AMedP-3(B)

CHEMICAL METHODS OF INSECT AND RODENT CONTROL

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NORTH ATLANTIC TREATY ORGANIZATION

NATO STANDARDIZATION AGENCY (NSA)

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RESERVATIONS

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RESERVATIONS

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CHAPTER 1

GENERAL PRACTICE OF PESTICIDE USE AND DEFINITON OF INTEGRATED PEST MANAGEMENT (IPM)

101. Purpose and Content

1. The purpose of the NATO AMedP-3 (B), “Chemical Methods of Insect and Rodent Control” is to provide basic information on using pesticides to control disease vectors and pests during field situations worldwide. Use pesticides only as part of an integrated pest management (IPM) program. IPM is an approach that combines a variety of techniques--including physical, mechanical, educational, biological and chemical--to prevent economic injury from pests or medical injury from disease vectors. Since pesticides are usually a last resort, the IPM approach reduces our dependency on pesticides and reduces the health and environmental risks associated with pesticide treatments. This listing is not intended to be a substitute for the pesticide label instructions.

102. Controlling Pests Not Listed on the Pesticide Label

1. During contingency operations, you may encounter disease vectors not listed on pesticide labels. Examples are: kissing bugs that transmit Chagas' disease in Central and South America; tsetse flies that transmit sleeping sickness in Africa; and phlebotomine sandflies that transmit leishmaniasis and sandfly fever in many parts of the world. Take the following steps to identify the pesticides to control these vectors:

2. Find out from an entomologist or reference material how and where the vector lives during its life cycle.

a. Determine the life cycle stage(s) most susceptible to control.

b. Identify a pesticide labeled for controlling a familiar pest at the same site or location as the vector you want to control.

NOTE: You may apply a pesticide to control pests not listed on the label, if the pesticide controls a labeled pest at the same site. For example, during the day, nymph and adult kissing bugs (in Central and South America) hide in cracks and crevices indoors and within woodpiles outdoors. From experience, you know that bedbugs also inhabit cracks and crevices within dwellings and spiders take refuge at the same outdoor sites as kissing bugs. Therefore, you can properly apply a pesticide labeled for these familiar pests to control (using the labeled treatment methods) kissing bugs found at the same labeled sites.

3. If you can't find exactly the same site on a label and have no further guidance, think carefully and choose the pesticide label for use at the most comparable site against the most similar pest. You may occasionally make a mistake and perhaps experience a control failure or other problems with the pesticide you chose, but you should still be confident that you chose the best available pesticide and that the benefits of controlling the pests outweighed the risks involved.

103. Importance of Sanitation

1. Poor sanitation and improper waste disposal under wartime conditions greatly increase the potential for disease vectors such as filth flies and rodents. Even in mobile field situations, these camp followers have historically amplified sanitation problems, often resulting in epidemics of diarrheal diseases that have caused many casualties. This threat is even greater in urban areas converted to temporary or semi-permanent military use, because personnel will not be moving every day to a different, cleaner area. In this situation, even cockroaches may join other pests associated with poor sanitation in compounding the problem especially in and around structures used for food storage, preparation and consumption, and buildings used for troop housing. All of these pests must be controlled, but only in conjunction with efforts to correct the sanitation problems which provide the pests food, breeding areas, and harborage.

2. Commanders are responsible for field sanitation: however, it is your responsibility as a preventive medicine or pest control manager to inform your commander on how to make improvements, and that controlling pests includes establishing and maintaining good sanitation practices. You can't do it by yourself with pesticides alone.

104. Safety Requirements

1. A dangerous temptation during deployments, in field training or combat situations is to relax the safety requirements for pesticide use. Some people think "the rules don't apply here." Yielding to that temptation can cost pesticide applicators their health and the health of those around them.

2. REGARDLESS OF THE SITUATION OR THE LOCATION, ALL SAFETY REQUIREMENTS ON THE PESTICIDE LABEL MUST BE MET. During planning, ensure that if pesticides are required that applicator personnel have the proper protective equipment on hand. There is no excuse for forgetting to bring protective equipment or for failing to use it. Most pesticide poisoning incidents caused by a lack of personal protective equipment occur with experienced personnel who thought that safety requirements applied only to people with less experience or to situations when there was "more time." The label precautions are there for a reason - TO PROTECT HEALTH. Pesticide applicators must never fail to use all the necessary protective equipment. Supervisors must not let pesticide applicators apply pesticides without it. Pesticide applicators should WEAR IT ALL and EVERY TIME.

105. Environmental Concerns

1. Negative Environmental Impacts. Concern for the environment should be a primary consideration during contingency and military operations. The impact of proper and improper pesticide application on the environment may play an important role on current and future host-nation relationships. When applying pesticides, consider the following:

a. Off target impact from drift, runoff, groundwater contamination and/or spills.

b. Development of pesticide resistance in target organisms.

c. Disposal of pesticide application waste.

2. Minimizing Negative Impacts. To minimize the negative impact of pesticides on the environment, adhere to the following:

a. Adhere to the climatic restrictions on the pesticide label.

b. Insure the pesticide application is required.

c. Select the pesticide that is specific for the pest to be controlled.

d. Treat the smallest area needed to control the pest.

e. Use only the amount of pesticide recommended on the label.

f. Contain spills and keep them from entering storm drains, wells, water systems, streams and rivers.

3. Pesticide Resistance. To minimize the potential for developing pesticide resistance, abide to the following:

a. Exhaust non-chemical controls (including sanitation, pest avoidance, physical barriers, and source reduction) prior to applying pesticides.

b. Avoid continuous use of a single pesticide class (consider what local agricultural pesticides are in use).

c. If the situation allows, use pesticides that have a shorter residual life.

d. Use compatible pesticide mixtures.

e. Combine synergists (such as piperonyl butoxide) with pesticides.

f. When possible, use biopesticides (e.g., Bacillus thuringiensis var. israelensis)

4. Disposing Pesticide Application Related Wastes

a. The proper disposal of pesticide and related wastes products is an important aspect of minimizing the detrimental effects of pesticides on the environment. During military exercises and contingencies operations, pesticide applicators must follow appropriate guidance for disposing of pesticides, pesticide rinse water, and pesticide containers.

b. For operations and exercises, pesticide applicators should dispose of pesticides, rinse water, and pesticide containers in accordance with the NATO or host-tenant agreements for that host country. If host-tenant or other agreements do not exist, you must adhere to the requirements or your own Country's regulations.

c. When supporting contingencies (such as combat operations in a hostile territory or allied country), you should still adhere to the principles of safe disposal for pesticides, rinse water, and pesticide containers. Even in these situations, rinsing spray equipment after use is important for keeping it operational as well as reducing the hazard of pesticide exposure between uses. Unused pesticides left in a sprayer (even for a day or two) can clog nozzles and deteriorate parts of the applicator so that the sprayer will not operate properly the next time you need it. To minimize the disposal problem, mix only the amount of pesticides that you know that you are going to use. It is usually much easier and safer to mix an additional application than it is to dispose of a full-strength spray left over because you mixed too much. If it is possible, take enough clean water to rinse the sprayer at the application site. The equipment rinse water can then be applied at the treatment site.

5. Empty Pesticide Containers

a. When disposing of empty pesticide containers, adhere to the following:

(1) Rinse empty pesticide containers and add the rinse water to the sprayer as a diluent to minimize health and environmental hazards.

(2) Punch holes in the sides and bottoms of metal or plastic containers and bury them if time permits, preferably in a landfill or other designated area.

(3) Empty bags should also be buried or burned.

b. To prevent troops in the field and local residents from using empty pesticide containers as cooking pots or water containers, NEVER LEAVE

EMPTY PESTICIDE CONTAINERS, OF ANY SIZE, IN REUSABLE CONDITION, EVEN IF THEY ARE BURIED. Most pesticide labels include instructions and precautions for disposing of the container.

106. Controlling Biting Pests that are Not Disease Vectors

1. Pre-deployment planning includes determining the disease vectors you will likely have to control in the area of operations. Be aware that biting pests, that are not disease vectors, can also pose a significant health threat. Ants, biting midges, black flies, and non-vector mosquitoes are among the pests that have caused many casualties during military exercises, and during actual contingency operations. These casualties were victims of secondary infections of arthropod bites, or suffered severe allergic reactions to arthropod bites. The greatest threats are in tropical and subtropical areas, where warmth and moisture promote rapid growth of fungal and bacterial infections, especially in field situations where there is little opportunity to keep clean and dry. Healing of these minor wounds is very slow in this environment and is usually retarded further because scratching the itch continually reopens the bite site. Infectious organisms are often introduced by scratching. So, even in areas relatively free of vector-borne diseases, plan on controlling biting pests that indirectly produce casualties from secondary infections and severe reactions.

107. Supporting Military Operations In Urban Areas

1. The purpose of this section is not to give detailed guidance, but rather to give a general idea of what to expect. The worldwide growth of cities, driven by population increases, has changed the terrain on which battles are likely to be fought. Because of the military advantages of controlling cities, NATO forces train extensively for urban combat and expect to fight in that environment. Consequently, you must be prepared to support them. Disruption of civilian health and sanitary services will sharply increase the risk of disease among civilian and military personnel.

108. Urban Control Challenges

1. Most urban control efforts will be against often explosive populations of typical urban pests (flies, cockroaches, rodents) associated with potentially epidemic diarrheal and other diseases, rather than classic vectors such as mosquitoes or ticks. Crowding of civilian populations, the formation of refugee camps, and the greatly reduced sectors and frontages of deployed combat forces promotes the rapid spread of diseases. Good sanitation and field hygiene in our deployed forces is critical to successful control efforts and should be continually stressed through the chain of command.

2. A single case of plague (flea-borne, from rodent reservoirs) or epidemic typhus (louse-borne) in the civilian or military population requires the immediate and highest priority efforts to control the responsible vectors/reservoirs, because of the potential for epidemics.

3. Another great concern is the convergence of refugees, deployed personnel, and establishment of prisoner of war (POW) camps. The size, location, and inherent problems to maintain adequate camp hygiene standards, coupled with the historically low state of health of POWs and refugees, significantly contributes to the spread of diseases among NATO forces. In these situations, your vector surveillance and control efforts must be closely coordinated with the responsible civil affairs units and with the medical chain of command responsible for epidemiological surveillance and treatment of NATO personnel.

CHAPTER 2

NATO CONTINGENCY PESTICIDE LIST

201. Purpose and Content

1. The purpose of the NATO AMedP-3 (B), “Chemical Methods of Insect and Rodent Control” is to provide **basic information** on using pesticides to control disease vectors and pests during field situations worldwide. This must also include the professional use and the rapid availability of pesticides in emergency or outbreak situations during contingency operations, especially in case of NATO Joint Deployment Operations (NAJODOs). Historical data and recent experiences during conflicts and wars clearly show that the hospitalization rate of soldiers due to communicable diseases usually reaches values between 65% and 80% of the overall rate. Approximately 2/3 of diseases currently defined as of military importance are vector-borne. High-risk vector-borne diseases like malaria and dengue fever are known as potential war stoppers in large, and geographically diverse areas of the world. To date, 156 infectious diseases are defined as emerging or resurging on the worldwide scale. Many of these diseases are also showing increasing levels of drug resistance. Therefore, one of the basic approaches of AMedP-3(A) must be to provide Force Health Protection by using vector control measures to prevent infections and/or othr medical problems from arthropod or rodent disease vectors of military importance. IPM-principles will be followed whenever the tactical situation permits, and only pesticides and application techniques proven as effective are to be used in order to rapidly:

a. interrupt the transmission cycle of naturally occurring, or intentionally spread vector-borne diseases,

b. prevent further geographical spread of diseases,

c. minimize the remaining epidemic potential at least within the camp site areas by reducing infected vector populations to levels where they are incapable of transmitting disease.

2. Pesticides are only to be applied using techniques appropriate for the target vector population. This listing is not intended to be a substitute for the pesticide label instructions without further emergency licensing by an authorized health institution.

202. Registration requirements for pesticides and repellents

1. Only pesticides and repellents registered and proven effective by either the national governmental authorities (e.g. USA-EPA, GBR-HSE, or DEU-BgVV), or by the national medical service of a NATO member country acting as special independent health authority according to its national laws against communicable diseases, are to be used to achieve control of epidemics of vector-borne

diseases. In order to ensure both, legal use and in-theatre availability of the vector control products listed, the national governmental registration authority, registration number, and/or military order reference of the responsible medical service should be notified. Registered pesticide products must be applied using devices and techniques with proven effectiveness for the product and all applications will be done in accordance with label instructions. If no registered product is available for a vector species, rapid emergency licensing may be done in accordance with national regulations in order to overcome the time delay for regular licensing, e.g. the 120 days emergency licensing of pesticides by the DEU-BAUA (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin). Once pesticide products have been proven effective and have been licensed for vector control by the responsible civil governmental health authority of one member nation of the European Community its generally legal use is guaranteed by all other EC countries according to the EC Biocide Guideline 98/8/EG.

203. Emergency vector control during epidemics

1. Emergency vector control measures during outbreaks of military important vector-borne diseases must be conducted in accordance with applicable national laws and/or specific NATO health regulations, and will be supervised by the responsible national military preventive medicine physician and/or, in case of NAJODOs, by the responsible NATO Theatre Surgeon. Effective vector control operations are to be implemented as rapidly and extensively as necessary to control the epidemic using applicable vector population control principles and with an emphasis on the safe use of chemical methods. In order to ensure military readiness for emergency vector control operations during deployments, sufficient supplies of appropriate emergency equipment, application devices, pesticides and repellents must be provided and kept on stock. Multinational access, exchange and support of pesticides and repellents available in the field will be ensured by the J4 chain of command.

204. Contingency list of Insecticides/Acaricides

1. Insecticides/Acaricides must be approved by a responsible governmental health intitution or the responsible military health service with respect to the national laws against communicable diseases according to the population eradication principle against

a. mechanical disease vectors (cockroaches, commensal flies/filth flies, commensal ants), and

b. blood-sucking disease vector arthropods.

2. In emergency cases during outbreak conditions, rapid special licensing to a defined target vector/indication is possible only by responsible governmental or military health institutions.

Product:	**Preventable diseases**:	**Indication/ Approved against:**	**Mode of Application:**	**Effective Compounds:**	**Registered by (Reg.-No./ Nation):**	**National Stock Number (NSN):**	**Manufacturer:**	**Precautions:**	**Remarks:**
B-5 Baygon WP 75, Wetable powder, 1 kg-can	Flea-, soft tick-, mosquito- and cockroach-borne diseases	Fleas, soft ticks, commensal flies, adult mosquitoes, commensal cockroaches (including organochloride-resistant strains), bed bug	Prepare sprayable suspension of WP in water (fleas:0,5%; ticks: 1%; flies, cockroaches 2-4%)	75% Propoxur	DEU-Federal Environmental Agency, (B-0090-00-00/ GE)	6840-12-183-5543	Bayer Vital GmbH, D-51368 Leverkusen	Do not spray directly on foodstuff; clean carefully contaminated parts of the body with soap esp. after contact with undiluted WP	New standard product (different NSN!) contains only 25% Propoxur WP
Solfac EW, 1 l can	Cockroach-borne diseases	Cockroaches	Residual spray, applied using pneumatic sprayer after dilution of concentrate in water	5% Cyfluthrin	DEU-Federal Environmental Agency, (B-0068-00-00/ GE)	none	Bayer Vital GmbH, D-51368 Leverkusen	Caution! Clean carefully contaminated parts of the body with soap, especially after contact with suspension concentrate or W.P. Do not spray on foodstuff.	

