

SAFETY DATA SHEET



Solids NMR Sample Kit 1.2mm-6mm Probes, Part Number G5232-85001

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

1.1 Product identifier

Product name	: Solids NMR Sample Kit 1.2mm-6mm Probes, Part Number G5232-85001		
Part No. (Kit)	: G5232-85001		
Part No.	: Adamantane	100277	
	: Ammonium dihydrogenphosphate	204005	
	: Glycine-15N	299294	
	: Hexamethylbenzene	322377	
	: Potassium bromide	P0838	

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

Identified uses	
Analytical chemistry.	
Glass vials	
4 X 5 g, 1 x 1 g	
Adamantane	5 g
Ammonium dihydrogenphosphate	5 g
Glycine-15N	1 g
Hexamethylbenzene	5 g
Potassium bromide	5 g

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	: Adamantane	Mono-constituent substance
	: Ammonium dihydrogenphosphate	Mono-constituent substance
	: Glycine-15N	Mono-constituent substance
	: Hexamethylbenzene	Mixture
	: Potassium bromide	Mono-constituent substance

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

Adamantane

H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
H400 ACUTE AQUATIC HAZARD - Category 1
H410 LONG-TERM AQUATIC HAZARD - Category 1

Hexamethylbenzene

H413 LONG-TERM AQUATIC HAZARD - Category 4

Potassium bromide

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SECTION 2: Hazards identification

H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H412	LONG-TERM AQUATIC HAZARD - Category 3

Ingredients of unknown toxicity	: Adamantane	Not applicable.
	: Ammonium dihydrogenphosphate	Not applicable.
	: Glycine-15N	Not applicable.
	: Hexamethylbenzene	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 100%
	: Potassium bromide	Not applicable.

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

Adamantane	The product is classified as dangerous according to Directive 1999/45/EC and its amendments.
Ammonium dihydrogenphosphate	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
Glycine-15N	The product is not classified as dangerous according to Directive 67/548/EEC and its amendments.
Hexamethylbenzene	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
Potassium bromide	The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification	: Adamantane	N; R50/53
	: Ammonium dihydrogenphosphate	Not classified.
	: Glycine-15N	Not classified.
	: Hexamethylbenzene	Not classified.
	: Potassium bromide	T; R48/23 Xi; R36/37/38

Human health hazards	: Adamantane	Not applicable.
	: Ammonium dihydrogenphosphate	Not applicable.
	: Glycine-15N	Not applicable.
	: Hexamethylbenzene	Not applicable.
	: Potassium bromide	Toxic: danger of serious damage to health by prolonged exposure through inhalation. Irritating to eyes, respiratory system and skin.

Environmental hazards	: Adamantane	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	: Ammonium dihydrogenphosphate	Not applicable.
	: Glycine-15N	Not applicable.
	: Hexamethylbenzene	Not applicable.
	: Potassium bromide	Not applicable.

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

: Adamantane	Warning
: Ammonium dihydrogenphosphate	No signal word.
: Glycine-15N	No signal word.
: Hexamethylbenzene	No signal word.
: Potassium bromide	Warning

SECTION 2: Hazards identification

Hazard statements	: Adamantane	GHS07 - Causes serious eye irritation.
	Ammonium dihydrogenphosphate	GHS09 - Very toxic to aquatic life with long lasting effects. No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	May cause long lasting harmful effects to aquatic life.
	Potassium bromide	GHS07 - Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation. GHS08 - May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.
Precautionary statements		
Prevention	: Adamantane	P280 - Wear eye or face protection. P273 - Avoid release to the environment. P264 - Wash hands thoroughly after handling. Not applicable.
	Ammonium dihydrogenphosphate	Not applicable.
	Glycine-15N	P273 - Avoid release to the environment.
	Hexamethylbenzene	P280 - Wear protective gloves. Wear eye or face protection.
	Potassium bromide	P273 - Avoid release to the environment. P260 - Do not breathe dust.
Response	: Adamantane	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Not applicable.
	Ammonium dihydrogenphosphate	Not applicable.
	Glycine-15N	Not applicable.
	Hexamethylbenzene	P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
	Potassium bromide	Not applicable.
Storage	: Adamantane	Not applicable.
	Ammonium dihydrogenphosphate	Not applicable.
	Glycine-15N	Not applicable.
	Hexamethylbenzene	Not applicable.
	Potassium bromide	P405 - Store locked up.
Disposal	: Adamantane	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.
	Ammonium dihydrogenphosphate	Not applicable.
	Glycine-15N	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Hexamethylbenzene	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Potassium bromide	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: Adamantane Adamantane	
	Ammonium dihydrogenphosphate Ammonium dihydrogenphosphate	
	Glycine-15N Glycine-15n	
	Potassium bromide Potassium bromide	

SECTION 2: Hazards identification

Supplemental label elements	: Adamantane	Not applicable.
	Ammonium dihydrogenphosphate	Not applicable.
	Glycine-15N	Not applicable.
	Hexamethylbenzene	Not applicable.
	Potassium bromide	Not applicable.

