous mixtures of organic solvents, for organic solvents and other liquids, UN (Unite Nations) standard containers shall be used. Canisters with capacity of 5, 10 and 20 litres are commercially available.

The canisters have a mark that shows the maximum filling level and this limit, based on the applicable legislation, has to be strictly observed.

The tanks can be also filled with contaminated solid material (gloves and other objects that are not sharp and/or pointed) provided that solids and liquids are never mixed in the same tank.

Plastic bottles or other containers that have already been used for food purposes and containers which do not follow the above rules are not permitted.

Solid material and liquid material shall always be collected separately.

Yellow or black drums with sturdy plastic bags are supplied for disposal of solid waste.

Sharp and pointed material shall be placed in suitable rigid plastic containers ("halibox") before being placed in the yellow or black drums.

4.3 Storage and packaging of chemical waste

The substances to be disposed of shall be set aside respecting as much as possible the compatibility and the classifications of the Codice Europeo dei Rifiuti (CER) to minimize the number of containers in the site.

Before mixing substances, it is essential to check their compatibility; in case of doubt, it is advisable to refer to the safety data sheets.

Chemical waste shall be stored away from sources of heat, sunlight and electrical panels, and shall not be placed at height or in unstable positions.

The bag shall be tightly closed with a tie, strap or adhesive tape and the plastic container shall be hermetically sealed.

It is advisable to place the liquid waste containers in a collection basin with a volume not less than the maximum capacity of the container and to equip the laboratory with absorbent materials to use in the event of spills.

The sheet that accompanies the containers shall be complete in all its parts, and include the name and signature of the site manager.

Signing is an assumption of responsibility with regard to the content of the waste.

4.4 Transport to temporary storage

Chemical waste shall be transported with caution, taking the appropriate security measures.

Liquid waste shall be transported using trolleys that are compliant with standards making sure that the trolley is properly cleaned before placing containers in it.

Transport shall be performed only by authorized and trained personnel.

Whenever the containers are handled, it is advisable to always use individual and collective protective measures and to check that they are always tightly closed.

4.5 Use of gloves

It is absolutely forbidden to leave the processing sites wearing protective gloves.

Therefore, gloves used during waste disposal operations should be new or completely decontaminated and worn only at the time of weighing and storage operations in the warehouse and shall be taken off as soon as the transport has been completed.

Touching doors or other common surfaces with contaminated gloves is carelessness and lack of respect for the one's own health and for that of the other people in same environment, and is punishable by law.

4.6 Disposal of glass and plastic containers

In accordance with the legal provisions on waste and as a result of an increased awareness that supports a more accurate separate waste collection, it is desirable to implement procedures that require the recovery of a greater number of glass or plastic containers, coming from the processing sites.

Taking into account the fact that these containers have contained substances of various types and hazardousness, it has been considered necessary to provide these guidelines to allow operators to identify which containers shall be sent to recycling and which, only if this is not feasible, shall be sent for treatment for final disposal, as it is done for solid chemical hazardous waste.

4.7 Decontamination of former containers

The container (ex) shall be completely emptied; any residues shall be collected and sent for disposal as special waste (whether hazardous or not), depending on their type.

The container (ex) shall be decontaminated as follows:

- **Volatile solvents:** evaporation under a hood or in air (depending on the type and hazardousness of the substance).
- **Non-volatile substances that can be mixed with water:** initial rinsing in minimum volume, to be collected and treated as waste, and any other

subsequent, which may be disposed of in the sewer until a good level of reclamation of the container has been achieved.

- **Non-volatile substances that cannot be mixed with water are not particularly hazardous:** drain thoroughly.

After completing the cleaning, the label shall be removed or if it is difficult to do so, deleted with an indelible/permanent marker.

4.8 Exclusions

Recycling and subsequent shipment for recycling does not include containers that have contained the following categories of substances, which shall be packed in yellow or black drums and classified under the CER code 150110.

- Carcinogens: R40, R45, R49
- Mutagens: R46
- Toxic for reproduction: from R60 to R64
- Possible risk of irreversible effects: R68
- Explosive: from R1 to R6, R9, R16, R18, R19
- Pyrophoric substances: R17
- Substances that are incompatible with water: R14, R15
- Very toxic substances: R26, R27, R28
- Substances that are toxic or harmful by inhalation: R20, R23
- Substances that may cause drowsiness and dizziness: R67
- Malodorous substances
- Substances classified as radioactive
- Anti blasts
- Any other container whose handling may pose an uncontrollable risk to the operator.

5. Part 5 - SYMBOLS OF DANGEROUS SUBSTANCES AND MIXTURES

The symbols of dangerous substances and mixtures, adopted on the packages of products, are summarized in Attachment "D".