								Avoid inhalation of spray mist.	
Detmol-per, 1 l can	Louse-borne diseases	Head and body lice (not to be applicated to persons)	Residual spray with flushing and knock-down effect, applied as cold fog or using pneumatic sprayer	24% Permethrin, 25% Pyrethrum	DEU-Federal Environmental Agency, (B-0077-00-00/ GE)	none	Frowein GmbH u.Co.Kg 72437 Albstadt	Caution! Clean carefully contaminated parts of the body with soap, especially after contact with suspension concentrate or W.P. Do not spray on foodstuff. Avoid inhalation of spray mist	
Detmol-mic, 1 l plastic bottle	Cockroach-borne diseases	Cockroaches	Residual spray, applied using pneumatic sprayer, after dilution in water.	20% Fenitrothion microencapsulated	DEU-Federal Environmental Agency, (B-0124-00-00/ GE)	none	Frowein GmbH u.Co.Kg 72437 Albstadt	Do not spray directly on foodstuff	
Schwab-Ex Gel 200 ml can	Cockroach-borne diseases	Cockroaches	Ready-to-use bait, bait with <0,5 g Gel per bait station.	0,8% Fenitrothion, microencapsulated	DEU-Federal Environmental Agency, (B-0138-00-	none	Frowein GmbH u.Co.Kg 72437 Albstadt-2	Avoid direct contact with foodstuff	

					00/ GE)				
Schwab-Wx-Spray, 400 ml spray can	Cockroach-borne diseases	Cockroaches	Ready-to-use-spray with high repellent and flushing effect to monitor insect infestations. To be sprayed directly in cracks and crevices where insects hide.	1,13% Chlorpyrifos, 0,87% Dichlorvos, 0,34% Pyrethrum	DEU-Federal Environmental Agency, (B-0052-00-00/ GE)	none	Frowein GmbH u.Co.Kg 72437 Albstadt-2	Do not spray on foodstuff. Avoid extended inhalation of vapors	

205. Contingency list of Rodenticides

1. Rodenticides must be approved by a responsible governmental health intitution or the responsible military health service with respect to the national laws against communicable diseases according to the population eradication principle against

a. commensal urban or periurban disease-carrying rodents, and

b. sylvatic disease carrying rodents.

2. In emergency cases during outbreaks conditions, rapid special licensing to a defined target vector/indication is possible only by responsible governmental or military health institutions.

Product:	**Preventable diseases**:	**Indication/ Approved against:**	**Mode of Application:**	**Effective Compounds :**	**Registered by (Reg.-No./ Nation):**	**National Stock Number (NSN):**	**Manufacturer:**	**Precautions :**	**Remarks:**
Conrax-top-Concentrate	Rodent-borne diseases	Rats and mice	Mix liquid concentrate and cereals 1+49 to form a ready - to - use bait.	0,25% Bromadiolon	DEU-Federal Environmental Agency, (23253-60/ GE)	none	Frowein GmbH u. Co. KG 72437 Albstadt-Ebingen	Avoid contact with foodstuff. Concentrate or bait must be applicated so that children and domestic animals (dogs, cats) have no access.	
Contrax-D Bloc, 60 g block	Rat-borne diseases	Rats	Ready - to - use wax-bound block for use in wet areas, formulated to deliver a lethal dose, used when resistances against first generation	0,0025% Difethialon	DEU-Federal Environmental Agency, (B-0137-00-00/ GE)	none	Frowein GmbH u. Co. KG 72437 Albstadt-Ebingen	Avoid contact with foodstuff; Powder or bait must be applicated so that children and domestic animals (dogs, cats) have no	

			coumarins occur.					access	
Difenacoum Fertigköder, 100 g Packs	Rodent-borne diseases	Rats and mice	Ready - to - use rodenticide (granular bait) packed in sealed sachets that have to be placed unopened (for rats) or opened (for mice) near normal runs and feeding areas.	0,006% Difenacuom 0,02% Sulfonamides	DEU-Federal Environmental Agency, (03910-60/ GE)	none	Bertram GmbH 66903 Dittweiler	Avoid contact with foodstuff. Powder or bait must be applicated so that children and domestic animals (dogs, cats) have no access	

206. Contingency list of Repellents (skin and fabric repellents)

1. Skin and fabric repellents have to be approved as sufficient repellent active and effective against disease-carrying blood-sucking arthropods in case of epidemics. Skin repellents have to be registered and licensed as a drug, or as a cosmetic with proven efficacy as repellent. Basing on todays‘ knowledge, fabric impregnation has to be carried out only with permethrin-based (cis:trans= 25%-40%:75%-60%) dipping or spraying formulations, or by ready-to-wear factory treated fabrics (primarily battle dress uniforms).

Product:	Indication/ Approved against:	Mode of Application:	Effective Compounds:	Registered by (Reg.-No./ Nation):	National Stock Number (NSN):	Manufacturer:	Precautions:	Remarks:
Insektenschutzmittel Bundeswehr	Blood-sucking arthropods	Application of solution onto exposed skin areas	30% N,N-Diethyl m-toluamide (DEET) solubilized in iso-propanole	GE-MoD, Medical Service	6840-12-192-5468	Bundeswehr Pharmacy Koblenz	Avoid contact with eyes, mucous membranes, and injured skin. May corrode plastics. Do not ingest solution.	Old formulation (solution), produced until year 2000
Insektenschutzmittel Bundeswehr	Blood-sucking arthropods	Application of ointment onto exposed skin areas	30% N,N-Diethyl m-toluamide (DEET)	GE-MoD, Medical Service	6840-12-354-2927	Bundeswehr Pharmacy Koblenz	Avoid contact with eyes, mucous membranes, and injured skin. May corrode plastics. Do not ingest ointment.	New formulation (ointment), produced since year 2002

ANNEX A

ALPHABETIC LIST OF CONTRIBUTING NATO MEMBERS INCLUDING INFORMATION ON AGENT, SPECTRUM OF ACTION, MODE OF APPLICATION, EFFECTIVE COMPOUNDS, PRECAUTIONS AND SOURCE OF SUPPLY OF THE INSECTICIDES AND ACARICIDES

1. General observations on the use of Insecticides and Acaricides. Since insecticides and acaricides do not kill pest insects and mites only, but (after uptake of appropriate amounts) also harm other animals and man. Therefore, these agents should be applied only in limited amounts and in the lowest effective dose.

2. The application should be conducted by trained personnel only, the instructions must be followed carefully and all necessary precautions must be taken.

3. Under all circumstances, any contact with food-stuff must be avoided.

4. As long as other chemical compounds are available, chlorinated hydrocarbon insecticides - such as Aldrin, Dieldrin, DDT, µ-HCH and others, should not be used because of their accumulation in the body.

1. **BELGIUM (BEL)**

INSECTICIDES

General rules for use

a. The personnel handling insecticides shall wear the complete protection suit with a panoramic mask fitted with an adequate filter.

b. Eating, drinking and smoking are prohibited while using insecticides.

c. Avoid any contact of pesticides with foodstuff or beverage; keep the pesticides secure in cool, dry and well locked places.

d. Kitchen utensiles that have possibly been reached by insecticides have to be washed before use.

e. Move the domestic animals away during the use of pesticides.

f. The personnel has to take a shower and to rinse the equipment after use.

1. **Belgium (BEL)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Permas powder	Crawling insects	Powder ready to use	0,75% w/w Permethrin	General	Edialux Belgium
2. Volcide	Ants	Ready to use bait stations	5,9% w/w Natrium cacodylate	To be kept out of reach of children and domestic animals	Edialux Belgium
3. AGRICHIM	Flying and crawling insects	Residual spray, applied using pneumatic sprayer	25 g/l Deltamethrin	General	Belgagri
4. Permas 250 Combi	Flying and crawling insects	Residual spray, applied using pneumatic sprayer	250 g/l Permethrin 30 g/l Bioallethrin 150 g/l Piperonylbutoxide	General	Edialux
5. Solfac EW 50 Emulsion	Flying and crawling insets	Residual spray, applied using pneumatic sprayer	50,4 g/l Cyfluthrin	General	Bayer Belgium
6. Empire 200	Crawling insects	Residual spray, applied using pneumatic sprayer	208 g/l microencapsulated Chlorpyriphos	General	Belgagri
7. Insecstop	Flying and crawling insects	Knock-down aerosol spray with residual activity	0,1% w/w Pyrethrins 0,23% w/w Perme-thrin	General	Rastop

1. **Belgium (BEL)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
8. Aircraft	Against flying insects on aircraft	Ready to use aerosol spray can for rapid knock-down of flying arthropods	2% w/w d-Phenothrin	General	Sabena

2. **Canada (CAN)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Malathion ULV Insecticide (20 L of 95% malathion/pail). PCP Act Reg. No 12216, NSN 6840-21-872-2591.	Mosquitoes (outdoors).	Ultra low volume generator. Apply concentrate at a rate of 55-80 ml/min at 15 km/hr over a 90 m swath (425-550 ml/ha)	Malathion	Cholinesterase inhibitor. Wear impervious gloves, coveralls and respirator. Do not contaminate water.	Wilson Professional, Oakville, ON. (Note: Supplier may vary according to national contract).
2. Dursban 2E (240 g/L in 4 L jugs), PCP Act Reg. No. 10636, NSN 6840-21-896-3778..	Indoor spot or crack and crevice treatment to control cockroaches, ants, crickets, firebrats, silverfish, spiders, carpet beetles, brown dog ticks, fleas. Outdoor treatment for various pests on turf and ornamental plants.	Mix with water and apply as a coarse residual spray with sprayer as 0.24 or 0,48% solution, according to pest to be controlled and the type of treatment applied.	Chlorpyrifos	Cholinesterase inhibitor. Wear impervious gloves, coveralls and respirators.	Wilson Professional, Oakville, ON or Gardex Chemicals Ltd., Etobicoke, (Note: Supplier may vary according to national contract).

2. **Canada (CAN)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
3. Dursban L.O. (480 g/L, 473.2 ml product/bottle, 4 bottles/box, 16 bottles/case). PCP Act Reg. No. 19611. NSN * (6840-21-210-3392?),	Indoor spot or crack and crevice treatment to control cockroaches, ants, crickets, firebrats, silverfish, spiders, carpet beetles, brown dog ticks, fleas.	Mix with water and apply as a spot or crack and crevice treatment or as a coarse spray as a 0.24 or 0,48% solution, according to pest to be controlled and the type of treatment applied.	Chlorpyrifos	Cholinesterase inhibitor. Wear impervious gloves, coveralls, and respirator.	Gardex Chemicals Ltd., Etobicoke, (Note: Supplier may vary according to national contract).
4. Dursban Turf (480 g/L, 2x10 L jugs/case. PCP Act Reg. No. 24414. NSN * (6840-21-402-5411?)	Mosquito larvae and adults, plus numerous pests of turf and ornamental plants.	Use hand or power sprayers to apply to larval mosquito breeding sites at a rate of 28-110 ml/ha. For adult mosquitoes resting in vegetation, apply at a rate of 55-110 ml/ha.	Chlorpyrifos	Cholinesterase inhibitor. Wear impervious gloves, coveralls, and respirator.	Plant Products Co., Ltd., Brampton, ON or Wilson Professional, Dundas, ON. (Note: Supplier may vary according to national contract).
5. Malathion 500EC (50% malathion, 500 g/L emulsitiable concentrate in 20 L pails). PCP Act Reg. No. 16099, NSN*.	Grasshoppers, flies.	Hand sprayer for fly control in small areas. Boom sprayer for grasshoppers in grass alongside air strips.	Malathion	Cholinesterase inhibitor. Wear impervious gloves coveralls, and respirator	Wilson Professional, Oakville, ON. (Note: Supplier may vary according to national contract).

2. **Canada (CAN)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
6. Drione Insecticide Powder (2,25 kg pail). PCP Act Reg. No. 13793, NSN	Ants cockroaches, fire brats, white grubs, scorpions, silverfish, spiders.	Dust into electrical outlets and switches, cracks, crevices, behind baseboards and mouldings.	Pyrethrins, Piperonyl butoxide	Avoid inhaling dust. Avoid contact with skin and eyes. Turn off power before removing any electrical coverings.	Wilson Professional, Oakville, ON. (Note: Supplier may vary according to national contract).
7. Ficam D 1% Dust, 2,5 kg container, PCP Act Reg. No. 16080, NSN 6640-21-884-3085	cockroaches, ants, crickets, fire brats, silverfish, spiders, fleas, dog ticks.	Apply dust to cracks and crevices and behind baseboards where these pests crawl and hide.	Bendiocarb	Cholinesterase inhibitor. Wear impervious gloves, coveralls and respirator.	Gardex Chemicals Ltd., Etobicoke, (Note: Supplier may vary according to national contract).
8. FICAM W (80%) wetable powder, 10 x 12,5 g packets/box). PCP Act Reg No. 14378.NSN 6840-21-877-1390	Cockroaches, bed bugs, ticks, fleas in buildings, carpet beetles, clothes moths, spiders, sowbugs, pillbugs, earwigs, millipedes, centipedes.	For indoor and outdoor use. Requires frequent agitation to prevent clogging of spray equipment. Do not use strainers finer than 100 mesh size. Indoors, spray cracks and crevices, rugs and floor coverings. Outdoors, apply as a residual perimeter treatment where pests congregate. Dilute with water to 0.125 to 0.50 % depending on pest to be controlled and level of infestation.	Bendiocarb	Cholinesterase inhibitor. Wear impervious gloves, coveralls and respirator.	Gardex Chemicals Ltd., Etobicoke, (Note: Supplier may vary according to national contract).

2. **Canada (CAN)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
9. Ficam Wasp & Hornet Spray (pressurized 400 g can, 12 cans/case). PCP Act Reg. No. 22103. NSN*	Wasps, hornets, yellowjackets.	Thoroughly spray nest with stream-type spray until nest is soaked. Allow 24 hours for those insects which were not directly hit by spray to leave area.	Bendiocarb, Pyrethrins	Cholinesterase inhibitor. Wear impervious gloves, coveralls and respirator.	Gardex Chemicals Ltd., Etobicoke, (Note: Supplier may vary according to national contract).
10. Methoxychlor 2 % pyrethrins 2% piperonyl-butoxide 1,25 % pressurized can (340 g/can. PCP Act Reg No. 13086, NSN 6840-21-859 2401.	Mosquitoes, gnats, wasps, flying moths, sand flies, silverfish, cockroaches, crickets, carpet beetles, stored product pests	Treat area at a rate of one second spray per 90 m² in buildings. Keep room closed for 15 minutes.	Methoxychlor, Pyrethrins, Piperonylbutoxide.	Avoid inhaling mist. Avoid contact with skin and eyes.	Wilson Professional, Oakville, ON. (Note: Supplier may vary according to national contract).

2. **Canada (CAN)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
11. Pro Aerosol (pyrethrins 0,5%, piperonyl butoxide 4%, pressurized can 340 g/can). PCP Act Reg. No. 17288, NSN 6640-21-859-2402.	Mosquitoes, gnats, wasps, silverfish, cockroaches, crickets, fleas, ants, spiders, bed bugs.	Apply for 3-5 seconds per cubic meters of space. Spray hiding places of pests. Keep room closed for 15 minutes.	Piperonyl-butoxide, Pyrethrins	Avoid inhaling mist. Avoid contact with skin and eyes.	Wilson Professional, Oakville, ON. (Note: Supplier may vary according to national contract).
12. Swat Insect Strip (19.2% dichlorvos, 24 or 48/case), PCP Act Reg. No. 12591, NSN 6840-21-142-9438.	Flies, mosquitoes and other small flying insects.	Hang strips at least 3 m apart at a rate of 1 strip/30 m^3.	Dichlorvos	Wash hands after handling. Do not use in hospitals or areas of less than 25 m^3.	Wilson Professional, Oakville, ON. (Note: Supplier may vary according to national contract).
13. Vectobac 1200 L (10 L jugs). PCP Act Reg. No. 21062, NSN ****	Mosquito larvae	Apply, diluted in water, with a hand or backpack sprayer to larval breeding sites, at a rate of 0,5-2 L/ha	Bacillus thuringiensis H-14	Avoid contact with skin, eyes, and clothing.	GDC Environnement, Cap-de-la-Madeline. PW. (Note: Supplier may vary according to national contract).

3. **Czech Republic (CZE)**

No contribution submitted.

4. **Denmark (DNK)**

The Danish army has no more in stock any insecticides or rodenticides. Instead we depend, when necessary, on civilian professional companies, which are authorized by governmental authorities to perform insect- and rodent control. All chemicals used by these firms are listed in the "Register of Approved Pesticides" (ISBN: 87-503-7010-3), which is revised every year.