Special packaging requirements

Tactile warning of danger	: Adamantane	Not applicable.
	Ammonium dihydrogenphosphate	Not applicable.
	Glycine-15N	Not applicable.
	Hexamethylbenzene	Not applicable.
	Potassium bromide	Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: Adamantane	None known.
	Ammonium dihydrogenphosphate	None known.
	Glycine-15N	Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.
	Hexamethylbenzene	None known.
	Potassium bromide	None known.

SECTION 3: Composition/information on ingredients

Substance/mixture	: Adamantane	Mono-constituent substance
	Ammonium dihydrogenphosphate	Mono-constituent substance
	Glycine-15N	Mono-constituent substance
	Hexamethylbenzene	Mixture
	Potassium bromide	Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Adamantane Tricyclo[3.3.1.1.3,7]decane	EC: 206-001-4 CAS: 281-23-2	100	N; R50/53	Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[A]
Ammonium dihydrogenphosphate Ammonium dihydrogenorthophosphate	EC: 231-764-5 CAS: 7722-76-1	100	Not classified.	Not classified.	[A]
Glycine-15N Glycine-15n	EC: 200-272-2 CAS: 7299-33-4	100	Not classified.	Not classified.	[A]
Hexamethylbenzene Hexamethylbenzene	EC: 201-777-0 CAS: 87-85-4	>=90	Not classified.	Aquatic Chronic 4, H413	[1]
Potassium bromide Potassium bromide	EC: 231-830-3 CAS: 7758-02-3	100	T; R48/23 Xi; R36/37/38	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation) STOT RE 2, H373 (central nervous system (CNS))	[A]

SECTION 3: Composition/information on ingredients

			See Section 16 for the full text of the R-phrases declared above.	Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	
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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 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	: Adamantane	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. If irritation persists, get medical attention.
	Ammonium dihydrogenphosphate	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Glycine-15N	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Hexamethylbenzene	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.
	Potassium bromide	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.
Inhalation	: Adamantane	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.
	Ammonium dihydrogenphosphate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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.
	Glycine-15N	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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.
	Hexamethylbenzene	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

SECTION 4: First aid measures

		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.
	Potassium bromide	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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.
Skin contact	: Adamantane	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Ammonium dihydrogenphosphate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Glycine-15N	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Hexamethylbenzene	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Potassium bromide	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Adamantane	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.
	Ammonium dihydrogenphosphate	Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Glycine-15N	Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Hexamethylbenzene	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

SECTION 4: First aid measures

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.

Potassium bromide

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 following exposure or if feeling unwell. 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 : Adamantane

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.

Ammonium dihydrogenphosphate
Glycine-15N

No action shall be taken involving any personal risk or without suitable training.

Hexamethylbenzene

No action shall be taken involving any personal risk or without suitable training.

Potassium bromide

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.

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact

: Adamantane
Ammonium dihydrogenphosphate
Glycine-15N

Causes eye irritation.
No known significant effects or critical hazards.

Hexamethylbenzene
Potassium bromide

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

No known significant effects or critical hazards.
Causes serious eye irritation.

Inhalation

: Adamantane
Ammonium dihydrogenphosphate
Glycine-15N

No known significant effects or critical hazards.
Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Hexamethylbenzene
Potassium bromide

No known significant effects or critical hazards.
May cause respiratory irritation.

