

SAFETY DATA SHEET



Polaris Si and NH2 LC Columns with less than 10 ml solvent

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

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

1.1 Product identifier

- Product name** : Polaris Si and NH2 LC Columns with less than 10 ml solvent
- Part no.** : A2003020X020, A2003030X020, A2003050G100, A2003050X030, A2003050X046, A2003100X020, A2003100X030, A2003100X046, A2003125X040, A2003125X046, A2003150X020, A2003150X021, A2003150X030, A2003150X040, A2003150X046, A2003150X100, A2003250X020, A2003250X021, A2003250X030, A2003250X040, A2003250X046, A2003MG, A2003MG2, A2004150X039, A2004250X046, A2004MG, A2004MG2, A2005020X020, A2005030X020, A2005030X021, A2005050X020, A2005050X021, A2005050X030, A2005050X046, A2005100X020, A2005100X030, A2005100X046, A2005150X020, A2005150X030, A2005150X046, A2005250X020, A2005250X030, A2005250X046, A2005MG, A2005MG2, A2013020X020, A2013030X020, A2013050G100, A2013050X020, A2013050X046, A2013100X020, A2013100X030, A2013100X046, A2013125X040, A2013150X020, A2013150X030, A2013150X039, A2013150X040, A2013150X046, A2013250X020, A2013250X021, A2013250X030, A2013250X046, A2013MG, A2013MG2, A2014020X020, A2014030X020, A2014030X021, A2014050X020, A2014050X021, A2014050X030, A2014050X046, A2014100X020, A2014100X021, A2014100X030, A2014100X046, A2014150X020, A2014150X030, A2014150X046, A2014250X020, A2014250X030, A2014250X046, A2014MG, A2014MG2

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

- Material uses** : Reagents and Standards for Analytical Chemistry Laboratory Use
HPLC Column
- | | |
|---------------|-----------------------------------------------------------------|
| A2003020X020, | Polaris 5 Si 20 x 2.0mm, 0.1 ml tube, 0.04 ml solvent |
| A2003030X020, | Polaris 5 Si 30 x 2.0mm, 0.1 ml tube, 0.06 ml solvent |
| A2003050G100, | Polaris 5 Si-A 50 X 10.0mm Guard, 3.9 ml tube, 2.36 ml solvent |
| A2003050X030, | Polaris 5 Si 50 x 3.0mm, 0.4 ml tube, 0.21 ml solvent |
| A2003050X046, | Polaris 5 Si 50 x 4.6mm, 0.8 ml tube, 0.05 ml solvent |
| A2003100X020, | Polaris 5 Si 100 x 2.0mm, 0.3 ml tube, 0.19 ml solvent |
| A2003100X030, | Polaris 5 Si 100 x 3.0mm, 0.7 ml tube, 0.42 ml solvent |
| A2003100X046, | Polaris 5 Si 100 x 4.6mm, 1.7 ml tube, 1.00 ml solvent |
| A2003125X040, | Polaris 5 Si 125 x 4.0mm, 1.6 ml tube, 0.94 ml solvent |
| A2003125X046, | Polaris 5 Si 125 x 4.6mm, 2.1 ml tube, 1.25 ml solvent |
| A2003150X020, | Polaris 5 Si 150 x 2.0mm, 0.5 ml tube, 0.28 ml solvent |
| A2003150X021, | Polaris 5 Si 150 x 2.1mm, 0.5 ml tube, 0.31 ml solvent |
| A2003150X030, | Polaris 5 Si 150 x 3.0mm, 1.1 ml tube, 0.64 ml solvent |
| A2003150X040, | Polaris 5 Si 150 x 4.0mm, 1.9 ml tube, 1.13 ml solvent |
| A2003150X046, | Polaris 5 Si 150 x 4.6mm, 2.5 ml tube, 1.50 ml solvent |
| A2003150X100, | Polaris 5 Si 150 x 10.0mm, 12 ml tube, 7.07 ml solvent |
| A2003250X020, | Polaris 5 Si 250 x 2.0mm, 0.8 ml tube, 0.047 ml solvent |
| A2003250X021, | Polaris 5 Si 250 x 2.1mm, 0.9 ml tube, 0.52 ml solvent |
| A2003250X030, | Polaris 5 Si 250 x 3.0mm, 1.8 ml tube, 1.06 ml solvent |
| A2003250X040, | Polaris 5 Si 250 x 4.0mm, 3.1 ml tube, 1.88 ml solvent |
| A2003250X046, | Polaris 5 Si 250 x 4.6mm, 4.2 ml tube, 2.49 ml solvent |
| A2003MG, | MetaGuard 4.6mm Polaris Si-A 5u, 0.2 ml tube, 0.10 ml solvent |
| A2003MG2, | MetaGuard 2.0mm Polaris Si-A 5u, 0.03 ml tube, 0.02 ml solvent |
| A2004150X039, | Polaris 10 Si 150 x 3.9mm, 1.8 ml tube, 1.08 ml solvent |
| A2004250X046, | Polaris 10 Si 250 x 4.6mm, 4.2 ml tube, 2.49 ml solvent |
| A2004MG, | MetaGuard 4.6mm Polaris Si-A 10u, 0.2 ml tube, 0.10 ml solvent |
| A2004MG2, | MetaGuard 2.0mm Polaris Si-A 10u, 0.03 ml tube, 0.02 ml solvent |
| A2005020X020, | Polaris 3 Si 20 x 2.0mm, 0.1 ml tube, 0.04 ml solvent |
| A2005030X020, | Polaris 3 Si 30 x 2.0mm, 0.1 ml tube, 0.06 ml solvent |
| A2005030X021, | Polaris 3 Si 30 x 2.1mm, 0.1 ml tube, 0.06 ml solvent |