5. **France (FRA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. One Shot Insecticidal Aerosol 697.920.052.002	Flying insects	One-shot hand-held aerosol for aircraft disinsection	2% d-Phenothrin	Do not spray on foodstuff. Avoid inhalation. Store between 0 and 50°C	PSA
2. ATOX Aerosol 697.920.010.002	Flying insects	Ready -to -use powder to be applied directly into cracks and crevices. Recommended for indoor use	1,8% Tetramethrin, 0,5% Sumithrin, 1,3% Piperonylbutoxide	Do not use at temperatures >50°C, do not dust on foodstuff. Avoid inhalation of dust.	SICO
3. Insecticidal Powder 697.920.030.102	Crawling insects	Ready -to -use powder. Directly applied on surfaces where insects crawl or hide	0,16% Neosynephrin, 0,09% Sumithrin, 0,8% Piperonylbutoxide	Do not dust on foodstuff. Avoid inhalation of dust.	SICO
4. King 91 697.920.040.500	Flying and crawling insects	WP to be diluted in water for use with pneumatic sprayer.	11% Malathion, 5-15% Propetamphos 19% Dichlorvos	Do not spray directly on foodstuff. Strictly avoid contract with concentrate and spray mist.	SICO
5. Lindan Powder 697.910.175.210	Ectoparasites, especially human lice	Powder for direct treatment of body hair and clothing	1% Lindane	For personal treatment strictly according product label according	SICO

5. **France (FRA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
6. K-Othrine ULV 15/5 1 l bottle 697.920.040.661	Flying insects	ULV-formulation with residual activity	1,5% Deltamethrin, 0,5% Esbiothrin	Strictly avoid skin and eye contact with ULV-mist.	AgrEvo
7. Abate Granneles 25 Kg can 697.920.040.700	Aquatic insect larvae, esp. mosquito Larvae	Impregnated sand grannules, applied by hand	1% SG Temephos	Do not treat foodstuff	AgrEvo
8. K-Othrine EC25 1 l bottle 697.920.040.781	Flying insects	Impregnation of bednets	2,5% Deltamethrin	Strictly avoid skin and eye contact.	AgrEvo

6. **GERMANY (DEU)**

Precautions - Use of Insecticides and Acaricides

As a general principle, insecticides are only to be applied with other measures according to the principle of integrated pest management (IPM). Aim is to reduce the amount of biocides in order to minimize exposure to humans, animals and environment. During epidemics of vector-borne diseases, specifically licensed products are to be used.

a. Only officially approved insecticides are to be used.
b. All insecticides approved specially for MOD use will, wherever practicable, carry the statutory approval of the Umweltbundesamt and/or the Biologische Bundesanstalt für Land- und Forstwirtschaft.
c. Pesticides may only be applied by personnel who have received appropriate education, examination and training.
d. Proper accounts of insecticide storage, issue, use and disposal are to be kept.
e. Transportation must be carried out according to the national law for hazardous substances.
f. Individuals suffering from certain skin complaints, including cuts and grazes, are not to be employed on insect control duties. If in doubt, medical advice should be sought.
g. Personnel using insecticides should have washing (and ideally showering) facilities readily available.
h. Personnel are not allowed to eat, drink or smoke when using insecticides.
i. When spraying near electrical power supplies, care should be taken to switch off beforehand, and to strictly avoid spraying, electrical power sockets. When spraying in kitchens, appliances should be allowed to cool beforehand.
j. Foodstuff and food preparation surfaces are to be protected from insecticides.
k. Personnel are not to be sprayed directly with insecticides.
l. Only sufficient quantities of insecticides are to be mixed for the task in hand.
m. The acceptable personal protective equipment must be compatible with the requirements of the national safety regulations (TRGS 523).
n. Redundant insecticide and empty or damaged containers are to be disposed of in such a manner as to preclude contamination of the environment. Containers are not to be reused.

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. B5 Insecticide Wetable powder 1 kg-can	Crawling insects	Suspension of the WP in water (Against: ants 0,2 %, fleas 0,5%, ticks 1% (200ml/m²); flies, gnats, cockroaches, wasps 2-4 kg (50 ml/m²)	75% Propoxur	Do not spray directly on foodstuff; clean carefully; contaminated parts of the body with soap especially after contact with the undiluted WP	Bayer AG 51373 Leverkusen Stock of the German Bundeswehr Stock-number: 6840-12-183-5543
2. Solfac EW 1 l can	Flying and crawling insects	Residual spray, applied using pneumatic sprayer after dilution of concentrate in water	5% Cyfluthrin	Caution! Clean carefully contaminated parts of the body with soap, especially after contact with suspension concentrate or W.P. Do not spray on foodstuff. Avoid inhalation of spray mist.	Bayer AG 51373 Leverkusen
3. Detmol-plus 1 l plastic bottle	Crawling insects, flying insects, mites, ticks, spiders, millipedes	The concentrate must be diluted with water to 1%, produces "flushing effect", if added (0,5%) to other insecticidal sprays	25% Pyrethrum, 46,6% PBO	Do not spray directly on foodstuff. Avoid inhalation of vapors	Frowein GmbH u Co KG 72437 Albstadt

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
4. Detmol-per 1 l can	Flying and crawling insects	Residual spray with flushing and knock-down effect, applied as cold fog or using pneumatic sprayer	24% Permethrin, 25% Pyrethrum	Caution! Clean carefully contaminated parts of the body with soap, especially after contact with suspension concentrate or W.P. Do not spray on foodstuff. Avoid inhalation of spray mist	Frowein GmbH u.Co.Kg 72437 Albstadt
5. Detmol-mic 1 l plastic bottle	Cockroaches and other crawling insects	Residual spray, applied using pneumatic sprayer, after dilution in water.	20% Fenitrothion microencapsulated	Do not spray directly on foodstuff	Frowein GmbH u.Co.Kg 72437 Albstadt
6. Detmol FOG 1 10 l can	Flying and crawling arthropods	Residual heat fog with knock-down and flushing effect	0,8% Permethrin 1,6% Pyrethrum 1,6% PBO	Do not fog on foodstuff, avoid inhalation, decontamination may be necessary. Attendant fire risk.	Frowein GmbH u.Co.Kg 72437 Albstadt
7. Pyrifix-Combifog	Flying and crawling insects	Non-residual heat fog with knock-down and flushing effect	0,4% Pyrethrum, 0,4% Bioallethrin, 1,2% PBO	Do not fog directly on foodstuff, avoid inhalation. Attendant fire risk.	Chembico Hauptstr. 13 67283 Obrigheim-Mühlheim
8. Schwab-Ex Gel 200 ml can	Cockroaches	Ready-to-use bait, bait with <0,5 g Gel per bait station.	0,8% Fenitrothion, microencapsulated,	Avoid direct contact with foodstuff	Frowein GmbH u.Co.Kg 72437 Albstadt-2

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
9. Schwab-Ex-Spray 400 ml spray can	Cockroaches and other crawling insects	Ready-to-use-spray with high repellent and flushing effect to monitor insect infestations. To be sprayed directly in cracks and crevices where insects hide.	1,13% Chlorpyrifos, 0,87% Dichlorvos, 0,34% Pyrethrum	Do not spray on foodstuff. Avoid extended inhalation of vapors	Frowein GmbH u.Co.Kg 72437 Albstadt-2
10. Vectobac WDG 3.000 ITU, 25 kg can	Mosquito-Larvae, blackfly Larvae	Applied using pneumatic sprayer after dilution of the WDG into water. Use 500g/ha water surface. Usable in combination with methoprene.	Toxins of Bacillus thuringiensis var. israelensis, 3000 IU/mg sterilized, microencapsulated product.	For outdoor use only. Do not spray on foodstuff. Avoid inhalation of WP.	Culinex Bauhausstr. 46 67069 Ludwigshafen

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
11. Altosid SR 20 5 gal can	Aquatic insect Larvae	4 l concentrate can be diluted with up to 1 m^3 water. Application by spraying. Formulation has residual larvicidal activity that lasts for up to 30 days. Use 50-75 ml concentrate/ha for treatment of naturally flooded areas, and extend amount to 150 ml concentrate/ha to treat artificial breeding places where water is polluted with organic material (e.g. sewage systems). Recommended for use in combination with Bti (Vectobac).	20 % Methoprene	Do not spray on foodstuff. Wear personal protective clothing and gloves when applying manually.	Culinex Bauhausstr. 46 67069 Ludwigshafen

7. **GREECE (GRC)**

General Rules

a. Insecticides must never be allowed to come into contact with food or drink.

b. Household utensils which have been contaminated must be washed before use.

c. Avoid inhaling insecticide aerosols (gasmask).

d. No smoking or eating while insecticides are in use.

e. Protect skin and clothes by wearing an overall, headdress, and, it deemed advisable, boots.

f. Remove domestic animals to a safe place.

g. Provide bath or shower, or at least washing facilities for people who have been using insecticides.

In the event of poisoning, see a doctor.

7. Greece (GRC)

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Aerosol new Smart	Flying Insects (Flies, Mosquitoes etc.)	Spray	DDVP 0.6 %	POISON	D.T.B. Hellas 1 Pireos St. Athens
2. Airtox	"	Spray-Powder	Pyrethrins 0.23 %	"	Levifarm O.E. 53 Marni St. Athens
3. Drumer Aerosol	"	Spray	Pyrethrins 0.2 %	"	Ntestre (Hellas) 2 Aristotelus St. Drapetsona-Piraeus
4. Emotox Aerosol	"	Spray	DDVP 0.6 %	"	National Can Greece 25 Km National Road Athens-Korinth
5. Guard	"	Spray	DDVP 0.8 %	"	Minigaz, 18 Amerikis St. Athens
6. Comet Aerosol	"	Spray	DDVP 0.6 %	"	Viospray EPE 12 Sapfous St., Athens
7. Mafu-Spray Neo	"	Spray	DDVP 0.8 %	"	Bayer Epifa AE 55-59 Deligeorgi St. Athens
8. Med-Rock	"	Solution	Neopynamin 0.3 %	"	Med-Hell (Hellas) AE 14 Epidayrou St. Chalandri-Athens

7. Greece (GRC)

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
9. Aerosol Banedon	Cockroaches Ants etc.	Spray	Dursban 1 % Pyrethrins 0.05 %	POISON	National Can Greece 17 I. Metaea AVE, Athens
10. Aerotoe Aerosol	"	Spray	Chlorpyrifos 0.05 % Diazinon 0.5 %	"	Aero Aebe Lasani-Levanti St. Peristeri-Greece
11. Black Star	"	Spray	Diazinon 0.8 % Pyrethrins 0.3 %	"	N. Petsiavas AE II. Nikodimoy-Vouli Athens
12. Baygon Spray	"	Spray	Baygon 2 % DDVP 0.5 %	"	Bayer-Epifa AE 55-59 Deligeorgi St. Athens
13. Piridur	"	Spray	Chlorpyrifos 1.17 % Bioallethrins 0.25 %	"	Emtea AE I. Mitmopolros St., Athens
14. Shelltox	"	Spray	Dursban 1 % DDVP 0.5 %	"	Shell Company (Hellas) 2 El. Venizelou Ave. Kaliethea-Athens

7. Greece (GRC)

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
15. Teza Spray extra	"	Spray	Dursban 1 % Pyrethrins 0.5 % Diazinon 1 %	"	Brattits Co. 150 Tatoiou, Athens
16. Black Flag Aerosol	Cockroaches, Ants and Flies, Mosquitoes	Spray	DDVP 0.16 % Pyrethrins 0.02 % Bromophos Methyl 0.8 %	POISON	Labropoulos Bros. 12 Ailianou St. Athens
17. Neo-Shelltox with Vapona Aerosol	Flying Insects (Flies, Mosquitoes etc.)	Spray	DDVP 0.6 %	"	Shell Co. (Hellas) 2 Venizeloy St. Kalithea-Athens
18. Nepin	"	Spray	Neopinamin 0.26 % Pyrethrins 0.10 % M.G.K. 261 1.10 %	"	Chemi-Products (Hellas) 42 Themistokleous St. Athens
19. 007 Aerosol	"	Spray	DDVP 0.6 %	"	National Can Greece 25 Km National Road Athens-Corinth
20. Red Star Aerosol	"	Spray	Neopinamin 0.3 % M.G.K. 261 0.5 %	"	N. Petslavas AE Nikodimoy-Voulis 11 Athens

7. Greece (GRC)

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
21. Sactif	"	Spray	Neopinamin 0.27 %	"	EBA AE 25 Alexandropoleos Athens
22. Finatox Aerosol Type C	"	Spray	DDVP 0.7 %	"	Fina AE 236 Syggrou Ave., Athens
23. Spok Aersol	Flying Insects (Flies, Mosquitoes etc.)	Spray	DDVP 0.6 %	POISON	D.T.B. Hellas AE 1 Piraeus St., Athens
24. Raid-2000	"	Spray	Pyrethrins 0.15 % Neopynamin 0.35 %	"	S.C. Johnson and Son (Hellas) EPE Aspropygos-Attica
25. Scorotoe	Moths	Solution	Perthane 3 %	"	Agrochimiki EPE 24 EM. Mpenaki St. Athens

8. **HUNGARY (HUN)**

No contribution submitted.

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Liquido Insetticida Concentrato Containing Malathion	Flies, mosquitoes, fleas, bedbugs, beetles and other insects.	Diluted in Water from 2 to 5 %	Malathion 50 % Pyrethrum 4 % Piperonylbutoxide 8% Solvents	Do not use on foods or on domestic animals. Do not use in closed quarters where people live. Inflammable.	Stabilimento Chimico Farmaceutico Militare Via R. Giuliani 201 Firenze.
2. Liquido Insetticida Concentrato Containing Bioalletrine	All insects.	Diluted in water to 4 %.	Bioallethrin 3.3 % Piperonylbutoxide 33,3 % Solvents and emulsifier.	"	"
3. Insetticida Pronto All'uso con Pyrethrum E Piperonylbutoxido	All insects	Ready for use.	Pyrethrum 0.6 % Piperonylbutoxide 0.6 % Citronella 2 % Solvents.	"	"
4. Malmed L 50	Flies and mosquitoes	Emulsion concentrate to be diluted in water 2 %	Malathion 50 %	Do not use on foods or domestic animals. Do not use in closed quarters where people live.	Agrimont S.P.A. Linea igiene pubblica Via S. Teresa, 23 Tel. 06/865761-861995-00198 Roma
5. Demos L 40	Flies and ground insects	Emulsionable in water 0.5-5%	Dimethoate 32 % Dichlorvos 8 %	"	"

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
6. Demos N.F.	Flies and ground insects	Emulsionable in water 0.5-5%	Dimethoate 32 % Pyrethrum 1,2 % Piperonylbutoxide 2,4%	"	Agrimont S.P.A. Linea igiene pubblica Via S. Teresa, 23 Tel. 06/865761-861995-00198 Roma
7. Slam C	Larvae of flies.	Diluted in water to 1-2%	Azothoate 10 %	Toxic if ingested, inhaled or absorbed through skin.	"
8. Blacard 50 P B	Beetles.	Powder soluble in water 1%	Carbaryl 50 %	Normal precautions required by insecticides.	"
9. Blacared 5 P	Beetles.	Dried powder ready for use 2g/m².	Carbaryl 5 %	"	"
10. Tanone	Mosquitoes.	Diluted in water to 1%	Phenthoate 50 %	"	"
11. Solfac EW	All insects.	Diluted in water to 1 %	Cyfluthrin 5 % Solvents.	"	Sici S.P.A. Via Torino, 41 Tel. 06/4742941 Roma
12. Solfac combi	Flies and mosquitoes	Diluted in water to 4 %	Cyfluthrin 2 % Fenthion 47,7 %	"	"
13. Skeetal	Mosquitoes, Larvae.	Diluted in water.	Living spores of Bacillus thuringiensis,	Toxic; do not use on foods.	"

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
14. Baytex 50 Bayer	Flies and mosquitoes	Diluted in water to 4 %	Mercaptofos 43 % DDVP 5 % inert ingredients 47 %	Do not use on foods or on animals	For Northern Italy: Leica-Via dei Mulini, 24-Forli, For Southern Italy: Sici-Via Torino41 Tel.06/4742941 Roma
15. Baygon EC	Cockroaches and other insects	Diluted in water from 2 to 5%	2-Isopropoxyphenyl-N-methylcarbamate (Propoxur).	Do not use on foods or on animals. Do not use in closed quarters where people live.	"
16. Baygon liquido (Liquid Baygon)	Cockroaches and other parasites	Ready for use in refined and deodored petrol	"	Toxic if inhaled or absorbed through skin.	2
17. Baygon Polvere (Baygon-Powder)	Cockroaches and parasites.	By spreading on the ground.	"	Toxic if absorbed through skin.	"
18. Baygon Spray	Flying and crawling insects.	By spraying.	"	Toxic if inhaled	"
19. Soital 50	Flies, horseflies, moths, mosquitoes and gnats.	Diluted in water to 2%. Can be sprayed with a sprinkling apparatus on internal or external walls.	Pyrethrum 25 %; Tetramethrine, Piperonylbutoxide; MGK; Solvents; Propellents and	Do not use on foods.	Sici-Via Torino 41 Tel. 06/4742941-Roma