SECTION 4: First aid measures

Skin contact	: Adamantane	No known significant effects or critical hazards.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.
Ingestion	: Adamantane	May be irritating to mouth, throat and stomach.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.
Over-exposure signs/symptoms	: Adamantane	No known significant effects or critical hazards.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Adamantane	Adverse symptoms may include the following: irritation watering redness
	Ammonium dihydrogenphosphate	No specific data.
	Glycine-15N	Adverse symptoms may include the following: irritation redness
	Hexamethylbenzene	No specific data.
Inhalation	: Adamantane	Adverse symptoms may include the following: pain or irritation watering redness
	Ammonium dihydrogenphosphate	No specific data.
	Glycine-15N	No specific data.
	Hexamethylbenzene	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adamantane	No specific data.
	Ammonium dihydrogenphosphate	No specific data.
	Glycine-15N	No specific data.
	Hexamethylbenzene	No specific data.
Ingestion	: Adamantane	Adverse symptoms may include the following: irritation redness
	Ammonium dihydrogenphosphate	No specific data.
	Glycine-15N	No specific data.
	Hexamethylbenzene	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Adamantane	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Ammonium dihydrogenphosphate	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.
	Glycine-15N	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.
	Hexamethylbenzene	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 4: First aid measures

	Potassium bromide	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Adamantane	No specific treatment.
	Ammonium dihydrogenphosphate	No specific treatment.
	Glycine-15N	No specific treatment.
	Hexamethylbenzene	No specific treatment.
	Potassium bromide	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Adamantane	Use an extinguishing agent suitable for the surrounding fire.
	Ammonium dihydrogenphosphate	Use an extinguishing agent suitable for the surrounding fire.
	Glycine-15N	Use dry chemical powder.
	Hexamethylbenzene	Use an extinguishing agent suitable for the surrounding fire.
	Potassium bromide	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Adamantane	None known.
	Ammonium dihydrogenphosphate	None known.
	Glycine-15N	Do not use water jet.
	Hexamethylbenzene	None known.
	Potassium bromide	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: Adamantane	This material is very toxic 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. No specific fire or explosion hazard.
	Ammonium dihydrogenphosphate	Fine dust clouds may form explosive mixtures with air. This material may cause long lasting harmful effects to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	Glycine-15N	Fine dust clouds may form explosive mixtures with air. This material may cause long lasting harmful effects to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	Hexamethylbenzene	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.
	Potassium bromide	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 combustion products	: Adamantane	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Ammonium dihydrogenphosphate	Decomposition products may include the following materials: nitrogen oxides phosphorus oxides
	Glycine-15N	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	Hexamethylbenzene	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Potassium bromide	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

Special precautions for fire-fighters	: Adamantane	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.
	Ammonium dihydrogenphosphate	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.
	Glycine-15N	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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Hexamethylbenzene	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.
	Potassium bromide	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	: Adamantane	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.
	Ammonium dihydrogenphosphate	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.
	Glycine-15N	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.
	Hexamethylbenzene	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.
	Potassium bromide	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	: Adamantane	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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Ammonium dihydrogenphosphate	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. Put on appropriate personal protective equipment.
	Glycine-15N	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas.

SECTION 6: Accidental release measures

		Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.
	Hexamethylbenzene	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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Potassium bromide	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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: Adamantane	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".
	Ammonium dihydrogenphosphate	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".
	Glycine-15N	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".
	Hexamethylbenzene	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".
	Potassium bromide	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	: Adamantane	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. Collect spillage.
	Ammonium dihydrogenphosphate	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).
	Glycine-15N	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).
	Hexamethylbenzene	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.
	Potassium bromide	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

SECTION 6: Accidental release measures

quantities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	: Adamantane	Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Ammonium dihydrogenphosphate	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
	Glycine-15N	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
	Hexamethylbenzene	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
	Potassium bromide	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

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**7.1 Precautions for safe handling**

Protective measures	: Adamantane	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. 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.
	Ammonium dihydrogenphosphate Glycine-15N	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.
	Hexamethylbenzene	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. 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.
	Potassium bromide	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with

SECTION 7: Handling and storage**Advice on general occupational hygiene**

: Adamantane	adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.
Ammonium dihydrogenphosphate	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.
Glycine-15N	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.
Hexamethylbenzene	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.
Potassium bromide	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

: Adamantane	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.
Ammonium dihydrogenphosphate	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.
Glycine-15N	Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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

SECTION 7: Handling and storage

Hexamethylbenzene	environmental contamination. 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.
Potassium bromide	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. Store locked up. 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.

7.3 Specific end use(s)

Recommendations	: Adamantane Ammonium dihydrogenphosphate Glycine-15N Hexamethylbenzene Potassium bromide	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
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Industrial sector specific solutions : Not applicable.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

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.

Derived effect levels

No DNELs available.