For the Risk statements (R), the Safety statements (S), the use of any Personal Protective Equipment (PPE) and/or specific organizational measures, reference should be made only to the information provided by the safety data sheets that accompany the products, under item 15. "Regulatory Information".

6. Part 6 - GREATER CAUTION

If interpretation needs arise on the application or update of applicable national and EU regulations and with reference to what has already been stated in paragraph 1.2, the appointed personnel and their corresponding hierarchical line are expressly requested to refer to the internal and external bodies to receive official and binding opinions for the use and the disposal of consumable products that are peculiar to aeronautics.

Therefore, while this guideline intends to urge the maximum attention on the overall management of PCPAs by standardising their acquisition procedure and the related proper technical and qualitative evaluation "ex ante" and "ex post", it shall not to be considered as exhaustive as regards the regulations on hygiene and safety in the workplace and on environmental policies given the continuous updating thereof due to the best practices for use of PCPA in the various maintenance contexts.

NATURE OF SPECIAL RISKS ATTRIBUTED TO DANGEROUS SUBSTANCES AND PREPARATIONS (DIRECTIVE 60/2001 EC)

R1	Explosive when dry.
R2	Risk of explosion by shock, friction, fire or other sources of ignition.
R3	Extreme risk of explosion by shock, friction, fire or other sources of ignition.
R4	Forms very sensitive explosive metallic compounds.
R5	Heating may cause an explosion.
R6	Explosive with or without contact with air.
R7	May cause fire.
R8	Contact with combustible material may cause fire.
R9	Explosive when mixed with combustible material.
R10	Flammable.
R11	Highly flammable.
R12	Extremely flammable.
R14	Reacts violently with water.
R15	Contact with water liberates extremely flammable gases.
R16	Explosive when mixed with oxidising substances.
R17	Spontaneously flammable in air.
R18	In use, may form flammable/explosive vapour-air mixture.
R19	May form explosive peroxides.
R20	Harmful by inhalation.
R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R23	Toxic by inhalation.
R24	Toxic in contact with skin.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R27	Very toxic in contact with skin.
R28	Very toxic if swallowed.
R29	Contact with water liberates toxic gas.

R30 Can become highly flammable in use.

R31 Contact with acids liberates toxic gas.

R32 Contact with acids liberates very toxic gas.

R33 Danger of cumulative effects.

R34 Causes burns.

R35 Causes severe burns.

R36 Irritating to eyes.

R37 Irritating to respiratory system.

R38 Irritating to skin.

R39 Danger of very serious irreversible effects.

R40 Limited evidence of a carcinogenic effect.

R41 Risk of serious damage to eyes.

R42 May cause sensitisation by inhalation.

R43 May cause sensitisation by skin contact.

R44 Risk of explosion if heated under confinement.

R45 May cause cancer.

R46 May cause inheritable genetic damage.

R48 Danger of serious damage to health by prolonged exposure.

R49 May cause cancer by inhalation.

R50 Very toxic to aquatic organisms.

R51 Toxic to aquatic organisms.

R52 Harmful to aquatic organisms.

R53 May cause long-term adverse effects in the aquatic environment.

R54 Toxic to flora.

R55 Toxic to fauna.

R56 Toxic to soil organisms.

R57 Toxic to bees.

R58 May cause long-term adverse effects in the environment.

R59 Dangerous for the ozone layer.

R60 May impair fertility.

R61 May cause harm to the unborn child.

R62 Possible risk of impaired fertility.

R63 Possible risk of harm to the unborn child.

R64 May cause harm to breast-fed babies.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

R14/15 Reacts violently with water, liberating extremely flammable gases.

R15/29 Contact with water liberates toxic, extremely flammable gases.

R20/21 Harmful by inhalation and in contact with skin.

R20/22 Harmful by inhalation and if swallowed.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R21/22 Harmful in contact with skin and if swallowed.

R23/24 Toxic by inhalation and in contact with skin.

R23/25 Toxic by inhalation and if swallowed.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R24/25 Toxic in contact with skin and if swallowed.

R26/27 Very toxic by inhalation and in contact with skin.

R26/28 Very toxic by inhalation and if swallowed.

R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R27/28 Very toxic in contact with skin and if swallowed.

R36/37 Irritating to eyes and respiratory system.

R36/38 Irritating to eyes and skin.

R36/37/38 Irritating to eyes, respiratory system and skin.

R37/38 Irritating to respiratory system and skin.

R39/23 Toxic: danger of very serious irreversible effects through inhalation.

R39/24 Toxic: danger of very serious irreversible effects in contact with skin.

R39/25 Toxic: danger of very serious irreversible effects if swallowed.

R39/23/24 Toxic: danger of very serious irreversible effects through inhalation and in contact with skin.

R39/23/25 Toxic: danger of very serious irreversible effects through inhalation and if swallowed.

