

SHPF SEVERELY HAZARDOUS PESTICIDE FORMULATIONS **KIT**

**GUIDANCE ON MONITORING AND REPORTING
PESTICIDE POISONING INCIDENTS RELATED
TO SEVERELY HAZARDOUS
PESTICIDE FORMULATIONS (SHPFs)**

a glossary



**ROTTERDAM
CONVENTION**

The glossary provided here defines terms that are found within the SHPF kit, produced by the Secretariat of the Rotterdam Convention. Some additional, common terms are also included for information. For a more comprehensive glossary of exposure-related terms please refer to:

Glossary of exposure assessment-related terms: a compilation. Prepared by the Exposure Terminology Subcommittee of the IPCS Exposure Assessment Planning Workgroup for the International Programme on Chemical Safety Harmonisation of Approaches to the Assessment of Risk from Exposure to Chemicals. IPCS, November 2001.

http://www.who.int/ipcs/publications/methods/harmonization/en/compilation_nov2001.pdf

The Pesticide Residues Committee, an advisory committee to the Health and Safety Executive of the UK Government, also offers a very helpful glossary, which has been extensively referred to in this document:

<http://www.pesticides.gov.uk/prc.asp?id=2673>

The Codex Alimentarius provide a brief glossary at:

<http://www.codexalimentarius.net/pestres/data/reference/glossary.html>

| Term | Definition | Source of definition |
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| Absorption | The movement of a pesticide from the surrounding environment into an organism through the surface of the organism. | PRC ¹ |
| Acceptable Daily Intake (ADI) | "ADI" of a chemical is the daily intake which, during an entire lifetime, appears to be without appreciable risk to the health of the consumer on the basis of all the known facts at the time of the evaluation of the chemical by the Joint FAO/WHO Meeting on Pesticide Residues. It is expressed in milligrams of the chemical per kilogram of body weight. (Note: For additional information on ADIs relative to pesticide residues refer to the Report of the 1975 Joint FAO/WHO Meeting on Pesticide Residues, FAO Plant Production and Protection Series No.1 or WHO Technical Report Series No. 592). | Codex Alimentarius http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| Accidental pesticide poisoning | Poisoning resulting from both occupational and non-intentional exposure to pesticides (as distinct from exposure due to the intention to commit suicide or homicide). | |
| Accumulation | Repeated doses of a chemical may result in its concentration in an organism, organ or tissue, potentially leading to increasing toxic effects with successive doses. | |
| Active Ingredient | The substance in a formulated product that makes the product work as a pesticide. A formulation may contain one or more active ingredients. | |
| Acute effects | Acute effects are those which result from either a single exposure or several exposures over a short period of time (usually less than 24 hours). See also chronic effects. | |
| Acute Toxicity | Ability of a substance to cause adverse effects within a short period following dosing or exposure. | PRC ¹ |
| Adverse effect | A change in an organism which results in the impairment of some function or capacity, or which makes the organism more susceptible to harm. | PRC ¹ |
| Agrochemical | Another word for agricultural chemicals used in crop and food production. Agrochemicals include pesticides, feed additives, veterinary medicines and related compounds | PRC ¹ |
| ARfD | ARfD relates to the amount of a chemical that can be taken in at one meal or on one day without appreciable health risk to the consumer. Mg/kg bw/day means milligrams per kilogram of bodyweight per day. This is the unit of measurement used for <u>Acute Reference Doses</u> (ARfDs). | |
| ASTM | American Society for Testing and Materials | |
| Bamako Convention | The Bamako Convention (in full: Bamako Convention on the ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa) is a treaty of African nations prohibiting the import of any hazardous waste. | |

¹ Pesticide Residues Committee, an independent committee which advises Ministers and the Chief Executives of the UK Food Standards Agency (FSA) and the Chemicals Regulation Directorate (CRD) on the monitoring programme for pesticide residues in food and drink in the United Kingdom.