Predicted effect concentrations

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

SECTION 8: Exposure controls/personal protection

- 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: chemical splash goggles.
- 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	: Adamantane	Solid. [Crystalline solid.]
	Ammonium dihydrogenphosphate	Solid. [Crystalline solid.]
	Glycine-15N	Solid. [Powder.]
	Hexamethylbenzene	Solid. [Crystalline solid.]
	Potassium bromide	Solid.
Colour	: Adamantane	Beige.
	Ammonium dihydrogenphosphate	Colourless.
	Glycine-15N	White.
	Hexamethylbenzene	Yellow.
	Potassium bromide	Not available.
Odour	: Adamantane	Not available.
	Ammonium dihydrogenphosphate	Not available.
	Glycine-15N	Odourless.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Odour threshold	: Adamantane	Not available.
	Ammonium dihydrogenphosphate	Not available.
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.

SECTION 9: Physical and chemical properties

pH	: Adamantane	Not applicable.
	Ammonium	7.8 to 8.2 [Conc. (% w/w): 5%]
	dihydrogenphosphate	
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
Melting point/freezing point	Potassium bromide	5 to 6 [Conc. (% w/w): 119%]
	: Adamantane	209 to 212°C
	Ammonium	190°C
	dihydrogenphosphate	
	Glycine-15N	290°C
Initial boiling point and boiling range	Hexamethylbenzene	164 to 166°C
	Potassium bromide	734°C
	: Adamantane	Not available.
	Ammonium	Decomposes.
	dihydrogenphosphate	
Flash point	Glycine-15N	Decomposes.
	Hexamethylbenzene	264°C
	Potassium bromide	1453°C
	: Adamantane	Not available.
	Ammonium	Not available.
Evaporation rate	dihydrogenphosphate	
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
	: Adamantane	Not available.
Flammability (solid, gas)	Ammonium	Not available.
	dihydrogenphosphate	
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Upper/lower flammability or explosive limits	: Adamantane	Not available.
	Ammonium	Not available.
	dihydrogenphosphate	
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
Vapour pressure	Potassium bromide	Not available.
	: Adamantane	Not available.
	Ammonium	Not available.
	dihydrogenphosphate	
	Glycine-15N	Not available.
Vapour density	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
	: Adamantane	Not available.
	Ammonium	Not available.
	dihydrogenphosphate	
Relative density	Glycine-15N	Not available.
	Hexamethylbenzene	5.6 [Air = 1]
	Potassium bromide	Not available.
	: Adamantane	1.07
	Ammonium	1.8
	dihydrogenphosphate	
	Glycine-15N	Not available.
	Hexamethylbenzene	1.063
	Potassium bromide	2.75

SECTION 9: Physical and chemical properties

Solubility(ies)	: Adamantane	Insoluble in the following materials: cold water and hot water.
	Ammonium dihydrogenphosphate Glycine-15N	Soluble in the following materials: cold water and hot water. Very slightly soluble in the following materials: acetone.
	Hexamethylbenzene	Insoluble in the following materials: diethyl ether.
	Potassium bromide	Insoluble in the following materials: cold water and hot water.
		Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Adamantane	4.24
	Ammonium dihydrogenphosphate Glycine-15N	Not available. -3.21
	Hexamethylbenzene	5.11
	Potassium bromide	Not available.
Auto-ignition temperature	: Adamantane	Not available.
	Ammonium dihydrogenphosphate Glycine-15N	Not available. Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Decomposition temperature	: Adamantane	Not available.
	Ammonium dihydrogenphosphate Glycine-15N	Not available. Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Viscosity	: Adamantane	Not available.
	Ammonium dihydrogenphosphate Glycine-15N	Not available. Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Explosive properties	: Adamantane	Not available.
	Ammonium dihydrogenphosphate Glycine-15N	Not available. Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Adamantane	No specific test data related to reactivity available for this product or its ingredients.
	Ammonium dihydrogenphosphate Glycine-15N	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
	Hexamethylbenzene	No specific test data related to reactivity available for this product or its ingredients.
	Potassium bromide	No specific test data related to reactivity available for this product or its ingredients.
		No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Adamantane	The product is stable.
	Ammonium dihydrogenphosphate Glycine-15N	The product is stable. The product is stable.
	Hexamethylbenzene	The product is stable.
	Potassium bromide	The product is stable.
		The product is stable.