R39/24/25 Toxic: danger of very serious irreversible effects in contact with skin and if swallowed.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

R39/26 Very Toxic: danger of very serious irreversible effects through inhalation.

R39/27 Very Toxic: danger of very serious irreversible effects in contact with skin.

R39/26/27 Very Toxic: danger of very serious irreversible effects through inhalation and in contact with skin.

R39/26/28 Very Toxic: danger of very serious irreversible effects through inhalation and if swallowed.

R39/27/28 Very Toxic: danger of very serious irreversible effects in contact with skin and if swallowed.

R39/26/27/28 Very Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

R40/20 Harmful: possible risk of irreversible effects through inhalation.

R40/21 Harmful: possible risk of irreversible effects through inhalation and in contact with skin.

R40/22 Harmful: possible risk of irreversible effects if swallowed.

R40/20/21 Harmful: possible risk of irreversible effects through inhalation and in contact with skin.

R40/20/22 Harmful: possible risk of irreversible effects through inhalation and if swallowed.

R40/21/22 Harmful: possible risk of irreversible effects in contact with skin and if swallowed.

R40/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

R42/43 May cause sensitisation by inhalation and skin contact.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R48/21 Harmful: danger of serious damage to health by prolonged exposure in contact with skin.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R48/20/21 Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.

R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R48/21/22 Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.

R48/24 Toxic: danger of serious damage to health by prolonged exposure in contact with skin.

R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.

R48/23/24 Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.

R48/23/25 Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R48/24/25 Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

R48/23/24/25 Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

R50/53 Highly toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY STATEMENTS CONCERNING DANGEROUS SUBSTANCES AND MIXTURES

S1 Keep locked up.

S2 Keep out of the reach of children.

S3 Keep in a cool place.

S4 Keep away from living quarters.

S5 Keep contents under... (*appropriate liquid to be specified by the manufacturer*).

S6 Keep under... *(inert gas to be specified by the manufacturer)*.

S7 Keep container tightly closed.

S8 Keep container dry.

S9 Keep container in a well-ventilated place.

S12 Do not keep the container sealed.

S13 Keep away from food and drink.

S14 Keep away from ... *(incompatible materials to be indicated by the manufacturer).*

S15 Keep away from heat.

S16 Keep away from sources of ignition - No smoking.

S17 Keep away from combustible material.

S18 Handle and open container with care.

S20 When using do not eat or drink.

S21 When using do not smoke.

S22 Do not breathe dust.

S23 Do not breathe gas/fumes/vapour/spray [appropriate wording to be specified by the manufacturer].

S24 Avoid contact with skin.

S25 Avoid contact with eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S27 Take off immediately all contaminated clothing.

S28 After contact with skin, wash immediately with plenty of *(to be specified by the manufacturer)*.

S29 Do not empty into drains.

S30 Never add water to this product.

S33 Take precautionary measures against static discharges.

S35 This material and its container shall be disposed of in a safe way.

S36 Wear suitable protective clothing.

S37 Wear suitable gloves.

S38 In case of insufficient ventilation wear suitable respiratory equipment.

S39 Wear eye/face protection.

S40 To clean the floor and all objects contaminated by this material use... *(to be specified by the manufacturer).*

S41 In case of fire and/or explosion do not breathe fumes.

S42 During fumigation/spraying wear suitable respiratory equipment [appropriate wording to be specified by the manufacturer].

S43 In case of fire use... *(indicate in the space the precise type of fire-fighting equipment. If water increases the risk, add "Never use water").*

S45 In case of accident or if you feel unwell seek medical advice immediately *(show the label where possible).*

S46 If swallowed, seek medical advice immediately and show this container or label.

S47 Keep at temperature not exceeding ... °C *(to be specified by the manufacturer)*.

S48 Keep wet with ... *(appropriate material to be specified by the manufacturer)*.

S49 Keep only in the original container.

S50 Do not mix with ... *(to be specified by the manufacturer).*

S51 Use only in well-ventilated areas.

S52 Not recommended for interior use on large surface areas.

S53 Avoid exposure - obtain special instructions before use.

S56 Dispose of this material and its container at hazardous or special waste collection point.

S57 Use appropriate containment to avoid environmental contamination.

S59 Refer to manufacturer/supplier for information on recovery/recycling.

S60 This material and its container shall be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label where possible.

S63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.

S64 If swallowed, rinse mouth with water *(only if the person is conscious)*.

S1/2 Keep locked up and out of the reach of children.

S3/7 Keep container tightly closed in a cool place.

S3/9/14 Keep in a cool, well-ventilated place away from ... *(incompatible materials to be indicated by the manufacturer).*

S3/9/14/49 Keep only in the original container in a cool, well-ventilated place away from… *(incompatible materials to be indicated by the manufacturer).*

S3/9/49 Keep only in the original container in a cool, well-ventilated place.