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A2005050X020,	Polaris 3 Si 50 x 2.0mm, 0.2 ml tube, 0.09 ml solvent
A2005050X021,	Polaris 3 Si 50 x 2.1mm, 0.2 ml tube, 0.10 ml solvent
A2005050X030,	Polaris 3 Si 50 x 3.0mm, 0.4 ml tube, 0.21 ml solvent
A2005050X046,	Polaris 3 Si 50 x 4.6mm, 0.8 ml tube, 0.50 ml solvent
A2005100X020,	Polaris 3 Si 100 x 2.0mm, 0.3 ml tube, 0.19 ml solvent
A2005100X030,	Polaris 3 Si 100 x 3.0mm, 0.7 ml tube, 0.42 ml solvent
A2005100X046,	Polaris 3 Si 100 x 4.6mm, 1.7 ml tube, 1.00 ml solvent
A2005150X020,	Polaris 3 Si 150 x 2.0mm, 0.5 ml tube, 0.28 ml solvent
A2005150X030,	Polaris 3 Si 150 x 3.0mm, 1.1 ml tube, 0.64 ml solvent
A2005150X046,	Polaris 3 Si 150 x 4.6mm, 2.5 ml tube, 1.50 ml solvent
A2005250X020,	Polaris 3 Si 250 x 2.0mm, 0.8 ml tube, 0.47 ml solvent
A2005250X030,	Polaris 3 Si 250 x 3.0mm, 1.8 ml tube, 1.06 ml solvent
A2005250X046,	Polaris 3 Si 250 x 4.6mm, 4.2 ml tube, 2.49 ml solvent
A2005MG,	MetaGuard 4.6mm Polaris Si-A 3u, 0.2 ml tube, 0.10 ml solvent
A2005MG2,	MetaGuard 2.0mm Polaris Si-A 3u, 0.03 ml tube, 0.02 ml solvent
A2013020X020,	Polaris 5 NH2 20 x 2.0mm, 0.1 ml tube, 0.04 ml solvent
A2013030X020,	Polaris 5 NH2 30 x 2.0mm, 0.1 ml tube, 0.06 ml solvent
A2013050G100,	Polaris NH2 5u 50 x 10.0mm Guard, 3.9 ml tube, 2.36 ml solvent
A2013050X020,	Polaris 5 NH2 50 x 2.0mm, 0.2 ml tube, 0.09 ml solvent
A2013050X046,	Polaris 5 NH2 50 x 4.6mm, 0.8 ml tube, 0.50 ml solvent
A2013100X020,	Polaris 5 NH2 100 x 2.0mm, 0.3 ml tube, 0.19 ml solvent
A2013100X030,	Polaris 5 NH2 100 x 3.0mm, 0.7 ml tube, 0.42 ml solvent
A2013100X046,	Polaris 5 NH2 100 x 4.6mm, 1.7 ml tube, 1.00 ml solvent
A2013125X040,	Polaris 5 NH2 125 x 4.0mm, 1.6 ml tube, 0.94 ml solvent
A2013150X020,	Polaris 5 NH2 150 x 2.0mm, 0.5 ml tube, 0.28 ml solvent
A2013150X030,	Polaris 5 NH2 150 x 3.0mm, 1.1 ml tube, 0.64 ml solvent
A2013150X039,	Polaris 5 NH2 150 x 3.9mm, 1.8 ml tube, 1.06 ml solvent