| Term | Definition | Source of definition |
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| Basel Convention | The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, usually known simply as the Basel Convention, is an international treaty that seeks to control and reduce movement of hazardous waste across boundaries, ensure safe management and disposal, assist developing countries in environmentally sound management of waste they generate. | |
| Bioaccumulation | The progressive increase in the amount of a substance in an organism or part of an organism because the organism takes up the substance at a faster rate than it is removed from the organism. | PRC ¹ |
| Biological monitoring (biomonitoring) | Measuring chemicals in biological materials (e.g. blood, urine, breath) to determine whether chemical exposure has occurred. | |
| Biological processes | A process of a living organism. Biological processes are made up of chemical reactions or other events that results in a transformation. Examples include respiration and photosynthesis. | |
| Chronic effects | The effects of exposure to a pesticide which arises slowly and as the result of exposure over a long period of time. | PRC ¹ |
| CLI | CropLife International A global federation representing the plant science industry in 91 countries. | http://www.croplife.org/ |
| Codex Alimentarius Commission | The <i>Codex Alimentarius Commission</i> (CAC) was established by the Food and Agricultural Organization of the United Nations (FAO) and the World Health Organization (WHO) to protect the health of consumers and ensure fair practices in food trade. Codex has 180 member governments. | http://www.codexalimentarius.net/web/faq_gen.jsp#G1 |
| COLEACP | COLEACP is an inter-professional association of producers, exporters, importers and other stakeholders concerned with promoting horticultural trade between the ACP states and the EU. | |
| Cumulative effect | Overall adverse change which occurs when repeated doses of a pesticide have biological consequences which are additive. | PRC ¹ |
| Designated National Authority (DNA) | Designated National Authorities serve as the focal point in their country for the dissemination of information concerning the provisions of the Rotterdam Convention to the relevant government departments as well as to other partners such as export and importing industries and customs officers. | Secretariat of the Rotterdam Convention |
| Dose response relationship | The relationship between the dose of a substance and the incidence of a defined effect in a population of organisms exposed to the substance. | PRC ¹ |
| EFSA | European Food Safety Authority | |
| Endocrine | Pertaining to hormones and the glands that make and secrete them | |
| EPA | Environment Protection Agency | |
| EPPO | European and Mediterranean Plant Protection Organisation | |
| Estimated daily intake | A calculation of the likely daily consumption of a pesticide residue, based on the estimated levels of the residue in different foods and the amounts of those foods which are eaten by different groups. The EDI for a particular pesticide and particular food may vary from group to group because different groups may eat different amounts of that food. | PRC ¹ |

| Term | Definition | Source of definition |
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| Exposure | The amount of a pesticide that reaches the target population, organism, tissue or cell, usually expressed in numerical terms of concentration, duration and frequency. | PRC ¹ |
| Extraneous Maximum Residue Limit (EMRL) | "EMRL" refers to a pesticide residue or a contaminant arising from environmental sources (including former agricultural uses) other than the use of a pesticide or contaminant substance directly or indirectly on the commodity. It is the maximum concentration of a pesticide residue or contaminant that is recommended by the Codex Alimentarius Commission to be legally permitted or recognized as acceptable in or on a food, agricultural commodity, or animal feed. The concentration is expressed in milligrams of pesticide residue or contaminant per kilogram of the commodity. | Codex Alimentarius http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| FAO | Food and Agriculture Organisation of the United Nations | |
| GCPF | Groupement International des Associations Nationales de Fabricants des Produits Agrochimiques | |
| Good Agricultural Practice (GAP) | "GAP" includes the nationally authorised safe uses of pesticides under actual conditions necessary for effective and reliable pest control. It encompasses a range of levels of pesticide applications up to the highest authorised use, applied in a manner which leaves a residue which is the smallest amount practicable. Authorised safe uses are determined at the national level and include nationally registered or recommended uses, which take into account public and occupational health and environmental safety considerations. Actual conditions include any stage in the production, storage, transport, distribution and processing of food commodities and animal feed. | Codex Alimentarius http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| Good laboratory practice | The formalised process and conditions under which laboratory studies on pesticides are planned, performed, monitored, recorded, reported and audited. Studies performed under GLP are based on the national regulations of a country and are designed to assure the reliability, and integrity of the studies and associated data. | |
| Hazard | The inherent properties of a pesticide which gives potential for adverse effects to man or the environment during its production, use or disposal, depending on the degree of exposure. | PRC ¹ |
| Health incidents | In the context of this kit, 'health incidents' refer to cases of pesticide poisoning | |
| Incident report forms | Several authorities have developed forms with which to collect data on incidences of pesticide poisoning. The Rotterdam Convention reporting for human health incidents is available from http://www.pic.int/ | |
| Integrated Pest Management (IPM) | Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms. | FAO |