S3/14 Keep in a cool place away from... *(incompatible materials to be indicated by the manufacturer)*.

S7/8 Keep container tightly closed and dry.

S7/9 Keep container tightly closed and in a well-ventilated place.

S7/47 Keep container tightly closed and at a temperature not exceeding ... °C *(to be specified by the manufacturer).*

S21/21 Do not eat, drink or smoke when using this product.

S24/25 Avoid contact with skin and eyes.

S27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of... *(to be specified by the manufacturer).*

S29/35 Do not empty into drains; dispose of this material and its container in a safe way.

S29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

S36/37 Wear suitable protective clothing and gloves.

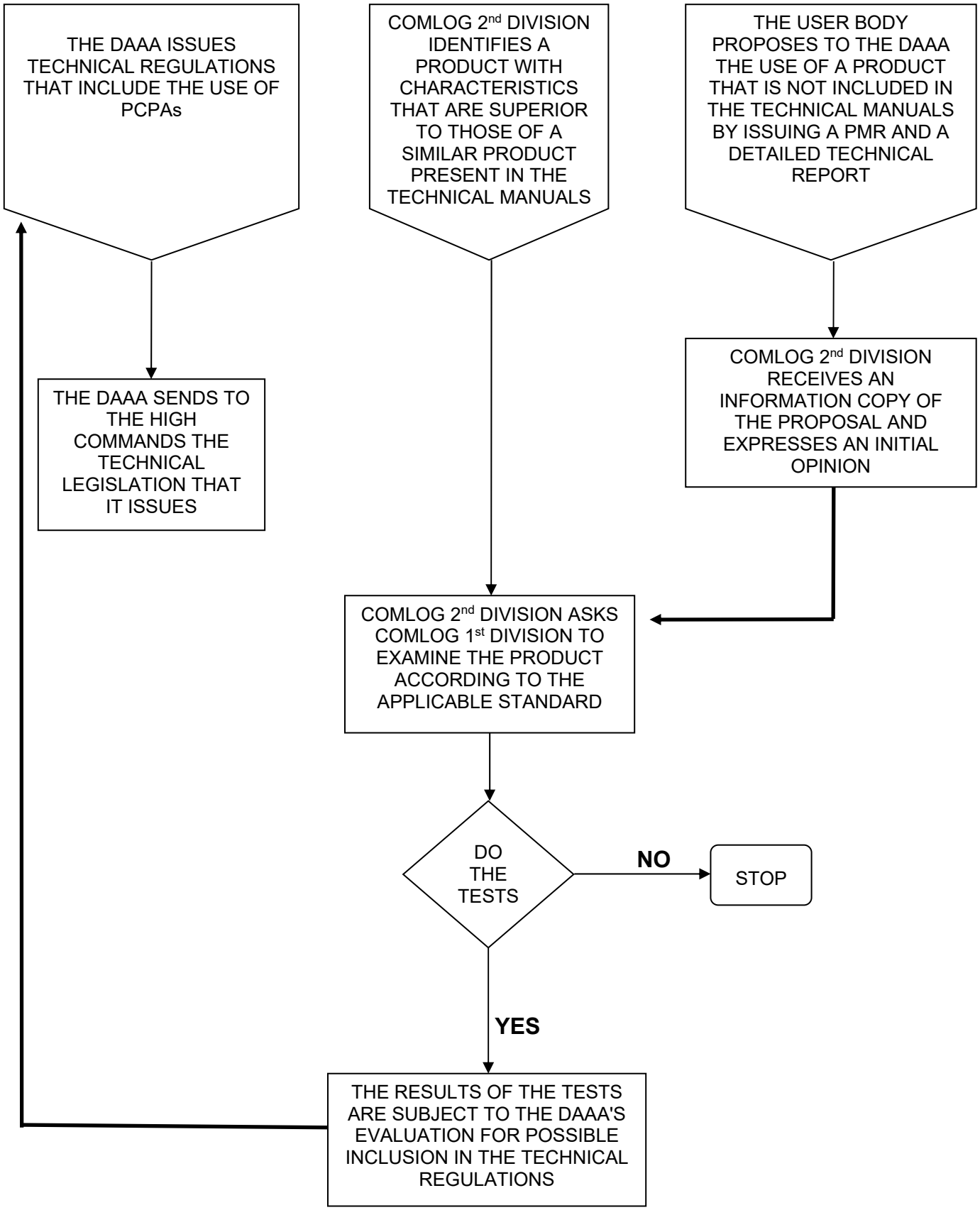
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S36/39 Wear suitable protective clothing and eye/face protection.

S37/39 Wear suitable gloves and eye/face protection.