SECTION 10: Stability and reactivity

10.3 Possibility of hazardous reactions	: Adamantane	Under normal conditions of storage and use, hazardous reactions will not occur.
	Ammonium dihydrogenphosphate	Under normal conditions of storage and use, hazardous reactions will not occur.
	Glycine-15N	Under normal conditions of storage and use, hazardous reactions will not occur.
	Hexamethylbenzene	Under normal conditions of storage and use, hazardous reactions will not occur.
	Potassium bromide	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Adamantane	No specific data.
	Ammonium dihydrogenphosphate	No specific data.
	Glycine-15N	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.
	Hexamethylbenzene	No specific data.
	Potassium bromide	No specific data.
10.5 Incompatible materials	: Adamantane	No specific data.
	Ammonium dihydrogenphosphate	No specific data.
	Glycine-15N	Reactive or incompatible with the following materials: oxidizing materials
	Hexamethylbenzene	No specific data.
	Potassium bromide	No specific data.
10.6 Hazardous decomposition products	: Adamantane	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Ammonium dihydrogenphosphate	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Glycine-15N	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Hexamethylbenzene	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Potassium bromide	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
Adamantane Tricyclo[3.3.1.1.3,7]decane	LD50 Oral	Rat	>10 g/kg	-
Glycine-15N Glycine-15n	LD50 Oral	Rat	7930 mg/kg	-
Potassium bromide Potassium bromide	LD50 Oral	Rat	3070 mg/kg	-

Acute toxicity estimates

Not available.

Irritation/Corrosion

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Adamantane Tricyclo[3.3.1.1.3,7]decane	Eyes - Mild irritant	Rabbit	-	50 milligrams	-

Sensitiser

Conclusion/Summary : Not available.

Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Potassium bromide Potassium bromide	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Potassium bromide Potassium bromide	Category 2	Not determined	central nervous system (CNS)

Aspiration hazard

Not available.

Information on the likely routes of exposure : skin Eyes Ingestion Inhalation

Potential acute health effects

Inhalation	: Adamantane Ammonium dihydrogenphosphate Glycine-15N	No known significant effects or critical hazards. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	Hexamethylbenzene Potassium bromide	No known significant effects or critical hazards. May cause respiratory irritation.
Ingestion	: Adamantane Ammonium dihydrogenphosphate Glycine-15N Hexamethylbenzene Potassium bromide	May be irritating to mouth, throat and stomach. No known significant effects or critical hazards. No known significant effects or critical hazards. Irritating to mouth, throat and stomach.
Skin contact	: Adamantane Ammonium dihydrogenphosphate Glycine-15N Hexamethylbenzene Potassium bromide	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes skin irritation.
Eye contact	: Adamantane Ammonium dihydrogenphosphate Glycine-15N	Causes eye irritation. No known significant effects or critical hazards.
	Hexamethylbenzene Potassium bromide	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. No known significant effects or critical hazards. Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

SECTION 11: Toxicological information

Inhalation	:	Adamantane	No specific data.
		Ammonium dihydrogenphosphate	No specific data.
		Glycine-15N	Adverse symptoms may include the following: respiratory tract irritation coughing
		Hexamethylbenzene	No specific data.
		Potassium bromide	Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	:	Adamantane	No specific data.
		Ammonium dihydrogenphosphate	No specific data.
		Glycine-15N	No specific data.
		Hexamethylbenzene	No specific data.
		Potassium bromide	No specific data.
Skin contact	:	Adamantane	No specific data.
		Ammonium dihydrogenphosphate	No specific data.
		Glycine-15N	No specific data.
		Hexamethylbenzene	No specific data.
		Potassium bromide	Adverse symptoms may include the following: irritation redness
Eye contact	:	Adamantane	Adverse symptoms may include the following: irritation watering redness
		Ammonium dihydrogenphosphate	No specific data.
		Glycine-15N	Adverse symptoms may include the following: irritation redness
		Hexamethylbenzene	No specific data.
		Potassium bromide	Adverse symptoms may include the following: pain or irritation watering redness

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

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	:	Adamantane	No known significant effects or critical hazards.
		Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
		Glycine-15N	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
		Hexamethylbenzene	No known significant effects or critical hazards.
		Potassium bromide	May cause damage to organs through prolonged or repeated exposure.