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
			aromatic substances.		
20. Pyrethrum	Flies, mosquitoes, gnats and cockroaches.	Emulsionable in water 4 %.	Pyrethrum; Piperonylbutoxide; Emulsionants and Mineral oil.	Do not use on foods or on animals	Bianchedi-Via dei Colli Portuensi 139 Tel. 06/5349500-Roma
21. Reldan 24/E	All insects.	Diluted in water from 2 to 5%	0,0-Dimethy l0-Chlorpyrifos Methyl.	Normal precautions to be used with insecticides.	"
22. Reldafos	All insects.	Diluted in water 4 %.	Chlorpyrifos-Methyl, Neopinamin, Piperonylbutoxide, Solvents and emulsionants.	Normal precautions to be used with insecticides.	"
23. Dursban Cy	All insects.	Emulsionable in water to 1 %	Chlorpyrifos 46 % Cypermethrin 4,6 % Solvents and emulsionants.	Toxic to fishes	"
24. Formiclor 80	Flies, mosquitoes and ground insects.	Emulsionable in water to 5 %	Pyrethrine, Piperonylbutoxide, Methoxichlor, Diazinon, solvents and emulsionants.	Toxic if ingested, inhaled or absorbed through skin.	ZUCCHET S.P.A., Via Pian Due Torri 52 Tel. 06/5270841 00146 Roma

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
25. Formiclor 40	Flies, mosquitoes and ground insects	Emulsionable in water to 5%	Diazinon 40 % Pyrethrum 2 % Piperonylbutoxide 4% Solvents and emulsionants.	Do not use on foods or domestic animals. Do not use in closed quarters where people live.	ZUCCHET S.P.A., Via Pian Due Torri 52 Tel. 06/5270841 00146 Roma
26. Formiclor 18	Flies, mosquitoes, fleas, lice, moths, ants and beetles.	By spraying	Pyrethrum 25 %, Piperonylbutoxide, solvents, antioxidants and aromatic substances.	Inflammable, toxic in closed quarters and on foods.	"
27. Muscaton 50	Flies, mosquitoes, fleas and other insects.	Emulsionable in water 0,5-4%	Malathion 30 gr. Rogor 20 gr. Solvents and emulsionants 50 gr.	Toxic if inhaled or absorbed through skin.	"
28. Nurelle 56EC	Flies, mosquitoes, fleas, beetles, bugs.	Diluted in water from 1 to 2 %.	Cypermethrin to 90%, 5,62 gr. Emulsionants and solvents 94,38 gr.	Normal precautions to be used with insecticides.	M. Bioanchedi S.r.l. Viale dei Colli Portuensi 139 00151-Roma
29. Keniatox per Industrie Alimentari (Keniatox for food factory)	All flying and ground insects.	Emulsionable in water. Can be sprayed with a sprinkling apparatus.	Piperonylbutoxide; Pyrethrum.	Toxic if inhaled or absorbed through skin.	COOPER Italiana

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
30. Famide Spray	All flying and ground insects.	By spraying.	Dioxacarb 50 gr.	Toxic if inhaled	Ciba-Geigy Tel. 02/96541 Origgio (VA).

10. **Netherlands (NLD)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. PREMISE gel	Cockroaches	Ready-to-use	Imidacloprid	Pest Control operator should be protected by gloves	Bayer Nederland Bv Postbus 105 6800 AC Arnheim THE NETHERLANDS
2. GOLIATH gel	Cockroaches	Ready-to-use	Fipronil	Pest Control operator should be protected by gloves	Aventis Env. Sc. Postbus 147 4900 AC Oosterhout THE NETHERLANDS
3. MIEREN MIDDEL Bayer	Ants	Dust on and underneath floors, behind skirtingboards, tubin, radiators, etc.	Foxim	Avoid contact	Bayer Nederland Bv Divisie Agro Chemie Postbus 105 6800 AC Arnheim THE NETHERLANDS
4. MEPROS BAIT BOX	Ants	Place bait-box on directly ant-streets	Trichlorfon		CAMBRIA BV Industrieweg 1 5531 AD Bladel THE NETHERLANDS
5. SOLFAC Liquid	Cockroaches Flies	Emulgate the emulsion concentrate in water (0,8%)	Cyfluthrin	Wear mask, gloves and other protective clothing remove all foodstuff; clean afterwards carefully contaminated kitchen-utensils and table	BAYER HOLLAND BV Argo-Chemie Veterinair Postbus 9217 6800 HW ARNHEM THE NETHERLANDS

10. **Netherlands (NLD)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
6. EMPIRE 20	Cockroaches and other crawling insects	Emulsion concentrate/ organic phosphorus connection (1% in water)	Chlorpyrifos	Wear mask, gloves and other protective clothing remove all foodstuff; clean afterwards carefully contaminated kitchen-utensils and table	RIWA BV Schapenweide 6 Postbus 2280 4800 CG BREDA THE NETHERLANDS
7. DETMOL CONCEN TRAAT DUd	Cockroaches and other crawling insects	Emulsion concentrate-combination (2-4% in water)	Chlorpyrifos	Wear mask, gloves and other protective clothing remove all foodstuff; clean afterwards carefully contaminated kitchen-utensils and table	RIWA BV Schapenweide 6 Postbus 2280 4800 CG BREDA THE NETHERLANDS
8. BAYGON Ants bait box	Ants	Place open box several days in same spot (Place bait-box on "ant-street")	Foxim		BAYER BV Energieweg 1 3641 RT MIJDRECHT THE NETHERLANDS
9. BAYGON Ants powder	Ants	Strew the entry of ant's nest (mostly between tiles). Can be mixed with water (25 g in 5 liter)	Foxim	Avoid contact	BAYER BV Energieweg 1 3641 RT MIJDRECHT THE NETHERLANDS

10. **Netherlands (NLD)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
10. MAXFORCE Pharaoh's ant bait box	Pharaoh's ants	Place bait box near "ant-street" or places with a lot of ants. 1 or 2 bait boxes per 10 meters.	Hydramethylon		ROUSSEL UCLAF ENVIRONMENTAL HEALTH NV Colonel Bourgstraat 128 B-1140 BRUSSEL BELGIUM
11. Aircraft desinsectant	Flying insects	Sprayer, ready for use	2%d-Phenothrin	Prevent direct contact and inhalation. Cover all foodstuff and clean all contaminated kitchen-utensils and tables	DENKA INTERNATIONAL Postbus 337 3770 AH BARNEVELD THE NETHERLANDS

11. **NORWAY (NOR)**

No contribution submitted.

12. **Portugal (PRT)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Certi-fog	Mosquitoes, flies, cockroaches, ants	Termal Fog Generator	Pyrethrins 0,3 % Piperonylbutoxide 1,75%	Should be used only by specially trained personnel. Exterminator should be protected by mask and gloves. Avoid contact with foodstuff. Clean contaminated parts of the body with soap. Combustible.	Certified Av. Conselheiro Fernando de Sousa Nr. 19-10°-Esq. Lisboa
2. Neo Insecticida	Flies, mosquitoes, bed bugs, fleas and mites	Sprayer ready for use.	Dichlorvos 2 % Piperonylbutoxide 3% Neo-pynamin 0,3 %	Avoid inhalation of vapors. Avoid skin contact. Do not spray on foodstuff, animals and plants.	Laboratorio Militar de Produtos Quimicos e Farmacêuticos Av. Alfredo Bensaude Lisboa
3. Baygon Liquid	Cockroaches, ants, silverfishes, earworms, spiders,fleas, bedbugs, ticks, crickets, flies, gnats, mites and wasps.	Ready for use.	Propoxur 1,0 % Dichlorvos 0,5 %	Exterminator should be protected by mask and gloves. Remove or cover all foodstuff. Colinesterase inhibitor. Do not contaminate.	Bayer Portugal SARL Rua Sociedade Farmacêutica n° 3-4°

12. **Portugal (PRT)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
4. Baygon Powder	Cockroaches, ants, silverfishes, earworms, spiders, fleas, bedbugs, ticks, crickets, flies, gnats mites and wasps	Powder ready for use.	Porpoxur 1 %	Exterminator should be protected by mask and gloves. Remove or cover all foodstuff. Colinesterase inhibitor. Do not contaminate.	Bayer Portugal SARL Rua Sociedade Farmacêutica n° 3-4° Lisboa

13. **POLAND (POL)**

No contribution submitted.

14. **Spain (ESP)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Liquid insecticide immediate action ZZ-33 N.O.C.: 6840-33-1399015	Flying insects	ULV-fogging machine	Natural Pyrethrins 0,3% 30 g/L Piperonyl Butoxide 3% 30 g/L	Do not spray directly on foodstuff, avoid inhalation; flammable liquid. Wear protective clothing. Avoid inhalation.	Zelnova S.A. Reg. D.G.F.P.S. No 130 Ins. Reg. G.S.A. No 3700159/PO-01624
2. Liquid insecticide imediate action massocide light	Crawling and flying insects	Cold or heat fogging	Pyrethrum 25% 16 g/L Piperonyl Butoxide 30 g/L	Do not spray directly on foodstuff, avoid inhalation; flammable liquid. Wear protective clothing. Avoid inhalation.	C.Q. Masso S.A. Reg. D.G.F.Y.M. No 1648 Ins. Reg. G.S.A. No 3700316/B-02537
3. Liquid insecticide compound ZZ-44	Flies, moths, mosquitoes, beetles.	Cold fogging or sprayer ready to use.	Natural Pyrethrins 3 g/L Piperonyl Butoxide 3% heavy mineral oil.	Do not fog on foodstuff. Avoid inhalation.	Zelnova S.A. Reg. D.G.F.P.S. No 133 Ins Reg. G.S.A. No 3700159/PO-01947
4. Liquid insecticide residual action Multispray N.O.C. 6840-33-1899286	Flying and crawling insects, bed bugs.	Cold and thermal fogging; back-pack sprayer.	Bioallethrin 0,04% Bioresmethrin 0,06% Piperonyl Butoxide Lindane 1%	Not to be used in presence of foodstuff; avoid inhalation, clean carefully conta-minated parts of the body with soap especially after contamination with concentrates.	Zelnova S.A. Reg. D.G.F.P.S. No 12624 Ins.

14. **Spain (ESP)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
5. Liquid insecticide Residual Baygon Ol	Cockroaches, and flying insects	Spray 0,75 - 1,5 ml/10 m^3 against flying insects, 25 - 50 ml/$m^{2.}$	Propoxur 1% Dichlorvos 0,5%	Not to be used in presence of foodstuff; avoid inhalation, clean carefully contaminated parts of the body with soap. Flammable liquid.	Bayer S.A. Reg. D.G.F.P.S. No 239 INS.
6. Lac insecticide Clorpirifos G.M.B.	Crawling insects, esp. cockroaches	Sprayer ready to use.	Chlorpyrifos 3% Dichlorvos 0,5%	Not to be used in presence of foodstuff; avoid inhalation, clean carefully contaminated parts of the body with soap. Flammable liquid.	G.M.B. International
7. Lac insecticide Clorpirifos Masso	Crawling insects, esp. cockroaches	Sprayer ready to use	Chlorpyrifos 25 g/L Cypermethrine 5 g/L	Not to be used in presence of foodstuff; avoid inhalation, clean carefully contaminated parts of the body with soap. Flammable liquid.	C.Q. Masso S.A. Reg. D.G. de P. de C. No 91-30-00172
8. Concentrate liquid insecticide Solfac EW 050	Cockroaches, flies, flying pests, mosquito larvae	Sprayed onto places where insects rest, hide or travel; use 80 ml/10 L water or 40 L/100 m^2 water surface against mosquito larvae.	Cyfluthrin 5%	Clean carefully contaminated parts of the body with soap, especially after contact with suspension concentrate. Do not spray on foodstuff. Avoid inhalation of spray mist.	Bayer S.A. Reg. D.G.S.P. No 37-04124

14. **Spain (ESP)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
9. Concentrate liquid insecticide Baygon EC 20	All insects	Suspend in water, spray 250-500 ml/m^2	Propoxur 20%	Do not spray directly on foodstuff; clean carefully contaminated parts of the body with soap especially after contact with WP or concentrates.	C.Q. Masso S.A. Reg. D.G. DE F Y M No 1646 INS
10. Liquid insecticides organosforate Massocide S-NP	Flies, mosquitoes (adults & larvae), cockroaches	For indoor and outdoor use.	Sumithion 500 g/L Neo-Pynamin 50 g/L	Flammable liquid. Do not spray directly on electric devices. Clean carefully contaminated parts of the body with soap, especially after contact with concentrates. Avoid inhalation of spray mist. Do not spread on hot surfaces.	C.Q. Masso S.A. Reg. D.G. DE F Y M No 1646 INS
11. Liquid insecticide Microencapsulated	Crawling insects	Concentrate to be diluted with water (2 - 4%) and sprayed on surfaces, where arthropods may rest, hide or travel	Sumithion 20%	Do not spray directly on foodstuff.	C.Q. Masso S.A. Reg. D.G. S.A.Y.P.C. No 37.00316/B-03342

14. **Spain (ESP)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
12. Powder insecticide Baygon	All insects	For use in areas, where liquid formulation is not recommended.	Propoxur 1%	Do not spray on foodstuff, use protective clothing and clean carefully contaminated parts of the body with soap.	Bayer S.A. Reg. D.G.F.Y.P.S. No 202 Ins
13. Wetable powder insecticide Ficam W	Cockroaches	For use in cockroach infested areas as a 0,3-0,6% solution	Bendiocarb 80%	Do not spray on foodstuff; use protective clothing and clean	C.Q. Masso, S.A.
14. Wetable powder insecticide Solfac WP 10	Crawling and flying insects	To be sprayed in an amount of 50 ml/m^2 against crawling and insects and 100 ml/m^2 against flying insects.	Cyfluthrin 10%	Avoid inhalation of spray mist. Do not spread on foodstuff. Clean carefully contaminated parts of the body with soap.	Bayer S.A. Reg. D.G.F.M No 1295 INS Reg. EN M.A.P.A. No 1635/8932

15. **TURKEY (TUR)**

General issues to be considered when using insecticides are as follows:

a. Insecticides must not be applied on foods.

b. Smoking and eating shall be prohibited during insecticide application.

c. Plastic gloves, protective clothing and mask must be used during contact with insecticides and during application.

d. In case of contact, eyes and skin must be cleaned with plenty of water.

e. Empty containers must be disposed properly after cleaning.

f. Insecticide containers must be stored preferably in dark, dry and cool places, and in their original package, as recommended by its manufacturer.

g. Insecticides must be stored in places away from foods and out of reach of children.

h. In case of toxication gastric washing must be applied.