A2013150X040,	Polaris 5 NH2 150 x 4.0mm, 1.9 ml tube, 1.13 ml solvent
A2013150X046,	Polaris 5 NH2 150 x 4.6mm, 2.5 ml tube, 1.50 ml solvent
A2013250X020,	Polaris 5 NH2 250 x 2.0mm, 0.8 ml tube, 0.47 ml solvent
A2013250X021,	Polaris 5 NH2 250 x 2.1mm, 0.9 ml tube, 0.52 ml solvent
A2013250X030,	Polaris 5 NH2 250 x 3.0mm, 1.8 ml tube, 1.08 ml solvent
A2013250X046,	Polaris 5 NH2 250 x 4.6mm, 4.2 ml tube, 2.49 ml solvent
A2013MG,	MetaGuard 4.6mm Polaris NH2 5u, 0.2 ml tube, 0.10 ml solvent
A2013MG2,	MetaGuard 2.0mm Polaris NH2 5u, 0.03 ml tube, 0.02 ml solvent
A2014020X020,	Polaris 3 NH2 20 x 2.0mm, 0.1 ml tube, 0.04 ml solvent
A2014030X020,	Polaris 3 NH2 30 x 2.0mm, 0.1 ml tube, 0.06 ml solvent
A2014030X021,	Polaris 3 NH2 30 x 2.1mm, 0.1 ml tube, 0.06 ml solvent
A2014050X020,	Polaris 3 NH2 50 x 2.0mm, 0.2 ml tube, 0.09 ml solvent
A2014050X021,	Polaris 3 NH2 50 x 2.1mm, 0.2 ml tube, 0.10 ml solvent
A2014050X030,	Polaris 3 NH2 50 x 3.0mm, 0.4 ml tube, 0.21 ml solvent
A2014050X046,	Polaris 3 NH2 50 x 4.6mm, 0.8 ml tube, 0.50 ml solvent
A2014100X020,	Polaris 3 NH2 100 x 2.0mm, 0.3 ml tube, 0.19 ml solvent
A2014100X021,	Polaris 3 NH2 100 x 2.1mm, 0.3 ml tube, 0.21 ml solvent
A2014100X030,	Polaris 3 NH2 100 x 3.0mm, 0.7 ml tube, 0.42 ml solvent
A2014100X046,	Polaris 3 NH2 100 x 4.6mm, 1.7 ml tube, 1.00 ml solvent
A2014150X020,	Polaris 3 NH2 150 x 2.0mm, 0.5 ml tube, 0.28 ml solvent
A2014150X030,	Polaris 3 NH2 150 x 3.0mm, 1.1 ml tube, 0.64 ml solvent
A2014150X046,	Polaris 3 NH2 150 x 4.6mm, 2.5 ml tube, 1.50 ml solvent
A2014250X020,	Polaris 3 NH2 250 x 2.0mm, 0.8 ml tube, 0.47 ml solvent
A2014250X030,	Polaris 3 NH2 250 x 3.0mm, 1.8 ml tube, 1.06 ml solvent
A2014250X046,	Polaris 3 NH2 250 x 4.6mm, 4.2 ml tube, 2.49 ml solvent
A2014MG,	MetaGuard 4.6mm Polaris NH2 3u, 0.2 ml tube, 0.10 ml solvent
A2014MG2,	MetaGuard 2.0mm Polaris NH2 3u, 0.03 ml tube, 0.02 ml solvent