SECTION 11: Toxicological information

Carcinogenicity	: Adamantane	No known significant effects or critical hazards.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.
	Potassium bromide	No known significant effects or critical hazards.
Mutagenicity	: Adamantane	No known significant effects or critical hazards.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.
	Potassium bromide	No known significant effects or critical hazards.
Teratogenicity	: Adamantane	No known significant effects or critical hazards.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.
	Potassium bromide	No known significant effects or critical hazards.
Developmental effects	: Adamantane	No known significant effects or critical hazards.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.
	Potassium bromide	No known significant effects or critical hazards.
Fertility effects	: Adamantane	No known significant effects or critical hazards.
	Ammonium dihydrogenphosphate	No known significant effects or critical hazards.
	Glycine-15N	No known significant effects or critical hazards.
	Hexamethylbenzene	No known significant effects or critical hazards.
	Potassium bromide	No known significant effects or critical hazards.
<u>Toxicokinetics</u>		
Absorption	: Adamantane	Not available.
	Ammonium dihydrogenphosphate	Not available.
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Distribution	: Adamantane	Not available.
	Ammonium dihydrogenphosphate	Not available.
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Metabolism	: Adamantane	Not available.
	Ammonium dihydrogenphosphate	Not available.
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Elimination	: Adamantane	Not available.
	Ammonium dihydrogenphosphate	Not available.
	Glycine-15N	Not available.
	Hexamethylbenzene	Not available.
	Potassium bromide	Not available.
Other information	: Not available.	

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
Adamantane Tricyclo[3.3.1.1.3,7]decane	Acute LC50 285 to 312 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Potassium bromide Potassium bromide	Acute LC50 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Adamantane Adamantane	4.24	-	high
Tricyclo[3.3.1.1.3,7]decane	4.24	-	high
Glycine-15N Glycine-15n	-3.21	-	low
Hexamethylbenzene Hexamethylbenzene	5.11	-	high
Hexamethylbenzene	5.11	-	high
Potassium bromide Potassium bromide	-	1.41	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 : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations**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 : The classification of the product may meet the criteria for a hazardous waste.

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.

SECTION 13: Disposal considerations

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 spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Additional information : **Special provisions**
251, 340

	ADR/RID	IMDG	IATA
14.1 UN number	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT. Marine pollutant (Tricyclo[3.3.1.13,7]decane)	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Yes.	Yes.	No.
14.6 Special precautions for user	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.	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.	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.
Additional information	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Hazard identification number 90 Limited quantity 0 Special provisions 251, 340 Tunnel code (E)	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-A, _S-P_ Special provisions 251, 340	The environmentally hazardous substance mark may appear if required by other transportation regulations. Passenger and Cargo Aircraft Quantity limitation: 10 kg Packaging instructions: 960 Cargo Aircraft Only Quantity limitation: 10 kg Packaging instructions: 960 Limited Quantities - Passenger Aircraft Quantity limitation: 1 kg Packaging instructions: Y960 Special provisions A44, A163

SECTION 14: Transport information

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

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 : Not applicable.

Other EU regulations

Other EU regulations

Europe inventory : All components are listed or exempted.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments might still be 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]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Adamantane Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Calculation method Calculation method Calculation method
Hexamethylbenzene Aquatic Chronic 4, H413	Calculation method
Potassium bromide Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation) STOT RE 2, H373 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method Calculation method

Date of issue/Date of revision : 12/06/2014

SECTION 16: Other information

Full text of abbreviated H statements	Adamantane	H319 H400 H410	Causes serious eye irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
	Hexamethylbenzene	H413	May cause long lasting harmful effects to aquatic life.
	Potassium bromide	H315 H319 H335 (Respiratory tract irritation) H373 H373 (central nervous system (CNS)) H412	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. (Respiratory tract irritation) May cause damage to organs through prolonged or repeated exposure. May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS)) Harmful to aquatic life with long lasting effects.
	Adamantane	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Eye Irrit. 2, H319	ACUTE AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
	Hexamethylbenzene	Aquatic Chronic 4, H413	LONG-TERM AQUATIC HAZARD - Category 4
	Potassium bromide	Aquatic Chronic 3, H412 Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT RE 2, H373 STOT RE 2, H373 (central nervous system (CNS)) STOT SE 3, H335 (Respiratory tract irritation)	LONG-TERM AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
	Adamantane		R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	Ammonium dihydrogenphosphate		Not applicable.
	Glycine-15N		Not applicable.
	Hexamethylbenzene		Not applicable.
Potassium bromide		R48/23- Toxic: danger of serious damage to health by prolonged exposure through inhalation. R36/37/38- Irritating to eyes, respiratory system and skin.	
Adamantane		N - Dangerous for the environment	
Ammonium dihydrogenphosphate		Not applicable.	
Glycine-15N		Not applicable.	
Hexamethylbenzene		Not applicable.	
Potassium bromide		T - Toxic Xi - Irritant	
Date of issue/ Date of revision	:	12/06/2014	
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Version	:	2	

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SECTION 16: Other information

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