15. **Turkey (TUR)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Mostyn BA 25	Flies, Mosquitos, Cockroaches, Lice, Fleas	Thermal fogging and with ULV	105 g/L Permethrin, 3.5 g/L S-Bioallethrin	General	Ulfog
2. Solfac UL 15	Stable flies, sand flies, mosquitos, house flies, cockroaches	All types of fogging apparatus	1% Cyfluthrin, 0,3% Pynamin forte, 5% Piperonyl Butoxide	General and producers of beekeeping shall be warned prior to application	Bayer
3. D DVP55 EM	Mosquitos, house flies, cockroaches	All types of fogging apparatus	Dichlorvos	General	Koruma Tarum
4. Imperator	Harmful insects on fruits and vegetables		Cypermethrin	General	Turco-Hoechst Industries
5. Special Mixture	Cockroaches	Prepared mixture shall be applied to dark and moist places	36% Borax, 16% Flour	General	
6. Mostyn M25 T	Mosquitos, bees, flies, cockroaches, fleas, ants, ticks, beetles	All types of fogging apparatus. Could be used by mixing with water, fuel oil or kerosene	10% Tetramethrin, 5% d-Phenothrin	General	Ulfog Insecticides

15. **Turkey (TUR)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
7. Fondol M EC 360	Mosquitos, bees, flies, cockroaches, fleas, ants, ticks, beetles	Fogging apparatus	360 g/L Methyl-Parathion	General and in calm weather conditions	
8. Poli DDVP 50 EL	Mosquitos, bees, flies, cockroaches, fleas, ants, ticks, beetles	Sprayed with pump	550 g/L Dichlorvos	General	Polisan Chemical Industries
9. Diazol 20 EC	Mosquitos, bees, flies, cockroaches, fleas, ants, ticks, beetles	Sprayed with pump	185 g/L Diazinon	General	
10. Icon IE	Cockroaches, fleas, bedbugs	Sprayed with pump	360 g/L Methyl-Parathion	General	Zeneca
11. K-Othrine SC 50	House flies, mosquitos, cockroaches, ants, wasps, fleas, bedbugs, clothes moths	Sprayed with pump	50 g/L Deltamethrin	General	AgrEvo (Hoechst-Schering)

16. **UNITED KINGDOM (GBR)**

Precautions - Use of Insecticides

1. Policy. UK military policy on the use of pesticides is contained in the following Joint Service Publications (JSP):
   a. JSP 371. Joint Service Manual on Pest Control.
   b. JSP 375. MOD Health and Safety Handbook.
   c. JSP 424. Guidance Notes for MOD COSHH Assessors.
   d. JSP 418. MOD Environmental Manual

2. Summary of General Safety Precautions. As a general principle, insecticides are only to be employed where other, less invasive techniques of control (such as environmental measures) are not considered to be effective.
   a. Only officially approved insecticides are to be used.
   b. All insecticides approved specifically for MOD use will, wherever practicable, carry the statutory approval of the Health and Safety Executive/Ministry of Agriculture, Fisheries and Food.
   c. The local purchase of insecticides is prohibited.
   d. Pesticides may only be applied by personnel who have received appropriate training. The minimum acceptable level for new technicians is successful attendance on the Unit Environmental Health Duties Course.
   e. There is to be proper accounts kept of insecticide storage, issue, use and disposal.
   f. Insecticides are to be stored in a secure, hazard-marked store, and kept in their original packaging. Hazard/risk assessments and manufacturers' safety data sheets are to be readily available.
   g. During transportation, insecticides are to be isolated from personnel by using a vapour-proof container.
   h. No individual is to be employed in spraying residual insecticides for more than 5 hours in any working day.
   i. Individuals suffering from certain skin complaints, including cuts and grazes, are not to be employed on insect control duties. If in doubt, medical advice should be sought.
   j. Personnel using insecticides are to have washing (and ideally showering) facilities readily available.
   k. Personnel are not allowed to eat, drink or smoke when using insecticides.
   m. When spraying near electrical power supplies, care should be taken to switch off beforehand, and to avoid spraying, electrical power sockets. When spraying in kitchens, appliances should be allowed to cool beforehand.
   n. Foodstuff, and food preparation surfaces, are to be protected from insecticides.
   o. Personnel are not to be directly sprayed with insecticides.

p. Only sufficient quantities of insecticides are to be mixed for the task in hand.

q. The minimum acceptable personal protective equipment compatible with safe residual insecticide use is as follows:

(1) Appropriate coverall with hood, and which is close-fitting at wrists and neck and boots as necessary.

(2) Non-absorbent protective gloves.

(3) Appropriate respiratory protective equipment } A full space mask with filter canister may be preferred

(4) Goggles }

r. Redundant insecticide and empty or damaged containers are to be disposed of in such a manner as to preclude contamination of the environment. Containers are not to be reused.

16. **United Kingdom (GBR)**

Ser	Agent	Use	Mode of Application	Effective compounds	Remarks and Precautions	Manufacturer/Supplier
1.	Cytrol Forte 40 H1/6840-99-125-9922	Crawling insects	Residual spray, applied using pneumatic sprayer	Cypermethrin	General	Pelgar International Ltd
2.	Insecticide Borax (Nippon) H1/6840-99-083-0746	Garden Ants	Applied from tube	5,5% W/W Borax	General	Vitax Ltd
3.	Reslin Premium H1/6840-99-131-0286	Flying insects	Diluted with water or kerosene, applied as a fog, using a thermal fogging machine for rapid knockdown of flying insects	1,7% W/W S-Bioallethrin 11% Permethrin	General If used with kerosene as diluent, there is an attendant fire risk, especially if used in confined spaces	AgrEvo Environmental Health Ltd
4.	Coopex Maxi Smoke Generator H1/6840-99-140-8868	Flying insects	Insecticidal "Smoke" generator for multipurpose disinfestation in enclosed spaces	13,5% WT for WT Permethrin	General	AgrEvo Environmental Health Ltd
5.	Coopex Insect Powder H1/6840-99-869-0200	Crawling insects	Powder applied direct from container or via dust gun	Permethrin	General	AgrEvo Environmental Health Ltd

16. **United Kingdom (GBR)**

Ser	Agent	Use	Mode of Application	Effective compounds	Remarks and Precautions	Manufacturer/Supplier
6.	Alfracron H1/6840-99-430-0333	Flies	Residual spray, applied using pneumatic sprayer	Azamethiphos	General	AgrEvo Environmental Health Ltd
7.	Insecticide aerosol H1/6840-99-978-8469	Flying insects	Knockdown aerosol spray	1,9% W/W Pyrethroid and Piperonyl Butoxide	General	Aerosols International Ltd
8.	Pif-Paf Crawling Insect Killer H1/6840-99-983-6023	Crawling Insects	Residual aerosol spray	Bioallethrin and Permethrin	General No restrictions on supply	Wellcome Foundation Ltd.
9.	Drione HI/6840-99-869-4122	Broad spectrum of arthropods	Applied as gel from container	1% Pyrethrin, 10% Piperonyl butoxide and 4% amorphous silica gel	General	Wellcome Foundation Ltd.
10.	Actellic 25EC HI/6840-99-869-4123	Crawling insects	Residual spray, applied using pneumatic sprayer	25% Pirimiphos methyl	General	Zeneca Public Health Ltd
11.	Ficam W H1/6840-99-225-8194	Crawling insects	Residual spray, applied using pneumatic sprayer	Bendiocarb	General	AgrEvo Environmental Health Ltd

16. **United Kingdom (GBR)**

Ser	Agent	Use	Mode of Application	Effective compounds	Remarks and Precautions	Manufacturer/Supplier
12.	Coopex WP HI/6840-99-225-2372	Crawling insects	Residual spray, applied using pneumatic sprayer	25% Permethrin	General	AgrEvo Environmental Health Ltd
13.	Abate HI/6840-99-430-7648	Aquatic larvae	Impregnated sand granules, applied by hand	1% SG Temephos	General	AgrEvo Environmental Health Ltd
14.	Coopex Mini Smoke Generators HI/6840-99-638-4327	Flying insects	Insecticidal "Smoke" generator for multipurpose disinfestation in enclosed spaces	13,5% WT for WT Permethrin	General	AgrEvo Environmental Health Ltd
15.	Empire 20 HI/6840-99-869-0197	Crawling insects	Residual spray, applied using pneumatic sprayer Approved for crack and crevice treatment only	Microencapsulated 20% WW Chlorpyrifos	General Not approved for general surface treatments	Dowelanco Ltd
16.	One Shot HI/6840-99-220-4227	Flying insects	One-shot hand-held aerosol for "blocks away" disinsection of aircraft	2% d-Phenothrin	General	Anteco
17.	Maxforce Gel HI/6840-99-869-4124	Cockroaches	Gel, applied using caulking gun	Hydramethylnon	General	AgrEvo Environmental Health Ltd

17. **UNITED STATES (USA)**

PRECAUTIONS AND OTHER PERTINENT INFORMATION

1. All pesticides, insecticides, rodenticides, insect repellents, fungicides, etc., are toxic chemicals which can cause injury or death to humans when improperly used.

2. Most of the chemicals listed in this compilation should be only by trained and qualified personnel.

3. Rates of application and percent concentration should be determined by competent professional personnel and pesticide use should be supervised.

4. Every attempt should be made to inform physicians of the planned use of pesticides in their areas so that first aid may be provided if signs and symptoms of pesticide poisoning occur and specific therapy can be obtained through professional medical sources before an emergency arises. In any case, all pertinent information relating to pesticide accidents, injuries or death must be furnished to the treating physician.

5. Pesticide applicator personnel must be provided with protective clothing, personal protective devices and eauipment when working with pesticides, which require the use of personal protective equipment.

6. Organophosphorous insecticides (e.g. Dursban) act as inhibitors of cholinesterase enzymes. Most signs and symptoms of poisoning are secondary to cholinesterase inhibitions. Signs and symptoms: headache, blurred vision, weakness, nausea, salivation, sweating, diarrhea, miosis, discomfort in the chest, tearing, convulsions, and coma. In severe cases, artificial respiration may be required and should be given until cyanosis is overcome. Then give atropine sulfate, 3 to 4 mg., intravenously, repeated at 5 to 10 minute intervals until the signs of atropinization appear, followed by 2-PAM (2-pyridine aldezime methochloride or methiodide) intravenously and slowly, 1 gram for adults and 0.25 grams for infants. Decontamination of skin, stomach, and eyes as indicated with symptomatic treatment.

7. Label precautions and application instructions must be adhered to. Each pesticide is only registered for use against pests identified on its label and in the manner specified.

8. Remember, in the U.S. and its territories, **the pesticide label is the law**.

9. Recording, Reporting, and Archiving Pesticide Use during Contigency Operations: Paragraph B.3.h., DoD Instruction 4150.7, "DoD Pest Management Program," April 22, 1997 requires that pesticide use during military operations be recorded and archived. Pesticide applicators must record all pesticide applications, excluding arthropod skin and clothing repellents, performed during military operations, using DD Form 1532-1, "Pest Management Maintenance Record," or a computer generated equivalent. Reporting pesticide use and archiving pesticide use shall be performed in accordance with U.S. Military Service procedures. Personal-use pesticide applications (including repellents) are exempt from reporting requirements.

10. Applying Pesticides in Foreign Countries. During contingency operations, U.S. forces should follow the Final Governing Standards (FGSs) for that installation's host country. These standards, which include pesticide applications, were developed by comparing an overseas environmental baseline (based on U.S. laws and regulations) with the host nation's standards. For countries without FGSs, or for operations outside a military installation, you should adhere to U.S. EPA requirements.

11. For operations and exercises, pesticide applicators should dispose of pesticides, rinse water, and pesticide containers in accordance with the U.S. or host-tenant agreements for that host country. If host-tenant or other agreements do not exist, you must adhere to the requirements of US regulations.

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Amidionohydrazone (1.65%) (Combat) cockroach bait); (Large size; 8 stations/bx; 12 bx/pkg). U.S. EPA Registration No. 64240-2 U.S. National Stock No. 6840-01-224-1269	Large size bait stations used for all species of household cockroaches.	Place bait stations where cockroaches have been seen. Use stickers to place bait stations on vertical surfaces. Replace all bait stations every 3 months.	Hydramethylnon	Do Not store near food or food products. Wash thoroughly after handling. May be harmful if swallowed.	The Clorox Co. Pleasanton, California (Note: Supplier may vary according to contract procurement awards.)
2. Amidionohydrazone (1.65%) (Combat) cockroach bait); Regular size (12 stations/bx; 12 bx/pkg). U.S. EPA Registration No. 64240-2 U.S. National Stock No. 6840-01-180-0167	Regular size bait stations used for German Cockroaches	Place bait stations where cockroaches have been seen. Use stickers to place bait stations on vertical surfaces. Replace all bait stations every 3 months.	Hydramethylnon	Do Not store near food or food products. Wash thoroughly after handling. May be harmful if swallowed.	The Clorox Co. Pleasanton, California (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
3. Bacillus thuringiensis Berliner var. israelensis (10%); (Mosquito Dunks or Bactimos Briquets/bx; U.S. EPA Registration No. 6218-47 U.S. National Stock No. 6840-01-377-7049	Mosquito Larvae	Apply as formulated. Manually applied. Use one briquette for up to 100 sq. ft. of surface water regardless of depth. In water with high organic matter content, such as sewage lagoons, the application rate may have to be increased up to four times the normal dosage. Pre-flood treatment: apply one briquet to each 100 sq. ft. of dry bed surface which is expected to flood. Break briquets into portions for use in old tires, rain barrels, ponds, tree holes, ditches, abandoned pools, roof gutters, flower pots, or other lacations where water collects and remains for periods of time. Use ¼ briquet for 1 to 5 sq. ft.; ½ briquet for 5 to 25 sq. ft.; and 1 briquet for 25 to 100 sq. ft.	Bacillus thuringiensis Berliner var. isralensis	Avoid contact with eyes or open wounds.	Summit Chemical Co. Baltimore, Maryland (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
4. Carbaryl (5%) (Sevin Dust); 1.816 kg (4 lb bag); 12 bags/box; U.S. EPA Registration No. 10107-43 National Stock No. 6840-01-033-4481	Broad spectrum control of agricultural insects and Other pests; ticks and fleas (plague vectors)	Apply as formulated in manual dusters, sifter cans, bulb dusters, rotary dusters or gasoline or electric driven power dusters. Animals and animal quarters may be lightly dusted. For outdoor use in controlling plague vectors, apply 2-oz per animal burrow or 0.25-lb to each of 4 to 6 bait stations per acre, or 20-lbs per acre. Use NIOSH/MSHA approved respirator with pesticide dust filters and impervious rubber gloves during applications.	Carbaryl.	Harmful if swallowed, inhaled or absorbed through skin. Avoid contamination of food, feed, feed throughs and watering receptacles. Exposed crops may be unfit for human consumption. Highly toxic to bees.	Summit Chemical Co. Baltimore, Maryland (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
5. Chlorpyrifos (41,5%); Dursban emulsifiable concentrate (Dursban LO); 40 ml bottle, 12 bottles/bx; single dose. U.S: EPA Registration No. 62719-55 U.S. National Stock No. 6840-01-210-3392	Broad spectrum control of household, stored product, turf, ornamental plant pests, and adult mosquito control.	Mix with water. For general application using hand pressurized or power operated sprayers. Unit dose; Mix 1 bottle per two gallons of water to make a 0.25% spray, or mix 1 bottle per gallon of water to make a 0.50% spray. Indoor use as spot treatment in and around residential, industrial, institutional, and commercial buildings or as a crack and crevice treatment in and around both food and non-food areas of food establishments. Outdoor dose rates vary depending on the pest and site.	Chlorpyrifos	Cholinesterase inhibitor. May be fatal if swallowed or absorbed through skin. Harmful if inhaled. Remove all pets and aquariums from area before spraying. Is highly toxic to bees exposed to direct treatment or residue on plants. Toxic to fish and birds.	Dow AgroSciences Indianapolis, Indiana (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
6. Chlorpyrifos (20%); Dursban emulsifiable concentrate (Dursban PRO); 0.475 liter (one pint bottle). U.S: EPA Registration No. 62719-166 U.S. National Stock No. 6840-01-412-4361	Broad spectrum control of household, stored product, turf, ornamental plant pests, and mosquito adult control.	Mix with water. For general application using hand pressurized or power operated sprayers. Indoor use as spot treatment in and around residential, industrial, institutional, and commercial buildings. Crack and crevice treatment in and around both food and non-food areas of food establish-ments. Mix 1 1/3 fl oz per gallon of water to make 0.025% spray. Mix 2 2/3 fl oz per gallon of water to make a 0.05% spray. Outdoor dose rates vary from 1 ½ oz up to 6 fl oz per gallon to treat 1000 sq. ft. depending on the pest and site.	Chlorpyrifos	Cholinesterase inhibitor. May be fatal if swallowed or absorbed through skin. Harmful if inhaled. Remove all pets and aquariums from area before spraying. Is highly toxic to bees exposed to direct treatment or residue on plants. Toxic to fish and birds.	Dow AgroSciences Indianapolis, Indiana (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
7. Chlorpyrifos (42%); Dursban emulsifiable concentrate (Dursban 4E); 3,8 liter (one gallon can). U.S: EPA Registration No. 655.499 U.S. National Stock No. 6840-01-122-2651	Broad spectrum control of household, stored product, turf, ornamental plant pests, and mosquito (larva and adult) control	Mix with water. For general application using hand pressurized or power operated sprayers. Indoor use as spot treatment in and around residential, industrial, institutional, and commercial buildings. Crack and crevice treatment in and around both food and non-food areas of food establish-ments.. Outdoor dose rates vary depending on the pest and site.	Chlorpyrifos	Cholinesterase inhibitor. May be fatal if swallowed or absorbed through skin. Harmful if inhaled. Remove all pets and aquariums from area before spraying. Is highly toxic to bees exposed to direct treatment or residue on plants. Toxic to fish and birds.	Prentis Incorporated Sandersville, Georgia (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
8. Chlorpyrifos (42%); Dursban emulsifiable concentrate (Dursban 4E); 18,9 liter (5 gallon can). U.S: EPA Registration No. 655.499 U.S. National Stock No. 6840-00-402-5411	Broad spectrum control of household, stored product, turf, ornamental plant pests, and mosquito (larva and adult) control	Mix with water. For general application using hand pressurized or power operated sprayers. Indoor use as spot treatment in and around residential, industrial, institutional, and commercial buildings. Crack and crevice treatment in and around both food and non-food areas of food establish-ments.. Outdoor dose rates vary depending on the pest and site.	Chlorpyrifos	Cholinesterase inhibitor. May be fatal if swallowed or absorbed through skin. Harmful if inhaled. Remove all pets and aquariums from area before spraying. Is highly toxic to bees exposed to direct treatment or residue on plants. Toxic to fish and birds	Prentis Incorporated Sandersville, Georgia (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
9. Cyfluthrin (24,3%); (Tempo 2 EC); 240 ml bottle; 12 bottles/bx; U.S. EPA Registration No. 3125-372 U.S. National Stock No. 6840-01-313-7359	Broad spectrum control of crawling, flying, stored product pests and wood destroying pests.	Dilute with water. For general sur-face application using hand pressurized or power operated sprayers. Use 8 milliliters of con-centrate per 1000 sq. ft. in sufficient water to cover the area to be treated. For spot or crack and crevice application, mix 8 milliliters of concentrate in one gallon of water to make a 0.05% concentration or 16 milliliters of con-centrate in one gallon of water to make a 0.10% concentration.	Cyfluthrin	Extremely toxic to fish and aquatic invertebrates. Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes, on skin or on clothing. Wear safety glasses, goggles, or face shield when handling undiluted material and wear a respirator when making general overhead treatment.	Bayer Corporation Kansas City, Missouri (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
10. Cyfluthrin (20%); (Tempo 20 WP); 9,5 gram packets; 288 packets/bx; U.S. EPA Registration No. 3125-377 U.S. National Stock No. 6840-01-383-6251	Broad spectrum control of crawling, flying, stored product pests and wood destroying pests.	Dilute with water. For general surface application using hand pressurized or power operated sprayers. Use 1 packet of concentrate per 1000 sq. ft. in sufficient water to cover the area to be treated. For spot/ crack and crevice application, use one packet of concentrate in one gallon of water for a 0.05% concentration or two packets of concentrate in one gallon of water for a 0.10% concentration.	Cyfluthrin	Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes, on skin or on clothing. Wear safety glasses, goggles, or face shield when handling undiluted material and wear a respirator when making general overhead treatment.	Bayer Corporation Kansas City, Missouri (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
11. Cypermethrin (35,6%) (Demon WP); 454 grams (1 lb jar); U.S. EPA Registration No. 10182-100 U.S. National Stock No. 6840-01-390-4822	Broad spectrum control of crawling and flying pests.	Dilute with water. Do Not use with oil. For general surface application using hand pressurized or power operated sprayers. Used as general area, a general spot or crack and crevice treatment. Do not use in Food areas. One packet per gallon of water makes a 0.10% concentration of active ingredient. Two packets per gallon of water makes a 0.20% concentration of active ingredient.	Cypermethrin	Do not get in eyes, on skin or on clothing. Avoid breathing vapors or spray mists. Extremely toxic to fish.	Zeneca Professional Products Wilmington, Deleware (Note: Supplier may vary according to contract procurement awards.)
12. Deltamethrin (0.05%); (Delta Dust); 454 grams (1 lb container); U.S. EPA Registration No. 432-772 U.S. NSN No. 6840-01-431-3345	Ants, bedbugs, bees, centipedes, cockroaches, fleas, scorpions, stored product pests, ticks, and wasps.	Apply as formulated. Do not use in food areas indoors. Use with hand or power duster, with a paint brush or by other suitable means to hiding and runway areas and other places where pests are found. Labeled for fleas and ticks in rodent burrows.	Deltamethrin	Avoid contact with skin, eyes or clothing. Extremely toxic to fish and aquatic invertebrates.	AgrEvo Environmental Health Montvale, New Jersey (Note: Supplier may vary according to contract procurement awards.