S47/49 Keep only in the original container at temperature not exceeding ... °C *(to be specified by the manufacturer).*

LOGICAL AND FUNCTIONAL FLOW OF ACTIVITIES



SYMBOLS AND HAZARD STATEMENTS FOR DANGEROUS SUBSTANCES AND MIXTURES

NOTE 1:
The symbols shall be made with an orange background and a black object

NOTE 2:
The letters E, O, F, F+, T, T+, C, Xn, Xi and N are not part of the symbol

explosive: an exploding bomb (E);

Oxidizing a flame above a circle (O);

easily flammable: a flame (F);

toxic: a skull and cross-bones (T);

harmful: a St. Andrew's Cross (Xn);

corrosive: a picture of the action of an acid (C);

irritating: a St. Andrew's Cross (Xi);

highly flammable (or extremely flammable): a flame (F+);

highly toxic (or very toxic): a skull and cross-bones (T+);

dangerous for the environment: a scene with seriously damaged animals (N).

NATURE OF SPECIAL RISKS ATTRIBUTED TO DANGEROUS SUBSTANCES AND MIXTURES IN ACCORDANCE WITH EC DIRECTIVE (CLP) 1272/2008 THAT REPLACES EC DIRECTIVE 60/2001

H200 – Unstable explosive.

H201 – Explosive; mass explosion hazard.

H202 – Explosive; severe projection hazard.

H203 – Explosive; fire, blast or projection hazard.

H204 – Fire or projection hazard.

H205 – In case of fire, mass explosion hazard.

H220 – Extremely flammable gas.

H221 – Flammable gas.

H222 – Extremely flammable aerosol.

H223 – Flammable aerosol.

H224 – Extremely flammable liquid and vapour.

H225 – Highly flammable liquid and vapour.

H226 – Flammable liquid and vapour.

H228 – Flammable solid.

H240 – Heating may cause an explosion.

H241 – Heating may cause a fire or explosion.

H242 – Heating may cause a fire.

H250 – Catches fire spontaneously if exposed to air.

H251 – Self-heating; may catch fire.

H252 – Self-heating in large quantities; may catch fire.

H260 – In contact with water releases flammable gases, which may ignite spontaneously.

H261 – In contact with water releases flammable gas.

H270 – May cause or intensify fire; oxidizer.

H271 – May cause fire or explosion; strong oxidizer.

H272 – May intensify fire; oxidizer.

H280 – Contains gas under pressure; may explode if heated.

H281 – Contains refrigerated gas; may cause cryogenic burns or injury.

H290 – May be corrosive to metals.

H300 – Fatal if swallowed.

H301 – Toxic if swallowed.

H302 – Harmful if swallowed.

H304 – May be fatal if swallowed and enters airways.

H310 – Fatal in contact with skin.

H311 – Toxic in contact with skin.

H312 – Harmful in contact with skin.

H314 – Causes severe skin burns and eye damage.

H315 – Causes skin irritation.

H317 – May cause an allergic skin reaction.

H318 – Causes serious eye damage.

H319 – Causes serious eye irritation.

H330 – Fatal if inhaled.

H331 – Toxic if inhaled.

H332 – Harmful if inhaled.

H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 – May cause respiratory irritation.

H336 – May cause drowsiness or dizziness.

H340 – May cause genetic defects.

H341 – Suspected of causing genetic defects.

H350 – May cause cancer.

H351 – Suspected of causing cancer.

H360 – May damage fertility or the unborn child.

H361 – Suspected of damaging fertility or the unborn child.

H362 – May cause harm to breast-fed children.

H370 – Causes damage to organs.

H371 – May cause damage to organs.

H372 – Causes damage to organs through prolonged or repeated exposure.

H373 – May cause damage to organs through prolonged or repeated exposure.

H400 – Very toxic to aquatic life.

H410 – Very toxic to aquatic life with long□lasting effects.

H411 – Toxic to aquatic life with long□lasting effects.

H412 – Harmful to aquatic life with long□lasting effects.

H413 – May be harmful to aquatic life with long□lasting effects.

EUH 001 – Explosive when dry.

EUH 006 – Explosive with or without contact with air.

EUH 014 – Reacts violently with water.

EUH 018 – In use may form flammable/explosive vapour-air mixture.

EUH 019 – May form explosive peroxides.

EUH 044 – Risk of explosion if heated under confinement.

EUH 029 – Contact with water liberates toxic gas.

EUH 031 – Contact with acids liberates toxic gas.

EUH 032 – Contact with acids liberates very toxic gas.

EUH 066 – Repeated exposure may cause skin dryness or cracking.

EUH 070 – Toxic by eye contact.

EUH 071 – Corrosive to the respiratory tract.

EUH 059 – Hazardous to the ozone layer.

EUH 201 – Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

EUH 201A - Warning! Contains lead.

EUH 202 – Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

EUH 203 – Contains chromium (VI). May produce an allergic reaction.

EUH 204 – Contains isocyanates. May produce an allergic reaction.