1.3 Details of the supplier of the safety data sheet

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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

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

2.1 Classification of the substance or mixture

Product definition : Mixture (encapsulated in article)

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

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN CORROSION/IRRITATION - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
H410	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

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

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

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.
H315 - Causes skin irritation.
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness or dizziness.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.

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SECTION 2: Hazards identification

- Response** : P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- Storage** : P405 - Store locked up.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazardous ingredients** : Heptane
- Supplemental label elements** : Not applicable.
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.
- Special packaging requirements**
- Tactile warning of danger** : Not applicable.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

3.1 Substances : Mixture (encapsulated in article)

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Heptane	EC: 205-563-8 CAS: 142-82-5 Index: 601-008-00-2	≥25 - ≤50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
Propan-2-ol	EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≤3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 See Section 16 for the full text of the H statements declared above.	[1] [2]

Contains: Organosilane bonded silica gel.

Note: To the best of our knowledge, the acute and chronic toxicological properties of bonded silica gels have not been investigated. This product contains synthetic amorphous silica, and should not be confused with crystalline silica such as quartz, cristobalite, or tridymite, or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms of silica.

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.

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SECTION 3: Composition/information on ingredients

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
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : 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** : 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** : 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** : Get medical attention immediately. Call a poison center or physician. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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. 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** : No known significant effects or critical hazards.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

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SECTION 4: First aid measures

- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. 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.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

- Special precautions 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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SECTION 6: Accidental release measures

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. Collect spillage.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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.

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 : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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

Storage : 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. Store locked up. 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 environmental contamination. See Section 10 for incompatible materials before handling or use.

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c E1	5000 100	50000 200

7.3 Specific end use(s)

Recommendations : Industrial applications, Professional applications.

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SECTION 7: Handling and storage

Industrial sector specific solutions : Not applicable.

SECTION 8: Exposure controls/personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
n-Heptane	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 500 ppm 8 hours.
Propan-2-ol	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 1250 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m ³ 8 hours. TWA: 400 ppm 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 : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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: chemical splash goggles.

Skin protection

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SECTION 8: Exposure controls/personal 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- 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** : Solid. (containing flammable liquid)
- Colour** : Not available.
- Odour** : Not available.
- Odour threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: -18 to 23°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Contains: Flammable liquid.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : Not available.
- Solubility(ies)** : Mobile phase / Stationary phase: Insoluble
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

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SECTION 9: Physical and chemical properties

9.2 Other information

No additional information.

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** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials
Incompatible with hydrogen fluoride.
- 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
n-Heptane	LC50 Inhalation Vapour	Rat	103 g/m ³	4 hours
	LC50 Inhalation Vapour	Rat	48000 ppm	4 hours
Propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Propan-2-ol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Skin : Repeated exposure may cause skin dryness or cracking.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

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Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
n-Heptane	Category 3	Not applicable.	Narcotic effects
Propan-2-ol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Polaris Si and NH2 LC Columns with less than 10 ml solvent n-Heptane	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
- Skin contact** : Causes skin irritation.
- Eye contact** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

Delayed and immediate effects as well as 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** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.

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SECTION 11: Toxicological information

- Mutagenicity** : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
n-Heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
Propan-2-ol	Acute EC50 10100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours

12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Propan-2-ol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
n-Heptane	4.66	552	high
Propan-2-ol	0.05	-	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.

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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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

ADR/RID / IMDG / IATA : Not regulated.

Additional information

Remarks: Special provisions

ADR: 216

IATA: A46

IMDG: 216

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.

14.7 Transport in bulk according to Annex II of Marpol 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 : Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

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SECTION 15: Regulatory information

Category

5c
E1

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
Canada	: Not determined.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
Malaysia	: All components are listed or exempted.
New Zealand	: <input checked="" type="checkbox"/> All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: <input checked="" type="checkbox"/> All components are listed or exempted.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

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 \[CLP/GHS\]](#)

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SECTION 16: Other information

Classification	Justification
Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Expert judgment Calculation method Calculation method

Full text of abbreviated H statements

H225 H304 H315 H319 H336 H400 H410	Highly flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]

Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Asp. Tox. 1, H304 Eye Irrit. 2, H319 Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
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