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
13. Dichlorvos Impregnated Strip (20%); (Loveland Pest Strip) or (PROZAP Insect Guard); Box of 48. U.S. EPA Registration No. 5481-338-36208 U.S. National Stock No. 6840-00-142-9438	Adult flies, adult mosquitoes and eye gnats	Apply as formulated. Use one strip for each 28.3 m^3 (1000 ft3) of enclosed area. One strip is usually effective for up to 3 months. Do not use in nurseries, or rooms where infants, ill, or aged persons are confined. Do not use in Kitchens, restaurants, or areas were food is prepared or served.	Dichlorvos (DDVP)	Do not get in mouth, harmful is swallowed. After prolonged storage, a small amount of liquid may form on the strip. Do not get liquid in eyes. Wash hands thoroughly with soap and water after handling strip.	Loveland Industries Greely, Colorado (Note: Supplier may vary according to contract procurement awards.)
14. d-Phenothrin (2%); (Airosol Aircraft Insecticide); 340.2 grams (12-oz can). U.S. EPA Registration No. 901-82 U.S. National Stock No. 6840-00-412-4634	Mosquitoes, gnats, house flies	Apply as formulated. Use as a space spray for disinsection of aircraft in compliance with agricultural quarantine. Use at least 30 minutes prior to landang. Spray 10 grams (10 seconds) per 28.3 m^2 (1000 ft3). For indoor use in buildings, vans, ships, and tentage; close space to be treated. Ten seconds of spraying is ample for each 28.3 m^3 (1000 ft3).	Phenothrin	Ventilate area before reentry. Harmful if swallowed	Zeneca Professional Products Wilmington, Deleware (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
15. Lamdacyhalothrin (10%); (Demand Pestab); 40 tablets/bottle; U.S. EPA Registration No. 10182-387 U.S. National Stock No. 6840-01-431-3357	Broad spectrum; Household, stored product, turf, ornamental plant pests, and mosquito adult control.	Mix with water. For general application using hand pressurized or power operated sprayers. One tablet per gallon of water makes a 0.015% spray, four tablets per gallon of water makes a 0.06% spray. For use as a general surface, spot application in and around buildings and structures and on various modes of transportation. May be applied to lawn areas and around residential buildings and similar sites.	Lamdacyhalothrin	May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes or clothing and breathing spray mist.	Zeneca Professional Products Wilmington, Deleware (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
16. Methoprene (1.8%); (Altosid XR Briquettes); 220 briquettes/bx; U.S. EPA Registration No. 2724-421-64833 U.S. National Stock No. 6840-01-424-2495	Mosquito larvae	Apply as formulated. Manually applied. Begin placement at or at the beginning of the mosquito season. Do not apply to known fish habitats. Designed to release effective levels of methoprene over aperiod of up to 150 days. Methoprene has no effect on pupal or adult stage mosquitoes. Use one briquet per 200 sq. ft. for shallow depressions. For *Aedes* and *Psorophora*, use one briquet per 200 sq. ft. For *Culex, Culiseta*, and Anopheles, place one briquet per 100 sq. ft. For *Coquillettidia* and *Mansonia* in cattail marshes, and water hyacinth beds, one briquet per 100 sq. ft.	Methoprene	No adverse reactions have resulted from human exposure during research or manufacture of this product. Avoid contact with eyes or clothing.	Sandoz Agro, Inc. Des Plaines, Illinois (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
17. Methoprene (20%); [Altosid SR20 Liquid Larvacide (A.L.L.); 18.9 liter (2) 2.5 gal containers]; U.S. EPA Registration No. 2724-446-64833 U.S. National Stock No. 6840-01-424-2493	Mosquito larvae	Mix with water. For general application using hand pressurized or power operated sprayers. Must be applied to 2nd, 3rd, or 4th instar larvae. This product has no effect on pupal or adult stage mosquitoes. Apply ¾ to 1 fl oz of A.L.L. concentrate in ½ to 5 gallons of water per acre of crop areas (rice fields, bogs, etc.) and intermittently flooded non-crop areas. A.L:L: may be mixed with sand and applied to areas of dense vegetation or canopy using granular dispersal equipment.	Methoprene	Causes moderate eye irritation. Avoid contact with eyes or clothing.	Sandoz Agro, Inc. Des Plaines, Illinois (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
18. Methomyl Fly Bait (1%); (Flytek/-Apache/Golden Malrin); 2,2 kg (5 lb) can; U.S. EPA Registration Nos. 2724-274-50809/-270-255/2724-TX-1 U.S.National Stock No. 6840-01-183-7244	Filth flies such as house flies.	Apply as formulated. For outdoor use only; apply at ¼ lb per 500 ft2 - do not put in piles. If necessary, apply daily. Do not allow food producing animals to have access to treated areas. Do not apply directly to water.	Methomyl	Harmful if swallowed, inhaled or absorbed throurgh skin. Avoid breathing dust. Avoid contact with skin, eyes, or clothing. Hazardous to birds and other wildlife.	Flytek/Golden malrin Zoecon Corporation Dallas, Texas Apache Farnham Livestock Products Phoenix, Arizona (Note: Supplier may vary according to contract procurement awards.)
19. Naled solution concentrate, (87,4%); (Dibrome); 113,6 liter (30 gal) drum; U.S. EPA Registration No. 59639-19 U.S. National Stock No. 6840-01-270-9765	Flith flies such as house flies, stable flies, and adult mosquitoes	For use in U.S. Air Force Aerial Spray systems. Apply as ultra-low volume (ULV) with out dilution. Aircraft application: apply 30-60 ml (1/2 - 1 fl. oz.) per acre.	Naled	Concentrate causes skin and eye damage. May be fatal if swallowed or absorbed through skin. Concentrate may corrode metal spray or mixing equipment.	Valent Corporation Walnut Creek, California (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
20. Pyrethrins, Allethrins, d-Phenothrin or Resmethrin aerosol, (PT 515 Wasp Freeze & Hornet Killer/Wasp Stopper II Plus/Wasp and Hornet Killer II), 12 oz can; 12 cans/bx; U.S. NSN: 6840-00-459-2443	Wasps, hornets, yellowjackets, bees, and spiders.	Apply as formulated. Stand 6 to 12 feet from the nest (not directly underneath) and aim spray toward the opening of the nest.	d-trans allethrin	Harmful if swallowed. Avoid inhalation of vapors. Avoid contact with skin and eyes.	Whitmire Research Laboratories St. Louis, Missouri (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
21. Pyrethrins or resermethrin, (3%) w/synergists; liquid ULV fog concentrate; (ULD BP-300); 3.78 liter (1 gal) can; U.S. EPA Registration No. 11540-1 U.S. Nation Stock No. 6840-01-104-0780	Stored products pests, flying insects and crawling insects indoors.	For use indoors and outdoors. Space or area sprays may be applied with handheld, cartmounted or truck mounted foggers. Use as an undiluted space spray to control stored products pests; use as a diluted spray to control flying insects; use an an undiluted space spray and contact spray to kill crawling insects.	Pyrethrins or resmethrin and Piperonyl butoxide - technical and MKG 264 insecticide synergist.	Harmful if swallowed. Do not apply directly to food. Cover food and food preparation surfaces prior to application. Toxic to fish.	Micro-Gen Corp. San Antonio, Texas (Note: Supplier may vary according to contract procurement awards.)
22. Resermethrin (4.14%) and Pipe-ronyl butoxide (12. 42%); (Scou-rge); 18.9 liter (5 gal can); U.S.EPA Reg.-No. 432-716, U.S.-NSN 6840-01-359-8533	Adult mosquitoes, midges (biting and non-biting) and blackflies	For outdoor use only. Use in hand held, portable backpack, ground or aerial ULV equipment. May be applied undiluted or diluted with refined soybean oil, light mineral oil of 54 second viscosity or other suitable solvent or diluent. Do not dilute in water.	Resermethrin and Piperonyl butoxide - technical and related compounds)	Harmful if swallowed. Avoid breathing vapor or spray mist. Void contact with skin, eyes or clothing. Toxic to fish and birds. Do not apply to lakes or streams. Do not contaminate water, food, or feed.	Roussel Bio Corp. Englewood Cliffs, New Jersey (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
23. Temephos (44.6%); (Abate 4E); 18.9 liter (5gal can); U.S. EPA Registration No. 241-132AA National Stock No. 6840-01-424-3132	Mosquito and midge larvae	Mix with water. For general application using hand pressurized or power operated sprayers. Abate 4E shows limited miscibility in fuel oils, and such mixtures should be used with caution. Apply between 0.5 fl. oz. (clean water) and 1.5 fl. oz. (water with high organic content) per acre of standing water, moist areas, woodland pools, shallow ponds, around perimeter of lakes, swamps, marshes, tidal marshes, tidal waters, and catch basins. Apply as a uniform spray in sufficient water for good coverage.	Temephos	Cholinesterase inhibitor. Toxic to bees, birds and fish. Harmful if swallowed or absorbed through skin.	American Cyanamid Wayne, New Jersey (Note: Supplier may vary according to contract procurement awards.)

ANNEX B

ALPHABETIC LIST OF CONTRIBUTING NATO MEMBERS INCLUDING INFORMATION ON AGENT, SPECTRUM OF ACTION, MODE OF APPLICATION, EFFECTIVE COMPOUNDS, PRECAUTIONS AND SOURCE OF SUPPLY OF THE RODENTICIDE

General observations on the use of rodenticides.

1. At the present time mainly anticoagulants are used for rodent control. These are derivatives of coumarin, which slow down after uptake of sufficient quantities for several days the coagulation of blood so seriously, that animals will perish by inner haemorrhage. These substances act on domestic animals and man in the same manner. Although bigger animals and man can hardly take up fatal doses, children, small animals, also dogs and cats, are endangered. Therefore, derivatives of coumarin must be applied so that children and domestic animals cannot come in contact with the poison.

2. Care must be taken to ensure the agent does not contaminate foodstuff or kitchen utensils.

3. Beyond that, the user must observe no further precautions. Maximum caution is indispensable when using strong poisons for rodent control as Zincphosphide, Talliumsulphate, Arsentrioxide and others. In any case, the instructions of the manufacturer must be followed exactly.

1. **BELGIUM (BEL)**

General Rules

a. Gloves must be worn

b. Wash yourself after working with such chemicals

1. **Belgium (BEL)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Rodan Overdose granules	Rats and mice	Ready to use rodenticide	0.005% Difenacoum	Avoid contact with foodstuff. Powder or bait must be applicated so that children and domestic animals (dogs, cats) have no access.	Billen
2. MURIN PASTA	Mice	Ready to use bait gel	0.004% Brodifacoum	"	Belagri
3. STRONG	Rats and mice	Ready to use rodenticide (granular bait)	0.005% Brodifacoum	"	Belagri
4. Racumin powder	Rats	a) Applicate dust directly into rodent burrows b) Mix powder and cereals 1+19 to from a ready to use bait	0.75% Cumatetralyl	"	Bayer
5. Taratronchlore bloc	Rats	Ready to use wax-bound block for use in wet areas	0.01% Chlorphacinon	"	Billen

2. **Canada (CAN)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Bromadiolone Rodenticide Anticoagulant Bait (8 bags of 50 g pellets per bag in 0,5 kg box). PCP Act Reg No. 16699, NSN 6840-21-893-6453	Mice, rats.	Use in tamper-proof bait boxes in areas inaccessible to children and domestic animals. Set up rat bait stations every 5-10 m. Set up mouse bait stations every 2-4 m. Maintain an uninterrupted supply of fresh bait for 10-15 days. Takes 4-5 days for first dead rodents to appear.	Bromadiolone	Avoid ingestion by humans and domestic animals. Dispose of dead rats and mice promptly to protect dogs and cats and that might feed on the carcasses. The use of insecticide may be indicated to control rodent ectoparasites that are potential vectors of disease.	Wilson Professional, Oakville, ON. (Note: Supplier may vary according to national contract).

3. **CZECH REPUBLIC (CZE)**

No contribution submitted.

