DYNAMEC

Version 7 - This version replaces all previous versions.
Revision Date 24.06.2015

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name : **DYNAMEC**

Design code : A8612AI

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use : Insecticide

1.3 Details of the supplier of the safety data sheet

Company Syngenta UK Limited
CPC4, Capital Park
Fulbourn, Cambridge
CB21 5XE

Telephone : (01223) 883400

Telefax : (01223) 882195

Website : www.syngenta.co.uk

1.4 Emergency telephone number

: +44 (0) 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

Acute toxicity (oral)	Category 4	H302
Eye Irritation	Category 2	H319
Specific target organ toxicity – repeated exposure	Category 2	H373
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 1	H410

For the full text of the H-Statements mentioned in this section, see Section 16.

2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms

Signal Word	:Warning	
Hazard Statements	:H302	Harmful if swallowed
	:H319	Causes serious eye irritation.
	:H373	May cause damage to the nervous system through prolonged or repeated exposure.
	:H410	Very toxic to aquatic life with long lasting effects.
Precautions Statements	:P102	Keep out of reach of children.
	:P280	Wear protective gloves/protective clothing/ eye protection/face protection.
	:P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	:P314	Get medical advice/attention if you feel unwell.
	:P337/313	If eye irritation persists: Get medical advice/attention.
	:P391	Collect spillage.
	:P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.
Supplemental Information	:EUH401	To avoid risks to human health and the environment comply with the instructions for use. For professional users only.

Hazardous components which must be listed on the label:

- abamectin
- cyclohexanol

2.3 Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS No. EC No. Registration Number	Classification (67/548/EEC)	Classification (REGULATION (EC) No. 1272/2008	Concentration
Cyclohexanol	108-93-0 203-630-6 01-2119447488-26-0002	Xn R20/22 R37/38	Acute Tox.4; H302 Acute Tox.4; H332 Skin Irrit.2; H315 Eye Irrit.2; H319 STOT SE3; H335	50-70 % w/w

Propane-1,2-diol	57-55-6 200-338-0	-	-	10-20 % w/w
Abamectin	71751-41-2 65195-56-4 65195-55-3	T+, N R63 R21 R26/28 R48/23/25 R50/53	Repr.2; H361d Acute Tox.2; H300 Acute Tox.3; H311 STOT RE1; H372 Acute Tox.1; H330 Aquatic Acute 1; H400 Aquatic Chronic1; H410	1.8 % w/w
2,6-di-tert-butyl-p-cresol	128-37-0 31194-40-8 204-881-4 01-2119555270-46-0000	N R50/53	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	1-5 % w/w

Substances for which there are Community workplace exposure limits.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General Advice : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control centre or physician, or going for treatment.

Inhalation : Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Control Centre immediately.

Skin Contact : Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye Contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Lack of co-ordination.
Tremors
Dilatation of pupils

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice **:**This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiaziphines, valproic acid) in patients with potentially toxic mectin exposure. Toxicity can be minimized by early administration of chemical absorbents (e.g. activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires

Use alcohol-resistant foam or water spray.
Do not use a solid water stream as it may scatter and spread fire.

5.2 **Special hazards arising from the substance or mixture**
As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.

5.3 **Advice for fire-fighters:**
Wear full protective clothing and self-contained breathing apparatus. Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions, protective equipment and emergency procedures**

Refer to protective measures listed in sections 7 and 8.

6.2 **Environmental precautions**:

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3 **Methods and materials for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 **Reference to other sections**
Refer to protective measures listed in sections 7 and 8.
Refer to disposal considerations listed in section 13.

SECTION 7. HANDLING AND STORAGE

7.1 **Precautions for safe handling**
No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 **Conditions for safe storage, including any incompatibilities**
No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

7.3 **Specific end use(s)**
Registered Crop Protection products: For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	Exposure limit(s)	Type of	Source

		exposure limit	
Abamectin	0.02 mg/m³	8 h TWA	SYNGENTA
Propane-1,2-diol	10 mg/m³ (particulates) 150 ppm, 470 mg/m³ (Total (vapour and particulates))	8 h TWA 8 h TWA	UK HSE UK HSE
Cyclohexanol	50 ppm 50 ppm 50 ppm 50 ppm, 208 mg/m³	8 h TWA 8 h TWA 8 h TWA 15 min STEL 8 h TWA	ACGIH DFG SUVA SUVA UK HSE
2,6-di-tert-butyl-p-cresol	10 mg/m³ 10 mg/m³ 10 mg/m³ 10 mg/m³	8 h TWA 8 h TWA 8 h TWA 8 h TWA	DFG SUVA ACGIH UK HSE

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

8.2 Exposure controls

Engineering Measures : Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Respiratory protection : A gas and vapour filter respirator may be necessary until effevtive technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposures levels are unknown, or under cuircumstances where air-puryfying respirators may not provide adequate protection.

Hand protection : Suitable material: nitrile rubber.
Break through time: > 480 min
Glove thickness: 0.5 mm
Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye Protection : If eye contact is possible, use tight-fitting chemical safety goggles.

