

SAFETY DATA SHEET

SIEMENS

PAP Control Module

MSDS no. :

PACM

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : PAP Control Module
Product code : PACM, 10385588
Product description : Not available.
Product type : Liquid.
Other means of identification : PAP Control Modules PAPC1, PAPC2 & PAPC1-3
PAPC3

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

Not applicable.

1.3 Company/undertaking identification

Manufactured/supplied : Siemens Healthcare Diagnostics Limited
Sir William Siemens Square
Newton House
Camberley
Frimley
Surrey
GU16 8QD
UK

Phone: +44 (0) 1276 696000

Fax: +44 (0)1276 696133

e-mail address of person responsible for this SDS : dx.msds.healthcare@siemens.com

1.4 Emergency telephone number : Poison Control:
In England and Wales:
NHS Direct – 0845 4647 or 111
In Scotland: NHS 24 – 08454 24 24 24
In the Republic of Ireland: 01 809 2166

CHEMTREC: 0870-8200418 (UK only)
00 + 1 + 703-527-3887 (UK & Ireland)
(International calls to the United Kingdom)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : PAP Control Modules PAPC1, PAPC2 & PAPC3 Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

PAP Control Modules PAPC1, PAPC2 & PAPC3

ACUTE TOXICITY SKIN Category 4
LONG-TERM AQUATIC HAZARD Category 3

PAP Control Modules PAPC1, PAPC2 & PAPC3 The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : PAP Control Modules PAPC1, PAPC2 & PAPC3

Ingredients of unknown ecotoxicity : PAP Control Modules PAPC1, PAPC2 & PAPC3

Classification according to Directive 1999/45/EC [DPD]

PAP Control Modules PAPC1, PAPC2 & PAPC3 The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : PAP Control Modules PAPC1, PAPC2 & PAPC3 T; R25 R52/53

Physical/chemical hazards : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not applicable.


Human health hazards : PAP Control Modules PAPC1, PAPC2 & PAPC3 Toxic if swallowed.

Environmental hazards : PAP Control Modules PAPC1, PAPC2 & PAPC3 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms : 

Signal word : PAP Control Modules PAPC1, PAPC2 & PAPC3 Warning

Hazard statements : PAP Control Modules PAPC1, PAPC2 & PAPC3 H312 - Harmful in contact with skin. H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : PAP Control Modules PAPC1, PAPC2 & PAPC3 P280 - Wear protective gloves/protective clothing/eye protection/face protection. P273 - Avoid release to the environment.

Response : PAP Control Modules PAPC1, PAPC2 & PAPC3 P302 + P352 + P312 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell.

Storage : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not applicable.

Disposal : PAP Control Modules PAPC1, PAPC2 & PAPC3 P501 - Dispose of contents and container in accordance with all local, regional, and national regulations.

SECTION 2: Hazards identification

- Hazardous ingredients** : PAP Control Modules PAPC1, PAPC2 & PAPC3
Sodium azide
- Supplemental label elements** : Not applicable.
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not applicable.

2.3 Other hazards

- Other hazards which do not result in classification** : None known.
Not available.

SECTION 3: Composition/information on ingredients

- Substance/mixture** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
PAP Control Modules PAPC1, PAPC2 & PAPC3 1,2, 3-Propanetricarboxylic acid, 2-hydroxy-, hydrate (1:1) sodium azide	EC: 201-069-1 CAS: 5949-29-1	>=1, <5	Not classified.	Eye Irrit. 2, H319	[1]
	EC: 247-852-1 CAS: 26628-22-8 Index: 011-004-00-7	>=1, <2.5	T+; R28 R32 N; R50/53 See Section 16 for the full text of the R-phrases declared above.	Acute Tox. 2, H300 Acute Tox. 1, H310 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
 [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.	

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No known significant effects or critical hazards.
Inhalation	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Harmful in contact with skin.
Ingestion	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No specific data.
Inhalation	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No specific data.
Skin contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No specific data.
Ingestion	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Seveso II Directive - Reporting thresholds (in tonnes)

Danger criteria

SECTION 7: Handling and storage

Category	Notification and MAPP threshold	Safety report threshold
PAP Control Modules PAPC1, PAPC2 & PAPC3 C2: Toxic	50	200

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker or exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
PAP Control Modules PAPC1, PAPC2 & PAPC3 sodium azide	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. Notes: as NaN₃ STEL: 0.3 mg/m ³ , (as NaN ₃) 15 minutes. TWA: 0.1 mg/m ³ , (as NaN ₃) 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

SECTION 8: Exposure controls/personal protection

Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Solid.
- Colour** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Off-white.
- Odour** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Bland.
- pH** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not applicable.
- Melting point/freezing point** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Initial boiling point and boiling range** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Flash point** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Evaporation rate** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Flammability (solid, gas)** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Burning time** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Burning rate** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Upper/lower flammability or explosive limits** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Vapour pressure** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Solubility in water** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.
- Partition coefficient: n-octanol/ water** : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.

SECTION 9: Physical and chemical properties

Auto-ignition temperature	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Not available.
Decomposition temperature	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Not available.
Viscosity	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Not available.
Explosive properties	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Explosive in the presence of the following materials or conditions: metals, acids and moisture.
Oxidising properties	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Not available.