EUH 205 – Contains epoxy constituents. May produce an allergic reaction.

EUH 206 – Warning! Do not use together with other products. May release dangerous gases (chlorine).

EUH 207 – Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions.

EUH 208 – Contains ... May produce an allergic reaction.

EUH 209 – Can become highly flammable in use.

EUH 209A – Can become flammable in use.

EUH 210 – Safety data sheet available on request.

EUH 401 – To avoid risks to human health and the environment, comply with the instructions for use.

P101 – If medical advice is needed, have product container or label at hand.

P102 – Keep out of reach of children.

P103 – Read label before use.

P201 – Obtain special instructions before use.

P202 – Do not handle until all safety precautions have been read and understood.

P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. – No smoking.

P211 – Do not spray on an open flame or other ignition source.

P220 – Keep/Store away from clothing/…/combustible materials.

P221 – Take any precaution to avoid mixing with combustibles.

P222 – Do not allow contact with air.

P223 – Do not allow contact with water because of violent reaction and possible flash fire.

P230 – Keep wetted with…

P231 – Handle under inert gas.

P232 – Protect from moisture.

P233 – Keep container tightly closed.

P234 – Store only in original container.

P235 – Keep cool.

P240 – Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical/ventilating/lighting/…/equipment.

P242 – Use only non-sparking tools.

P243 – Take precautionary measures against static discharge.

P244 – Keep valves and fittings free from oil and grease.

P250 – Do not subject to grinding/shock/…/friction.

P251 – Pressurized container: do not pierce or burn, even after use.

P260 – Do not breath dust/fumes/gas/mist/vapours/spray.

P261 – Avoid breathing dust/fumes/gas/mist/vapours/spray.

P262 – Do not get in eyes, on skin, or on clothing.

P263 – Avoid contact during pregnancy/while nursing.

P264 – Wash … thoroughly after handling.

P270 – Do not eat, drink or smoke when using this product.

P271 – Use only outdoors or in a well-ventilated area.

P272 – Contaminated work clothing should not be allowed out of the workplace.

P273 – Avoid release to the environment.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P281 – Use the personal protective equipment required.

P282 – Wear cold insulating gloves/face shield/eye protection.

P283 – Wear fire/flame resistant/retardant clothing.

P284 – Wear respiratory protection.

P285 – In case of inadequate ventilation, wear respiratory protection.

P231 + **P232** – Handle under inert gas. Protect from moisture.

P235 + **P410** – Keep cool. Protect from sunlight.

P301 – IF SWALLOWED:

P302 – IF ON SKIN:

P303 – IF ON SKIN (or hair):

P304 – IF INHALED:

P305 – IF IN EYES:

P306 – IF ON CLOTHING:

P307 – IF exposed:

P308 – IF exposed or concerned:

P309 – IF exposed or if you feel unwell:

P310– Immediately call a POISON CENTRE/doctor/.

P311– Call a POISON CENTRE or doctor/physician.

P312– Call a POISON CENTRE or doctor/physician if you feel unwell.

P313 – Get medical advice/attention.

P314 – Get medical advice/attention if you feel unwell.

P315 – Get immediate medical advice/attention.

P320 – Specific treatment is urgent (see … on this label).

P321 – Specific treatment (see … on this label).

P322 – Specific measures (see …on this label).

P330 – Rinse mouth.

P331 – Do NOT induce vomiting.

P332 – If skin irritation occurs:

P333 – If skin irritation or a rash occurs:

P334 – Immerse in cool water/wrap in wet bandages.

P335 – Brush off loose particles from skin.

P336 – Thaw frosted parts with lukewarm water. Do not rub affected areas.

P337 – If eye irritation persists:

P338 – Remove contact lenses if present and easy to do. Continue rinsing.

P340 – Remove person to fresh air and keep comfortable for breathing.

P341 – If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342 – If experiencing respiratory symptoms:

P350 – Gently wash with plenty of soap and water.

P351 – Rinse cautiously with water for several minutes.

P352 – Wash with plenty of soap and water.

P353 – Rinse skin with water/shower.

P360 – Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

P361 – Remove/Take off immediately all contaminated clothing.

P362 – Take off all contaminated clothing and wash before reuse.

P363 – Wash contaminated clothing before reuse.

P370 – In case of fire:

P371 – In case of major fire and large quantities:

P372 – Explosion risk in case of fire.

P373 – DO NOT fight fire when fire reaches explosives.

P374 – Fight fire with normal precautions from a reasonable distance.

P375 – Fight fire remotely due to the risk of explosion.

P376 – Stop leak if safe to do so.

P377 – Leaking gas fire – do not extinguish unless leak can be stopped safely.

P378 – Use … to extinguish.

P380 – Evacuate area.

P381 – Eliminate all ignition sources if safe to do so.

P390 – Absorb spillage to prevent material damage.