Skin and body protection : Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots,

etc.). Wear as appropriate: impervious protective suit.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State	:	Liquid
Form	:	Liquid
Colour	:	Pale yellow to brown
Odour	:	Aromatic
Odour Threshold	:	No data available
pH	:	3.2 at 1.0 % w/v (25 °C)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	69 °C Pensky-Martens c.c.
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	0.9764 g/cm³ at 20 ºC
Solubility in other solvents	:	Partly miscible in water, miscible in methanol and toluene at 30 ºC
Partition Coefficient n-octanol/water	:	No data available
Autoignition temperature	:	320 ºC
Thermal decomposition	:	No data available
Viscosity, dynamic	:	77 - 113 mP.a.s at 20 ºC 30 - 65 mP.a.s at 40 ºC
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not oxidising

9.2 Other information

No data available

SECTION 10. STABILITY AND REACTIVITY

10.1	**Reactivity**	:	See Section 10.3 “Possibility of hazardous reactions”
10.2	**Chemical Stability**	:	The product is stable when used in normal conditions
10.3	**Possibility of hazardous reactions**	:	No hazardous reactions by normal handling and storage according to provisions.
10.4	**Conditions to avoid**	:	No decomposition if used as directed.
10.5	**Incompatible materials**	:	No substances are known which lead to the formation of hazardous substances or thermal reactions.
10.6	**Hazardous decomposition products**	:	Combustion or thermal decomposition will evolve toxic and irritant vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	:	LD50 female rat, 891 mg/kg
Acute inhalational toxicity	:	LC50 male and female rat, > 5.04 mg/l, 4 h.
Acute dermal toxicity	:	LD50 male and female rat, > 5,050 mg/kg
Skin corrosion/irritation	:	Rabbit: non-irritating.
Serious eye damage/eye irritation	:	Rabbit: moderately irritating
Respiratory or skin sensitisation	:	Guinea pig: not a skin sensitiser in animal tests.
Germ cell mutagenicity	:	
cyclohexanol		Tests on bacterial or mammalian cell cultures did not show mutagenic effects
abamectin		Did not show mutagenic effects in animal experiments.
Carcinogenicity	:	
abamectin		Did not show carcinogenic effects in animal experiments.
Reproductive toxicity	:	
abamectin		Experiments have shown reproductive toxicity effects on laboratory animals.
STOT – single exposure	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT – repeated exposure	:	
abamectin		Central nervous system effects in chronic/subchronic animal tests.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	:	LC50 *Oncorhynchus mykiss* (rainbow trout), 0.247 mg/l, 96 h
Toxicity to aquatic invertebrates	:	EC50 *Daphnia magna* (water flea), 0.095 mg/l, 48 h
Toxicity to aquatic plants	:	ErC50 *Pseudokirchneriella subcapitata* (green algae), > 100mg/l, 72 h..

12.2 Persistence and degradability

Biodegrability	:	
abamectin		Not readily biodegradable
Stability in water	:	Degradation half life: 1.7 d. Not persistent in water
Stability in soil	:	Degradation half life: 12 – 52 d. Not persistent in soil

12.3 Bioaccumulative potential

abamectin	:	Does not bioaccumulate.

12.4 Mobility in soil

abamectin	:	The substance has slight mobility in soil.

12.5 Results of PBT and vPvB assessment

Abamectin, cyclohexanol	:	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

Chronic aquatic toxicity. Classification of the product is based on the summation of the concentrations of classified components.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1	**UN Number**	**:**	UN 3082
14.2	**UN proper shipping name**	**:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ABAMECTIN)
14.3	**Transport hazard class(es)**	**:**	9
14.4	**Packing Group**	**;**	III
Labels		:	9
14.5	**Environmental hazards**	:	Environmentally hazardous

Sea transport(IMDG)

14.1	**UN Number**	**:**	UN 3082
14.2	**UN proper shipping name**	**:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ABAMECTIN)
14.3	**Transport hazard class(es)**	**:**	9
14.4	**Packing Group**	**;**	III
Labels		**:**	9
14.5	**Environmental hazards**	**:**	Marine pollutant

Air transport (IATA-DGR**)**

14.1	**UN Number**	**:**	UN 3082
14.2	**UN proper shipping name**	**:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ABAMECTIN)
14.3	**Transport hazard class(es)**	**:**	9
14.4	**Packing Group**	**;**	III
Labels		**:**	9
14.6	**Special precautions for user**	**:**	none

14.6 Special precautions for user

none

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS-Labelling

Hazard pictograms

Signal Word	:Warning	
Hazard Statements	:H302	Harmful if swallowed
	:H319	Causes serious eye irritation.
	:H373	May cause damage to the nervous system through prolonged or repeated exposure.
	:H410	Very toxic to aquatic life with long lasting effects.
Precautions Statements	:P102	Keep out of reach of children.
	:P280	Wear protective gloves/protective clothing/ eye protection/face protection.
	:P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	:P314	Get medical advice/attention if you feel unwell.
	:P337/313	If eye irritation persists: Get medical advice/attention.
	:P391	Collect spillage.
	:P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.
Supplemental Information	:EUH401	To avoid risks to human health and the environment comply with the instructions for use. For professional users only.

Hazardous components which must be listed on the label:

- abamectin
- cyclohexanol

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16. OTHER INFORMATION

Approval number, MAPP 13331.
Use plant protection products safely. Always read the label and product information before use.

Based upon SDS release dated 24/06/2015, version 7 with local amendment.

Full text of H-Statements referred to under sections 2 and 3.

H300	Fatal if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled

H332	Harmful if inhaled
H335	May cause respiratory irritation
H361d	Suspected of damaging the unborn child
H372	Causes damage to the nervous system through prolonged or repeated exposure
H373	May cause damage to the nervous system through prolonged or repeated exposure
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.