9.2 Other information

SADT	: Not available.
<u>Aerosol product</u>	
Type of aerosol	: Not applicable.
Heat of combustion	: Not available.
Ignition distance	: Not applicable.
Enclosed space ignition - Time equivalent	: Not applicable.
Enclosed space ignition - Deflagration density	: Not applicable.
Flame height	: Not applicable.
Flame duration	: Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: No specific data.
10.5 Incompatible materials	: No specific data.
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
PAP Control Modules PAPC1, PAPC2 & PAPC3 sodium azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

SECTION 11: Toxicological information

Route	ATE value
PAP Control Modules PAPC1, PAPC2 & PAPC3 Oral Dermal	2454.5 mg/kg 1818.2 mg/kg

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
PAP Control Modules PAPC1, PAPC2 & PAPC3 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, hydrate (1:1)	Eyes - Mild irritant	Rabbit	-	0.5 minutes 5 milligrams	-

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No known significant effects or critical hazards.
Inhalation	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Harmful in contact with skin.
Ingestion	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No specific data.
Inhalation	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No specific data.
Skin contact	: PAP Control Modules PAPC1, PAPC2 & PAPC3	No specific data.

SECTION 11: Toxicological information

Ingestion : PAP Control Modules PAPC1, PAPC2 & PAPC3 No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.

Potential delayed effects : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.

Long term exposure

Potential immediate effects : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.

Potential delayed effects : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.

General : PAP Control Modules PAPC1, PAPC2 & PAPC3 No known significant effects or critical hazards.

Carcinogenicity : PAP Control Modules PAPC1, PAPC2 & PAPC3 No known significant effects or critical hazards.

Mutagenicity : PAP Control Modules PAPC1, PAPC2 & PAPC3 No known significant effects or critical hazards.

Teratogenicity : PAP Control Modules PAPC1, PAPC2 & PAPC3 No known significant effects or critical hazards.

Developmental effects : PAP Control Modules PAPC1, PAPC2 & PAPC3 No known significant effects or critical hazards.

Fertility effects : PAP Control Modules PAPC1, PAPC2 & PAPC3 No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
PAP Control Modules PAPC1, PAPC2 & PAPC3 sodium azide	Acute EC50 0.348 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/l Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 µg/l Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 µg/l Marine water	Algae - Macrocyctis pyrifera	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
PAP Control Modules PAPC1, PAPC2 & PAPC3 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, hydrate (1:1)	-1.72	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not applicable.

vPvB : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : PAP Control Modules PAPC1, PAPC2 & PAPC3 The classification of the product may meet the criteria for a hazardous waste. Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

ADR/RID

14.1 UN number PAP Control Modules PAPC1, PAPC2 & PAPC3 Not regulated.

14.2 UN proper shipping name PAP Control Modules PAPC1, PAPC2 & PAPC3 -

SECTION 14: Transport information

14.3 Transport hazard class(es)	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.4 Packing group	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.5 Environmental hazards	PAP Control Modules PAPC1, PAPC2 & PAPC3	No.
Additional information	PAP Control Modules PAPC1, PAPC2 & PAPC3	-

ADN

14.1 UN number	PAP Control Modules PAPC1, PAPC2 & PAPC3	Not regulated.
14.2 UN proper shipping name	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.3 Transport hazard class(es)	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.4 Packing group	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.5 Environmental hazards	PAP Control Modules PAPC1, PAPC2 & PAPC3	No.
Additional information	PAP Control Modules PAPC1, PAPC2 & PAPC3	-

IMDG

14.1 UN number	PAP Control Modules PAPC1, PAPC2 & PAPC3	Not regulated.
14.2 UN proper shipping name	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.3 Transport hazard class(es)	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.4 Packing group	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.5 Environmental hazards	PAP Control Modules PAPC1, PAPC2 & PAPC3	No.
Additional information	PAP Control Modules PAPC1, PAPC2 & PAPC3	-

IATA

14.1 UN number	PAP Control Modules PAPC1, PAPC2 & PAPC3	Not regulated.
14.2 UN proper shipping name	PAP Control Modules PAPC1, PAPC2 & PAPC3	-

PAP Control Module

SECTION 14: Transport information

14.3 Transport hazard class(es)	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.4 Packing group	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.5 Environmental hazards	PAP Control Modules PAPC1, PAPC2 & PAPC3	No.
Additional information	PAP Control Modules PAPC1, PAPC2 & PAPC3	-
14.6 Special precautions for user	: PAP Control Modules PAPC1, PAPC2 & PAPC3	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	: Not available.	

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : PAP Control Modules PAPC1, PAPC2 & PAPC3 Not applicable.

Other EU regulations

Europe inventory : Not determined.

Seveso II Directive

This product is not controlled under the Seveso II Directive.

Danger criteria

Category

PAP Control Modules PAPC1, PAPC2 & PAPC3
C2: Toxic

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

PAP Control Modules PAPC1, PAPC2 & PAPC3

Acute Tox. 4, H312
Aquatic Chronic 3, H412

Calculation method
Calculation method

Full text of abbreviated H statements : PAP Control Modules PAPC1, PAPC2 & PAPC3

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] : PAP Control Modules PAPC1, PAPC2 & PAPC3

Acute Tox. 1, H310	ACUTE TOXICITY: SKIN - Category 1
Acute Tox. 2, H300	ACUTE TOXICITY: ORAL - Category 2
Acute Tox. 4, H312	ACUTE TOXICITY: SKIN - Category 4
Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410	LONG-TERM AQUATIC HAZARD - Category 1
Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

Full text of abbreviated R phrases

: R28- Very toxic if swallowed.
R25- Toxic if swallowed.
R32- Contact with acids liberates very toxic gas.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD]

: T+ - Very toxic
T - Toxic
N - Dangerous for the environment

Date of printing : 5/6/2015.

Date of issue/ Date of revision : 5/6/2015.

Date of previous issue : 3/11/2015.

Version : 3

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