P391 – Collect spillage.

P301 + **P310** – IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.

P301 + **P312** – IF SWALLOWED: call a POISON CENTRE or doctor/physician if you feel unwell.

P301 + **P330** + **P331** – IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302 + **P334** – IF ON SKIN: Immerse in cool water/wrap in wet bandages.

P302 + **P350** – IF ON SKIN: wash delicately with plenty of soap and water.

P302 + **P352** – IF ON SKIN: Wash with plenty of soap and water.

P303 + **P361** + **P353** - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + **P340** – IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing.

P304 + **P341** – IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + **P351** + **P338** – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P306 + **P360** – IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

P307 + **P311** – IF exposed: call a POISON CENTRE or doctor/physician.

P308 + **P313** – IF exposed or concerned: get medical advice/attention.

P309 + **P311** – IF exposed or if you feel unwell: call a POISON CENTRE or doctor/physician.

P332 + **P313** – If skin irritation occurs: get medical advice/attention.

P333 + **P313** – If skin irritation or a rash occurs: Get medical advice/attention.

P335 + **P334** – Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

P337 + **P313** – If eye irritation persists get medical advice/attention.

P342 + **P311** – If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

P370 + **P376** – In case of fire: Stop leak if safe to do so.

P370 + **P378** – In case of fire: Use … to extinguish.

P370 + **P380** – In case of fire: Evacuate area.

P370 + **P380** + **P375** – In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Explosion hazard.

P371 + **P380** + **P375** – In case of major fire and large quantities: Evacuate area. Explosion hazard. Fight fire remotely due to the risk of explosion.

P401 – Store …

P402 – Store in a dry place.

P403 – Store in a well-ventilated place.

P404 – Store in a closed container.

P405 – Store locked up.

P406 – Store in a corrosive resistant/… container with a resistant inner liner.

P407 – Maintain air gap between stacks/pallets.

P410 – Protect from sunlight.

P411 – Store at temperatures not exceeding … °C/… °F.

P412 – Do not expose to temperatures exceeding 50 °C/122 °F.

P413 – Store bulk masses greater than … kg/… lbs at temperatures not exceeding … °C/… °F.

P420 – Store away from other materials.

P422 – Store contents under …

P402 + **P404** – Store in a dry place. Store in a closed container.

P403 + **P233** – Store in a well-ventilated place. Keep container tightly closed.

P403 + **P235** – Store in a well-ventilated place. Keep cool.

P410 + **P403** – Protect from sunlight. Store in a well-ventilated place.

P410 + **P412** – Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P411 + **P235** – Store at temperatures not exceeding … °C/… °F.

P501 – Dispose of contents/container to …

HAZARD PICTOGRAMS

NOTE 1:
The hazard pictograms for each hazard class, hazard class differentiation and hazard category shall comply with the requirements of Attachment V and Attachment I, point 1.2 of the EC Regulation no. 1272/2008. They are shown below informational purposes only.
In case of doubt, please refer to the aforementioned Regulation.

1. PART 1: PHYSICAL HAZARDS

1.1. Symbol: exploding bomb

Pictogram (1)	Hazard class and hazard category (2)
GHS01 	Section 2.1 Unstable explosives Explosives of Divisions 1.1, 1.2, 1.3, 1.4 Section 2.8 Self reactive substances and mixtures, Types A, B Section 2.15 Organic peroxides, Types A, B

1.2. Symbol: flame

Pictogram (1)	Hazard class and hazard category (2)
GHS02 	Section 2.2 Flammable gases, hazard category 1 Section 2.3 Flammable aerosols, hazard categories 1, 2 Section 2.6 Flammable liquids, hazard categories 1, 2, 3 Section 2.7 Flammable solids, hazard categories 1, 2 Section 2.8 Self-reactive substances and mixtures, Types B, C, D, E, F Section 2.9 Pyrophoric liquids, hazard category 1 Section 2.10 Pyrophoric solids, hazard category 1 Section 2.11 Self-heating substances and mixtures, hazard categories 1, 2 Section 2.12 Substances and mixtures, which in contact with water, emit flammable gases, hazard categories 1, 2, 3 Section 2.15 Organic peroxides, Types B, C, D, E, F

1.3. Symbol: flame over circle

Pictogram (1)	Hazard class and hazard category (2)
GHS03 	Section 2.4 Oxidising gases, hazard category 1 Section 2.13 Oxidising liquids, hazard categories 1, 2, 3 Section 2.14 Oxidising solids, hazard categories 1, 2, 3

1.4. Symbol: gas cylinder

Pictogram (1)	Hazard class and hazard category (2)
GHS04 	Section 2.5 Gases under pressure: Compressed gases; Liquefied gases; Refrigerated liquefied gases; Dissolved gases