4. **DENMARK (DNK)**

The Danish army has no more in stock any insecticides or rodenticides. Instead we depend, when necessary, on civilian professional companies, which are authorized by governmental authorities to perform insect- and rodent control. All chemicals used by these firms are listed in the "Register of Approved Pesticides" (ISBN: 87-503-7010-3), which is revised every year.

5. **France (FRA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. CAID No. NMA: 697 910-205	Rats	Bait ready for use. Place the bait near normal runs and feeding areas.	Chlorophacione 0,005 %	Keep domestic animals away. Avoid contact with foodstuff. Anticoagulant Antitoxin: Vitamin K 1	STLLIPHA 115 Avenue Lacarsagne 69 Lyon

6. **GERMANY (DEU)**

Precautions - Use of Rodenticides

As a general principle, rodenticides are only to be applied with appropriate measures according to the principle of Integrated Pest Management. Aims to reduce the amount of biocides in order to minimize the exposure to humans, animals and environment. During epidemics of rodent-borne diseases, specifically licensed products are to be used.

a. Only officially approved rodenticides are to be used.

b. All rodenticides approved specifically for MOD use will, wherever practicable, carry the statutory approval of the Umweltbundesamt and/or the Biologische Bundesanstalt für Land- und Forstwirtschaft.

c. Rodenticides may only be applied by personnel who have received appropriate education, examination and training.

d. Proper accounts of rodenticide storage, issue, use and disposal are to be kept.

e. Personnel are not allowed to eat, drink or smoke when using rodenticides.

f. Foodstuff and food preparation surfaces are to be protected from rodenticides.

g. Only anticoagulant rodenticides are to be used. The use of acute poisons is prohibited.

h. Rodenticides are to be placed deliberately in order to prevent their accidental ingestion by personnel and non-target species, preferably by the use of purpose-designed, appropriately marked bait stations.

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Contrax-top Concentrate	Rats and mice	Mix liquid concentrate and cereals 1+49 to form a ready - to - use bait.	0,25% Bromadiolon	Avoid contact with foodstuff. Concentrate or bait must be applicated so that children and domestic animals (dogs, cats) have no access.	Frowein GmbH u. Co. KG 72437 Albstadt-Ebingen
2. Contrax-fit BLOC 220 g block	Rats	Ready - to - use wax-bound block for use in wet areas.	0,006% Warfarin or 0,005% Bromadiolon	Avoid contact with foodstuff. Powder or bait must be applicated so that children and domestic animals (dogs, cats) have no access.	Frowein GmbH u. Co. KG 72437 Albstadt-Ebingen
3. Contrax-D Bloc 60 g block	Rats and mice	Ready - to - use wax-bound block for use in wet areas, formulated to deliver a lethal dose, used when resistances against first generation coumarins occur.	0,0025% Difethialon	Avoid contact with foodstuff; Powder or bait must be applicated so that children and domestic animals (dogs, cats) have no access	Frowein GmbH u. Co. KG 72437 Albstadt-Ebingen
4. Difenacoum Fertigköder 100 g Packs	Rats and mice	Ready - to - use rodenticide (granular bait) packed in sealed sachets that have to be placed unopened (for rats) or opened (for mice) near normal runs and feeding areas.	0,006% Difenacuom 0,02% Sulfonamides	Avoid contact with foodstuff. Powder or bait must be applicated so that children and domestic animals (dogs, cats) have no access.	Bertram GmbH 66903 Dittweiler

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
5. Lepit-Forst-Pellet 10 Kg bag	Commensal and field mice	Ready - to - use bait (granular) against field mice for application with bait boxes or without (15 Kg/ha)	0,0075% Chlorphacinon	Avoid contact with foodstuff; Powder or bait must be applicated so that children and domestic animals (dogs, cats) have no access	AgrEvo Postfach 111149 40511 Düsseldorf

7. **Greece (GRC)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Akan	Rats-Mice	Bait	Warfarin 0,05 %	POISON	Ch. Kostabassis 14 Eunardou St. Athens
2. Vacor	Rats-Mice	Bait	N-3-Pyridylmethyl	POISON	Rohm and Haas 32 Xenias St. Athens
3. Deathmore	Rats-Mice	Bait	Warfarin 0,05 %	POISON	Ellagret OE Aristotelous 38 Athens
4. Gibbons Pelleted Rat Bait	Rats-Mice	Bait	Diphacine 0,005 %	POISON	B. Fabrakos 3. Sapfous St. and Menandrou, Athens
5. Lion Brand Rat Killer	Rats-Mice	Bait	Coumarin 0,05 % Base	GLOVES	Gefex EPE 10 Pireus St., Athens
6. Parasitox	Rats-Mice	Bait	Coumarine 0,05 % Base	GLOVES	SP. Margaritis 55 AG. Zonis, Athens
7. Ratero	Rats-Mice	Bait	Warfarin 0,025 %	POISON	Abbbott Laboratories 194 Syngrou Ave, Athens

7. **Greece (GRC)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
8. Racumin	Rats-Mice	Bait	Coumarin 0,375 % Base	GLOVES	Bayer-Epifa 55-59 Deligeorgi St. Athens
9. Ratoxol	Rats-Mice	Bait	Warfarin 0,05 %	POISON	Chemi Prod. Hellas 42 Themistokleous St. Athens
10. SOS	Rats-Mice	Bait	Zinc Phosphide 10 %	STRONG POISON	K. Papadopoulos Mich. Karaoli 21 Thessaloniki
11. Ramik	Rats-Mice	Bait	Diphacinone 0,005 %	POISON	Agraria OE 122 Alexandra AVe Athens
12. Rex	Rats-Mice	Bait	Zinc Phosphide 10 %	STRONG POISON	Nik. Krialis 124 Aegaleo St. Piraeus
13. Tomorin	Rats-Mice	Powder	Derivative of Coumarin 1 %	GLOVES	Biofarm AE 111 Avlonas St. Athens
14. Quick	Rats-Mice	Bait	Chlorophacinone 0,005 %	POISON	Sege EPE 7 Leuktron St. Peristeri-Athens

8. **HUNGARY (HUN)**

No contribution submitted.

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Topirat-Esca	Rats and mice	Fresh baits in small paper envelopes to be spread in places infested by rodents.	Cumatetralyl	Toxic for man and domestic animals. The baits must be managed with gloves because man's smell on the baits will scare away rodents.	Sici - Via Torino n. 41 - Roma
2. Sovi Tox	All rodents	Spread in small amounts in infested places.	Wheat gr. 99.8 Colorants, eccipients and odoreus substances gr. 0.175; 3 (phenyl, acetyl, ethyk) 4 hydroxicumarin gr. 0.025	The baits must be managed with gloves because man's smell will scare away the rodents.	Bianchede - Via dei Celli Portuensi n. 139 - Roma
3. Zetarat	Rats and mice	Spread the baits at one meter intervals in infested places.	Warfarin 0.0275 %; Other substances (cheese, biscuit powder, etc.) up to 100 %	Toxic for man and animals if ingested. In such cases cause vomiting and call for a physician.	Zuccet - Via Pian Due Torri n. 54- Roma
4. Dicusat	Rats and mice	Prepare the baits with ham, cheese or other substances. Put the baits in places infested, by rodents.	Cumarin sulphate 50 %	Not toxic for man or for domestic animals.	Chimiberg - Via Tonale n. 15 Albano S - Alessandro-Bergamo

9. **Italy (ITA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
5. Tomorin (Powder)	Rats	Put the baits along paths used by the rodents.	Cumarin 1 % and other non active and adhesive substances.	Do not contaminate food. Toxic for man and domestic animals.	Ciba-Geigy - Via Piranesi n. 44 Milano
6. Ratin 2	Rats and mice	(1)	Salmonella endotoxins.	Not dangerous for man or domestic animals.	Libce Srl - Via Zurige n. 3 Milano
7. Ratinin (for agriculture)	Rats and mice	(1)	Stabilized glycosyde of Urginea Marittima Bak.	Toxic if inhaled, absorbed or ingested.	"
8. CB (for agriculture)	Rats and mice	(1)	Warfarin, natural flavours and sodium hydrate.	Toxic if inhaled, absorbed or ingested.	"
9. Antimurina am (for agriculture)	Rats and mice	(1)	Warfarin, meat extract, peptone, glucose, sodium phosophate, yeast extract and sodium hydrate.	Toxic if inhaled, absorbed or ingested.	"
NOTE 1: These products are applied directly by trained personnel coming from the manufacturing firm.					

10. **Netherlands (NLD)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. TOMCAT Blocks	Rats and mice	Ready to use bait	Brodifacoum	Use special bait boxes	Bell Lab, Inc. MADISON WI 53704 USA
2. SORKIL Blocks	Rats and mice	Ready to use bait	Difenacoum	Use special bait boxes	Edialux Ned BV Veemweg 2 2771 MT BARNEVELD The Netherlands
3. STORM Blocks	Rats and mice	Ready to use bait	Fluocoumafen	Use special bait boxes	Wesemael BV Zoutestraat 109 4561 TB HULST The Netherlands

11. **Norway (NOR)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Warfarin	Rats and mice	Mixed with baits	Warfarin 0,025 %	Applicated so that domestic animals have no access.	Kämo-Swed, Sweden.
2. Temus	Rats and mice	Mixed with baits Ready for use.	Bromadiolon 0,005 %	Applicated so that domestic animals have no access.	Agro-Kemi Copenhagen, Denmark

12. **Portugal (PRT)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Triple XXX	Rats and mice	Bait ready for use	Warfarin 0,025 % Quinoxaline Sulfate 0,025 %	– Anticoagulant – Avoid inhalation of the powder – Avoid contact with food-stuffs the bait must be applicated so that domestic animals (dogs, cats) have no access – Antidot Vitamine K1	Cartified Av. Conselheiro Fernando de Sousa No. 19-10° Esq. Lisboa
2. Racumin	Rats and mice	a) Applicate dust directly in to rodent burrows b) Mix powder and cereals 1+19 to form a ready -to- use bait	Cumatetralyl	Avoid contact with foodstuff; keep away domestic animals	Farbenfabrik Bayer Leverkusen, FRG

13. **POLAND (POL)**

No contribution submitted.

14. **Spain (ESP)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Granulates raticide Lanirat	Against rats and mice	Bait ready to use in bags	Bromadiolon 0,005%	Avoid contact with foodstuff, bags/bait must be applicated so that children and domestic animals have no access.	Ciba-Geigy S.A.
2. Granulated raticide Ratsul-D	Agasinst rats and mice	Bait ready to use for disposal into loopholes and on runways	Diphenacoum 0,005%	Avoid contact with foodstuff, recommended for use in waterresistant bait boxes; avoid contact with skin.	Zelnova, S.A.
3. Soluble Powder Raticide Ratsul N.O.C.: 6840-33-0004587	Against rats and mice	Powder to be solved in water as rodenticidal drinking stations (500 cm^3/ station against mice).	Warfarin 0,54%	Avoid contact with foodstuff, use drinking stations only indoors and placed so that they are out of reach of children and domestic animals, avoids skin contact with concentrate.	Zelnova, S.A.
4. Blocks raticide Racumin	Against rats	Bait ready for use; qualified to be used in wet rooms and in sewages.	Cumatetralyl	Avoid contact with foodstuff; bait must be placed so that children and domestic animals have no access	Bayer, S.A. Reg. D.G.S.P. No. 92-10-00465 No. 92-10-00465 HA

14. **Spain (ESP)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
5. Blocks raticide Latigo	Against rats and mice	Bait ready for use recommended for use in wet areas, especially in urban sewage systems.	Bromadiolon 0,005%	Avoid contact with foodstuff; bait must be placed so that children and domestic animals have no access	Comercial Quimica Masso, S.A. Reg. Plaguicides D.S. No. 94-10-00833
6. Granulated raticide Racumin D	Against domestic and wildlife mice	Bait ready for use; applicate piles of 20-30 gr. in bait boxes every 2 to 3 m.	Cholecalciferol 0,1% (Vitamin D_3)	Avoid contact with foodstuff; bait must be placed so that children, domestic and nontarget animals have no access	Bayer, S.A. Reg. D.G.S. No. 1348 RAT

15. **TURKEY (TUR)**

General issues to be considered when using rodenticides are as follows:

a. Rodenticides must be applied by wearing gloves.

b. Hands must be washed after application.

c. Domestic animals must be prevented from eating the dead mice and rats.

d. In order to prevent the spreading of disease, mice and rats must be collected and buried in a deep pit or burnt.

15. **Turkey (TUR)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Famorin	Mice	Nests, touring and feeding places of mice	Coumachlor 1%	General	Hektas Ticaret
2. Racumin	Mice	Marked part of the plastic bag is cut and folded aside	Coumatetralyl 0,0375%	General	Bayer
3. Callanusip	Mice, rats	Applied on hard material such has wood and fiverboard and food is placed in the center	Tibtrop	Residues are cleaned by gasoline	Bayer
4. Brofar (pelet)	Mice	Nests, touring, and feeding places of mice	Brodifacoum	General	Firma Kimya
5. Musal	Mice	Nests, touring, and feeding places of mice	Bromadiolone 0,005%	General	Agr Evo

16 **United Kingdom (GBR)**

Use of Rodenticides

1. Policy. UK military policy on the use of rodenticides is contained in the following Joint Service Publications (JSP):

a. JSP 371. Joint Service Manual on Pest Control

b. JSP 375. MOD Health and Safety Handbook.

c. JSP 424. Guidance Notes for MOD COSHH Assessors.

d. JSP 418. MOD Environmental Manual

2. Summary of General Safety Precautions. As a general principle, rodenticides are only to be employed where other, less invasive techniques of control (such as environmental measures) are not considered to be effective.

a. Only officially approved rodenticides are to be used.

b. All rodenticides approved specifically for MOD use will, wherever practicable, carry the statutory approval of the Health and Safety Executive/Ministry of Agriculture, Fisheries and Food.

c. The local purchase of rodenticides is prohibited.

d. Rodenticides may only be applied by personnel who have received appropriate training. The minimum acceptable level for non-specialist personnel is successful attendance on the Unit Environmental Health Duties Course.

e. There is to be proper accounts kept of rodenticide storage, issue, use and disposal.

f. Rodenticides are to be stored in a secure, hazard-marked store, and kept in their original packaging. Hazard/risk assessments and manufacturers safety data sheets are to be readily available.

g. Personnel are not to eat, drink or smoke when using rodenticides.

h. Foodstuff, and food preparation surfaces, are to be protected from rodenticides.

i. Only anticoagulant rodenticides are to be used. The use of acute poisons is prohibited.

j. Rodenticides are to be placed to prevent their accidental ingestion by personnel and non-target species, preferably by the use of purpose-designed, appropriatly marked bait stations.

16 **United Kingdom (GBR)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Neosorexa HI/6840-99-978-3210	Rats and mice	Ready-to-use. rodenticide (granular bait). Baiting points should be sited near normal runs and feeding areas	0,005 % Difenacoum	For indoor and outdoor use	Sorex Ltd., .
2. Brodifacoum blocks HI/6840-99-978-3211	Rats and mice	Ready-to-use Wax-bound rodenticide blocks, formulated to deliver a lethal dose	0,002 % Brodifacoum	Not approved for use outdoors.	Sorex Ltd., .
3. Neosorexa Throw Packs H1/6840-99-978-3212.	Rats and mice	Ready-to-use rodenticide (granular bait) packed in sealed polymer sachets. Sachets placed unopened (for rats) or opened (for mice) near normal runs and feeding aereas	0,005 % Difenacoum	For indoor and outdoor use.	Sorex Ltd., .