| Term | Definition | Source of definition |
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| International Code of Conduct on the Distribution and Use of Pesticides FAO code of Conduct | The International Code of Conduct on the Distribution and Use of Pesticides is the worldwide guidance document on pesticide management for all public and private entities engaged in, or associated with, the distribution and use of pesticides. The Code is designed to provide standards of conduct and to serve as a point of reference in relation to sound pesticide management practices, in particular for government authorities and the pesticide industry. | FAO |
| IPCS | International Programme on Chemical Safety, World Health Organisation | |
| ISO | International Organisation for Standardisation | |
| JMPR | Joint Food and Agricultural Organisation (FAO)/World Health Organisation (WHO) Meeting on Pesticide Residues which conducts scientific evaluations of pesticide residues in food. | |
| Local conditions of use | A term used by the Rotterdam Convention to refer to the context in which pesticides are used in a particular country or region, which can have an impact on the risk associated with a pesticide. Geographical differences in agricultural practices and / or climate, for example, can have an impact on whether a pesticide is used safely or poses an unacceptable risk to human health. | |
| Material Safety Data Sheets | A Material Safety Data Sheet (MSDS) is a document that contains information on the potential hazards (health, fire, reactivity and environmental) of a chemical product. It also contains information on the use, storage, handling and emergency procedures related to the product as well as how to recognize symptoms of overexposure, and what to do if such incidents occur. The MSDS contains much more information about the material than the label. MSDSs are prepared by the supplier or manufacturer of the material. | |
| Maximum Residue Limit (MRL) | "MRL" is the maximum concentration of a pesticide residue (expressed as mg/kg), recommended by the Codex Alimentarius Commission to be legally permitted in or in food commodities and animal feeds. MRLs are based on GAP data and foods derived from commodities that comply with the respective MRLs are intended to be toxicologically acceptable. | Codex Alimentarius http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| Mode of action | The way in which a pesticide works at a biological or chemical level. | |
| Monitoring | Monitoring, or surveillance, is the process of keeping a subject under systematic review or scrutiny. In the context of this toolkit, these terms refer to the process of determining the impact a pesticide is having on human health. | |
| Morbidity | Departure from a state of physical or psychological well-being. In the context of this toolkit, it refers to sub-lethal effects of pesticide exposure. | |
| Mortality | Death. | |
| Mortality rate | Mortality rate is commonly expressed as the number of deaths per 1000 head of population per year. | |
| Neurotoxin | Neurotoxins are chemicals which interfere with the nervous system in some way. At sufficient doses they can cause paralysis, usually resulting in death, while lower doses might result in altered behaviour. | PRC ¹ |

| Term | Definition | Source of definition |
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| No Observed Adverse Effect Level (NOAEL) | The highest level of continual exposure to a chemical which causes no significant adverse effect on morphology, biochemistry, functional capacity, growth, development or life span of individuals of the target species which may be animal or human. | PRC ¹ |
| OC pesticide | Organochlorine pesticide. A generic term for pesticides containing chlorine but commonly used to refer to older persistent materials including aldrin, BHC, chlordane, DDT, dieldrin, heptachlor, lindane and toxaphene. | PRC ¹ |
| OECD | Organisation for Economic Co-Operation and Development | |
| OP pesticide | Organophosphorus pesticide. A generic term for pesticides containing phosphorus but commonly used to refer to insecticides consisting of cholinesterase inhibiting esters of phosphate or thiophosphate. | PRC ¹ |
| Persistent Organic Pollutants (POPs) | POPs are chemicals which do not break down easily in the environment. This means that the amounts in the environment can increase over time. Certain POPs can build up in living tissues therefore strict controls are placed on their use. POPs include certain organochlorine pesticides such as DDT. | PRC ¹ |
| Pesticide | "Pesticide" means any substance intended for preventing, destroying, attracting, repelling, or controlling any pest including unwanted species of plants or animals during the production, storage, transport, distribution, and processing of food, agricultural commodities, or animal feeds or which may be administered to animals for the control of ectoparasites. The term includes substances intended for use as a plant-growth regulator, defoliant, desiccant, fruit thinning agent, or sprouting inhibitor and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport. The term normally excludes fertilizers, plant and animal nutrients, food additives and animal drugs. (Note: "Agricultural commodities" refers to commodities such as raw cereals, sugar beet, and cottonseed which might not, in the general sense, be considered food). | Codex Alimentarius http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| Pesticide contamination | The addition or presence of pesticides to, or in, another substance to such a degree as to cause concern regarding the safety of the substance for its intended purpose. Pesticide contamination of groundwater, for example, is the presence of pesticides in concentrations that cause environmental or safety concerns. | |
| Pesticide control centre | Such centres may have different functions in different countries but are commonly concerned with offering expertise on pesticide safety and the treatment of pesticide poisoning as well as collecting incident data. | |
| Pesticide formulation | The combination of active substances and other ingredients that make up the end-user product. | PRC ¹ |
| Pesticide incident | A case of pesticide poisoning or environmental contamination. | |
| Pesticide incident reporting systems | A system for the collection of data on cases of pesticide poisoning and / or environmental contamination. | |
| Pesticide poisoning | A toxic condition resulting from exposure to a pesticide (by contact with skin, inhaling or ingestion). | |