1.5. Symbol: corrosion

Pictogram (1)	Hazard class and hazard category (2)
GHS05 	Section 2.16 Corrosive to metals, hazard category 1

1.6. A pictograms is not required for the following physical hazard classes and hazards categories:

Section 2.1: Explosives of division 1.5

Section 2.1: Explosives of division 1.6

Section 2.2: Flammable gases, hazard category 2

Section 2.8: Self-reactive substances and mixtures, type G

Section 2.15: Organic peroxides, type G

2. PART 2: HEALTH HAZARDS

2.1. Symbol: skull and crossbones

Pictogram (1)	Hazard class and hazard category (2)
GHS06 	Section 3.1 Acute toxicity (oral, dermal, inhalation), hazard categories 1, 2, 3

2.2. Symbol: corrosion

Pictogram (1)	Hazard class and hazard category (2)
GHS05 	Section 3.2 Skin corrosion, hazard categories 1A, 1B, 1C Section 3.3 Serious eye damage, hazard category 1

2.3. Symbol: exclamation mark

Pictogram (1)	Hazard class and hazard category (2)
GHS07 	Section 3.1 Acute toxicity (oral, dermal, inhalation), hazard category 4 Section 3.2 Skin irritation, hazard category 2 Section 3.3 Eye irritation, hazard category 2 Section 3.4 Skin sensitisation, hazard category 1 Section 3.8 Specific Target Organ Toxicity — Single exposure, hazard category 3 Respiratory tract irritation Narcotic effects

2.4. Symbol: health hazard

Pictogram (1)	Hazard class and hazard category (2)
GHS08 	Section 3.4 Respiratory sensitisation, hazard category 1 Section 3.5 Germ cell mutagenicity, hazard categories 1A, 1B, 2 Section 3.6 Carcinogenicity, hazard categories 1A, 1B, 2 Section 3.7 Reproductive toxicity, hazard categories 1A, 1B, 2 Section 3.8 Specific Target Organ Toxicity — Single exposure, hazard categories 1, 2 Section 3.9 Specific Target Organ Toxicity — Repeated exposure, hazard categories 1, 2 Section 3.10 Aspiration hazard, hazard category 1

2.5. A pictograms is not required for the following health hazards categories:

Section 3.7: Reproductive toxicity, effects on or via lactation, additional hazard category

3. PART 3: ENVIRONMENTAL HAZARDS

3.1. Symbol: environment

Pictogram (1)	Hazard class and hazard category (2)
GHS09 	Section 4.1 Hazardous to the aquatic environment — Acute hazard category 1 — Chronic hazard categories 1, 2

A pictograms is not required for the following environmental hazards classes and hazard categories:

Section 4.1: Hazardous for the aquatic environment - Chronic hazard categories 3 and 4.

PROTOCOL FOR THE PURCHASE PROCEDURE AND ACCEPTANCE OF CHEMICALS PECULIAR TO AERONAUTICS

1. DEFINITION OF TECHNOLOGICAL REQUIREMENT

- Locate in the manufacturer's manuals the trade names or the technical specifications (MIL, AER, EN, ISO, ASTM, SP-J, etc.) referenced for a given maintenance task or overhaul of the aircraft.
  If it exists, refer to the AER standard generated for a given PCPA to supplement or to improve the technological progress achieved.
- For a technical specification, therefore, lacking a unique trade name, check if it is in the QPL (Qualified Product List) against the specification itself and request only products present in the QPL.
- Lacking the QPL, require test reports of the single production batch (Quality Conformance Testing, Inspection test, etc.) against the requirements of the specification for that purpose.
- In both cases, the products shall always be accompanied by the Certificate of Conformity (CoC), by the Test Report (TR), except in the cases set out in para. 3.2, and by the technical and use card.

2. DEFINITION OF THE QUALITY REQUIREMENT

Deal with manufacturers/importers or distributors that use a Quality Management System in the field of accreditation of such products, recognized as conforming to one or more of the following protocols:

1. UNI EN ISO 9001:2008 for the production and development of products for the Aerospace and Defence industry.
2. AQAP-2110/2120 or AER-Q110/120 Q in the same areas of point 1.
3. UNI EN ISO 9001:2008 or AQAP/AER for distributors of consumables as set out in this AER for the Aerospace and Defence industry.
4. N 9120 for distributors of lubricating oils, paints, and chemicals for Aerospace supplies.
5. In all cases, the manufacturers shall provide valid quality-related credentials issued by a third party.
6. The protocol used for the tests is that described in the MIL-STD-1916 standard "DOD PREFERRED METHODS FOR ACCEPTANCE OF PRODUCT".

3. DEFINITION OF THE QUALITY REQUIREMENT

Safety data sheets shall be provided upon delivery of the products in accordance with the REACH standard Regulation EC 1907/2006 and concerning the advancement of technological progress in accordance with EC Directive 67/548.