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Diphacinone Anticoagulant (0.005%); (Rodent Cake or Eaton Bait Blocks); 226,0 grams (8oz) block; 40 blocks/bx; U.S. EPA Registration Nos. 12455-14 AA/56-23 U.S. National Stock No. 6840-00089-4664	Rats	Apply as formulated. Place baits where rats and/or mice will find and consume bait. Generally, place bait blocks along walls, by gnawed openings in and around burrows, in corners, in sewer manholes, and between floors and walls or other places where rats and mice have been observed. Place baits in locations not accessible to children, domestic animals, and wildlife or in tamper proof bait boxes. Blocks must be used inside retrograde cargo leaving a plaque area and returning to the United States Containers must be marked on the outside door with red tape to denote the use of bait blocks inside the container.	Diphacinone	Precautions shold be taken to make sure that the blocks are not consumed or a contaminate foodstuff. Dispose of dead rats and mice promptly to protect domestic cats and dogs as well as other wildlife.	J.T. Eaton Co., Inc. Twinsburg, Ohio Bell Laboratories, Inc. Madison, Wisconsin (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
2. Anticoagulant ready-mixed bait (0.005% di-phacinone); (Finis -the end- Rat and Mouse Bait); 2.3 kg (5 lb can); U.S. EPA Registration No. 7122-69-51863 U.S. National Stock No. 6840-00-753-4973	House mice, Norway and Roof Rats	Use as formulated. Baits should be placed in tamper-proof bait boxes. Place tamper-proof bait boxes containing bait where rats and/or mice will find and consume bait. Generally, place bait blocks along walls, by gnawed openings in and around burrows, in corners and along walls or other places where rats and mice have been observed. An uninterrupted supply of bait should be maintained for a minimum of 12 days.	Diphacione	May be harmful if swallowed. Do not contaminate water, food or feed. Avoid ingestion by humans, domestic animals or wildlife. Dispose of dead rats and mice promptly to protect domestic cats and dogs as well as other wildlife.	ARCHEM Corp. Portsmouth, Ohio (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
3. Anticoagulant ready to use pellets (Bromadiolon 0.005%); (Maki); 11 lb can; U.S. EPA Registration No. 7173-187 U.S. National Stock No. 6840-01-151-1884	Norway rats, roof rats and house mice.	Use as formulated. Baits should be placed in tamper-proof bait boxes. Place tamper-proof bait boxes containing bait where rats and/or mice will find and consume bait. Generally, place bait blocks along walls, by gnawed openings in and around burrows, in corners and along walls or other places where rats and mice have been observed. An uninterrupted supply of bait should be maintained for a minimum of 12 days.	Bromadiolon	May be harmful if swallowed. Do not contaminate water, food or feed. Avoid ingestion by humans, domestic animals or wildlife. Dispose of dead rats and mice promptly to protect domestic cats and dogs as well as other wildlife.	LiphaTech, Inc. Milwalkee, Wisconsin (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
4. Anticoagulant ready to use pellets (Brodifacoum 0.005%); (Talon G); 11 lb can; U.S. EPA Registration No. 10182-335 U.S. National Stock No. 6840-01-426-4808	Norway rats, roof rats and house mice.	Use as formulated. Baits should be placed in tamper-proof bait boxes. Place tamper-proof bait boxes containing bait where rats and/or mice will find and consume bait. Generally, place bait blocks along walls, by gnawed openings in and around burrows, in corners and along walls or other places where rats and mice have been observed. An uninterrupted supply of bait should be maintained for a minimum of 12 days.	Brodifacoum	May be harmful if swallowed. Do not contaminate water, food or feed. Avoid ingestion by humans, domestic animals or wildlife. Dispose of dead rats and mice promptly to protect domestic cats and dogs as well as other wildlife.	LiphaTech, Inc. Milwalkee, Wisconsin (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
5. Anticoagulant concentrate (0.106% dipha-cinone); (LIQUA TOX II); 50/1.7 oz pouches per box; U.S. EPA Registration No. 12455-61 U.S. National Stock No. 6840-00-753-4972	Field mice, field rats, norway and roof rats.	Use as formulated. Baits should be placed in tamper-proof bait boxes. Place tamper-proof bait boxes containing bait where rats and/or mice will find and consume bait. Generally, place bait blocks along walls, by gnawed openings in and around burrows, in corners and along walls or other places where rats and mice have been observed. An uninterrupted supply of bait should be maintained for a minimum of 12 days.	Sodium salt of Diphacinone	May be harmful or fatal if swallowed. Do not contaminate water, food or feed. Avoid ingestion by humans, domestic animals or wildlife. Dispose of dead rats and mice promptly to protect domestic cats and dogs as well as other wildlife.	Octagon Process, Inc. Edgewater, New Jersey (Note: Supplier may vary according to contract procurement awards.)

ANNEX C

ALPHABETIC LIST OF CONTRIBUTING NATO MEMBERS INCLUDING INFORMATION ON AGENT, SPECTRUM OF ACTION, MODE OF APPLICATION, EFFECTIVE COMPOUNDS, PRECAUTIONS AND SOURCE OF SUPPLY OF THE REPELLENTS

General observations on the use of repellents

Attention must be paid that neither the eyes nor mucuous membranes are effected by the agents. Generally the protective effect lasts about six hours.

1. **Belgium (BEL)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Insect-repellent solution	Provides 4 hour protection against mosquitoes and other insects	To be applied on the skin only. Special for troops in manoeuvre in the field.	20% N,N Diethyl-m-toluamide (DEET)	Avoid contact with eyes and mucous membranes. Do not ingest solution.	Local drug making at the next Military Pharmacy
2. Anti-insect solution 40 ml Autan NSN: 6505-70-2802841	8 hours general protection against insects.	To be applied on the skin only.	20% N,N Diethyl-m-toluamide	Avoid contact with eyes and mucous membranes. Do not ingest solution	Bayer Belgium

2. **Canada (CAN)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. DEET 75% repellent for clothing and skin application (50 ml bottles). PCP Reg. No. 17341, CGSB 15-GP-19M NSN: 6840-00-753-4963	Mosquitoes, biting flies, chiggers, ticks, fleas, gnats	Apply evently by hand to exposed skin. May be applied to uniform openings. Repeat as necessary to maintain repellent effect.	Diethyltoluamide	Avoid contact with lips, eyes, and nostrils. Do not ingest. May damage lacquer, paint, plastics, synthetic fibres.	Wilson Professional, Oakville, ON. (NOTE: Supplier may vary according to national contract).

3. **CZECH REPUBLIC (CZE)**

No contribution submitted.

4. **DENMARK (DNK)**

No contribution submitted.

5. **France (FRA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Insect Ecran peau adulte (lotion) 697.200.535.002	Biting athropods	Application of lotion directly onto exposed skin areas	50% N,N-Diethyl-m-toluamide (DEET)	Not to be applied near the eyes and mouth. Strong plasticizer.	OSLER

6. **GERMANY (DEU)**

Precautions - Use of Repellents

a. Only officially approved repellents are to be used.

b. All repellents must carry the statutory approval of the Paul-Ehrlich-Institute, the Umweltbundesamt or the MOD.

c. Repellents are only to be used in strict compliance with the manufacturers' instructions as shown on the label.

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Insekten-schutzmittel Bw, 40 ml glass flask, old formulation produced until year 2002	Biting arthropods	Application of solution onto exposed skin areas	30% N,N Diethyl-m-toluamide (DEET), solution	Avoid contact with eyes and mucous membranes. May corrode plastics. Do not ingest solution.	Bw Pharmacy Koblenz Stock of the German Bundeswehr Stock-number 6840-12-192-5468
2. Insektenschutz-mittel Bw, 75 ml plastic flask, new formulation, produced since year 2002	Biting arthropods	Application of solution onto exposed skin areas	30% N,N Diethyl-m-toluamide (DEET), ointment, extended duration formulation	Avoid contact with eyes and mucous membranes. May corrode plastics. Do not ingest ointment	Bw Pharmacy Koblenz Stock of the German Bundeswehr Stock-number 6840-12-354-2927
3. Peripel 1 l can; HSE Reg.No: 5659	Mosquitoes and other biting arthropod vectors	Impregnation of bednets and clothing	10% Permethrin (20:80=cis:trans)	Only to be applied under appropriate supervision. Clothing must not be worn until dried.	AgrEvo Environmental Health Ltd.; UK National Stock-No: H1/6840-01-284-3982

6. **Germany (DEU)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
4. Repellent, Clothing application, 6-oz spray can; US EPA Reg.No: 50404-5	Mosquitoes, ticks, mites, and other biting arthropods	Apply as fromulated. For treating military field clothing and mosquito netting only. Hold can 15 to 20 cm from surface to be treated. Do not treat uniform cap or undergarments.	0,5% Permethrin (cis:trans=40%:60%)	Make applications outdoors. Do not use or store near heat or open flame. Use protective gloves when mixing or handling freshly treated, wet uniforms or mosquito netting. Avoid contact with face, eyes, or skin. Avoid breathing vapors or spray mist. Wash hands thoroughly after handling.	Colston International Corp., Easton, Pensylvania, USA, US National Stock No: 6840-01-278-1336

7. **Greece (GRC)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Autan	Biting arthropods	Solution	Diethyl-Toluamide 33 % (DEET)	Avoid contact with eyes etc.	Bayer Apifa AE 55-59 Deligeorgie St. Athens
2. Autan	Biting arthropods	Spray	Diethyl-Toluamide 13,2 % (DEET)	Avoid contact with eyes etc.	Bayer Apifa AE 55-59 Deligeorgie St. Athens
3. Autan	Biting arthropods	Stick	Diethyl-Toluamide 33 % (DEET)	Avoid contact with eyes etc.	Bayer Apifa AE 55-59 Deligeorgie St. Athens
4. Autan	Biting arthropods	Emulsion	Diethyl-Toluamide 25 % (DEET)	Avoid contact with eyes etc.	Bayer Apifa AE 55-59 Deligeorgie St. Athens
5. Off	Biting arthropods	Solution	Diethyl-Toluamide 35 % (DEET)	Avoid contact with eyes etc.	S. Johnson and Son Hella EPE Aspropyrgos-Attica
6. Off	Biting arthropods	Spray	Diethyl-Toluamide 15 % (DEET)	Avoid contact with eyes etc.	S. Johnson and Son Hella EPE Aspropyrgos-Attica

7. **Greece (GRC)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
7. Ipiplex	Biting arthropods	Spray	Dimethyl-Phthalate 28 % (DIMP)	Avoid contact with eyes etc.	Agrochimiki EPE 24 EM. Mpenaki St. Athens

8. **HUNGARY (HUN)**

No contribution submitted.

9. **ITALY (ITA)**

No contribution submitted.

10. **Netherlands (NLD)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. FINNS Mosquito Oil	Mosquitoes, flies	Apply to skin	Diethyl-m-toluamide and Ethohexadiol solution (resp. 35 % and 14,1 %)	Avoid contact with eyes and mucous membranes. Should not be ingested.	BOEHRINGER-MANNHEIM B.V. Donker Curtiusstraat 7-IV-b AMSTERDAM
2. AUTAN Mosquito	Mosquitoes, flies	Apply to skin	Diethyl-m-toluamide solution (33 %)	"	BAYER DIVISIE AROCHEMIE Postbus 105 ARNHEM

11. **NORWAY (NOR)**

No contribution submitted.

12. **Portgual (PRT)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Repelente (cream)	Mosquitoes biting flies, ticks	Applied by hand to exposed parts of the skin.	N,N-Diethyl-toluamide 20 %	Irritant to eyes and mucous membranes. Ingestion can cause CNS disturbances.	Laboratorio militar de Produtos Quimicos e Famaceuticos Av. Alfredo Bensaude Lisboa

13. **POLAND (POL)**

No contribution submitted.

14. **SPAIN (ESP)**

No contribution submitted.

15. **TURKEY (TUR)**

No contribution submitted.

16. **UNITED KINGDOM (GBR)**

Use of Repellents

1. Policy. UK military policy on the use of repellents is contained in the following Joint Service Publications (JSP):
   a. JSP 371. Joint Service Manual on Pest Control
   b. JSP 375. MOD Health and Safety Handbook.
   c. JSP 424. Guidance Notes for MOD COSHH Assessors.
   d. JSP 418. MOD Environmental Manual 1.
2. Summary of General Safety Precautions.
   a. Only officially approved repellents are to be used.
   b. All repellents approved specifically for MOD use will, wherever practicable, carry the statutory approval of the Health and Safety Exe-cutive/Ministry of Agriculture, Fisheries and Food.
   c. Repellents are only to be used in strict compliance with the manufacturers' instructions as shown on the label.

16. **United Kingdom (GBR)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Peripel HI/6840-99-300-0661	Mosquitoes and other flying insects	Impregnation of bednets and clothing	10% WW permethrin	General. Only to be applied under appropriate supervision. Clothing must not be worn until dried.	AgrEvo Environmental Health Ltd
2. Insect repellent personal appli-cation HI/6840-01-284-3982	Biting arthropods	Application from tube onto exposed skin areas	32% NN Diethyl-m-toluamide (DEET)	General. Not be applied near the eyes and mouth. May corrode plastics	3M Health care

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
1. Permethrin Clothing Application (40%); liquid concentrate; for use in 2 gallon sprayer application to fabric; 151 ml bottle; 12 bottles-/bx. U.S. EPA Registration No. 63120-1 U.S. National Stock No. 6840-01-334-2666	Mosquitoes, ticks, chiggers and other biting insects.	Mix concentrate with water and apply with 2 gallon sprayer at 55 psi. Place military uniforms or mosquito nets on the ground or flat surface and spray front and back surfaces until soaking wet. Hang uniforms and bednets for 3 hours or until dry. One two gallon sprayer mix should treat an average of 8 uniforms. May be used to treat tenatage.	Permethrin	Make all applications outdoors. Use a NIOSH/MSHA approved respirator with pesticide filters and protective gloves when mixing or handling freshly treated, wet uniforms or mosquito netting. Avoid contact with face, eyes, or skin. Avoid breathing vapors or spray mist. Wash hands thoroughly after handling. Do not store below 32 degrees F.	Colston International Corporation Easton, Pennsylvania (Note: Supplier may vary according to contract procurement awards.)
2. Permethrin Clothing Application (0.5%); Aerosol; 6 oz can; 12 cans/bx; U.S. EPA Registration No. 50404-5 U.S. National Stock No. 6840-01-278-1336	Mosquitoes and ticks		Permethrin	Make all applications outdoors. Do not use or store near heat or open flame. Exposure to temperatures above 130 degrees F may cause bursting.	Colston International Corporation Easton, Pennsylvania (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
3. Permethrin Clothing Application, 40% permethrin concentrate, IDA Kit; 12 kits/'bx; U.S. EPA Registration No. 63120-3 U.S. National Stock No. 6840-01-345-0237	Mosquitoes, ticks, chiggers, and human body lice.	For military field uniform treatment only. Mix permethrin concentrate with water and apply to uniform in bags, will treat one uniform. Hung uniform for 3 hours or until dry. Mark uniform with date of treatment using the laundry marker included in the kit. Do not Re-treat uniforms; one treatment is effective for the service life of the uniform. Do not use to treat hats, headgear, socks or undergarments.	Permethrin	Make all applications outdoors. Use protective gloves when mixing or handling freshly treated, wet uniforms or mosquito netting. Avoid contact with face, eyes, or skin. Avoid breathing vapors. Wash hands thoroughly after handling. Do not store below 32 degrees F. Do not reuse empty impregnation bags or other materials.	Colston International Corporation Easton, Pennsylvania (Note: Supplier may vary according to contract procurement awards.)
4. DEET Personal Application (33%); 2 oz tube; 12 tubes/bx; U.S. EPA Registration No. 58007-1 U.S. National Stock No. 6840-01-284-3982	Repels Biting flies (Mosquitoes, deer flies and stable flies), chiggers, fleas, and terrestrial leaches in tropical areas where they appear.	Apply as formulated.	N,N-Diethyl-m-toluamide (DEET)	Apply a thin layer to exposed skin. Avoid contact with eyes and lips. May damage certain synthetic fabrics, plastics, painted or varnished surfaces. Avoid smearing on plastic eyeglass frames, gloggles, watch crystals, etc.	3M St. Paul, Minnesota (Note: Supplier may vary according to contract procurement awards.)

17. **United States (USA)**

Agent	Effective against	Mode of Application	Effective compounds	Precautions	Manufacturer
5. DEET Clothing and Personal Application (75%); 2 oz bottle; U.S. EPA Registration No. U.S. National Stock No. 6840-00-753-4963	Biting insects, chiggers (mites), fleas, and ticks.	Apply as formulated. For use only for pretreatment or retreatment of repellent parka. May be used for clothing treatment and skin applications if permethrin or 33% DEET lotion is not available.	N,N-Diethyl-m-toluamide (DEET)	Avoid contact with eyes and lips. May damage certain synthetic fabrics, plastics, painted or varnished surfaces. Avoid smearing on plastic eyeglass frames, goggles, watch crystals, etc.	(Note: Supplier may vary according to contract procurement awards.)