| Term | Definition | Source of definition |
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| Pesticide residue | "Pesticide residue" means any specified substances in food, agricultural commodities, or animal feed resulting from the use of a pesticide. The term includes any derivatives of a pesticide, such as conversion products, metabolites, reaction products, and impurities considered to be of toxicological significance. (Note: The term "pesticide residue" includes residues from unknown or unavoidable sources (e.g., environmental), as well as known uses of the chemical). | Codex Alimentarius http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| Pesticide Residues Committee (PRC) | An independent committee established in 2000 which advises Ministers and the Chief Executives of the UK Food Standards Agency (FSA) and the Chemicals Regulation Directorate (CRD) on the monitoring programme for pesticide residues in food and drink in the United Kingdom. | |
| Provisional Tolerable Daily Intake (PTDI) | A value based on toxicological data. It represents tolerable human intake of a former agricultural pesticide that may occur as a contaminant in food, drinking water and the environment. (Report of 1995 JMPR, FAO Plant Production and Protection Paper 127, p. 5) | Codex Alimentarius: http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| Registration | The process whereby the responsible national government authority approves the sale and use of a pesticide following the evaluation of scientific data demonstrating that the pesticide is effective for the purposes intended and poses no significant risks to human health, animals or the environment. | PRC ¹ |
| Risk | The probability of any specific hazard occurring from exposure to a pesticide under specific conditions. Risk is a function of the likelihood of exposure and the likelihood of harm to biological or other systems. See also <u>Hazard</u> . | PRC ¹ |
| Rotterdam Convention (also known as 'PIC') | The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade | Rotterdam Convention website: http://www.pic.int/ |
| Self-surveillance | In this context, 'self-surveillance' refers to monitoring systems that depend on participants collecting data regarding their own state of health and pattern of pesticide use. This can be done, for example, with illustrated report cards that are systematically collected over a period of time. | |
| Severely Hazardous Pesticide Formulation (SHPF) | "Severely hazardous pesticide formulation" means a chemical formulated for pesticidal use that produces severe health or environmental effects observable within a short period of time after single or multiple exposure, under conditions of use; <i>N.B. SHPF refers to <u>any</u> pesticide, regardless of hazard classification.</i> | The text of the Rotterdam Convention: http://www.pic.int/TheConvention/Overview/TextoftheConvention/tabid/1048/language/en-US/Default.aspx |
| Stockholm Convention | The Stockholm Convention on Persistent Organic Pollutants is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have adverse effects to human health or to the environment. The Convention is administered by the United Nations Environment Programme and is based in Geneva, Switzerland. | Stockholm Convention website: http://chm.pops.int/Convention/tabid/54/language/en-GB/Default.aspx |
| Surveillance | See 'monitoring' | |

| Term | Definition | Source of definition |
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| Temporary Acceptable Daily Intake | "Temporary ADI" is an acceptable daily intake established for a specified, limited period to enable additional biochemical, toxicological or other data to be obtained as may be required for estimating an acceptable daily intake. (Note: A TADI estimated by the Joint FAO/WHO Meeting on Pesticide Residues normally involves the application of a safety factor larger than that used in estimating an ADI). | Codex Alimentarius http://www.codexalimentarius.net/pestres/data/reference/glossary.html |
| The Convention Secretariat | The Secretariat of the Rotterdam Convention | |
| Toxicology | Toxicology is the science of adverse effects of chemicals on living organisms (plants and animals). | |
| UN | United Nations | |
| UNEP | United Nations Environment Programme | |
| WHO | World Health Organisation of the United Nations | |