

## Symphony N2+

Version 1.2

Revision Date 11-18-2013

Print Date 03-18-2014

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Symphony N2+

Mat.-No./ Genisys-No. : 05279542001

**Manufacturer or supplier's details**

Company : Roche Diagnostics Limited  
Charles Avenue

Address : Burgess Hill  
RH15 9RY West Sussex

Telephone : +44 1444 256000  
Telefax : +44 1444 256239

Emergency telephone number : +49(0)621-759-2012 oder +49(0)621-759-4848 oder +49(0)8856-60-2629

Emergency telephone number:

Emergency telephone number:  
In case of emergencies: : Health, Safety & +44 1444 256500 or +44 7802  
(Roche Diagnostics Ltd.) Environment 260498  
- +44 1444 256561 or +44 7710

To index: 244 publications      NDIC      +44 244 200 2111

#### Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

## SECTION 2. HAZARDS IDENTIFICATION

## Emergency Overview

Physical state	liquid
Colour	reddish-violet
Odour	none

## GHS Classification

Serious eye damage : Category 1  
 Skin sensitisation : Category 1  
 Carcinogenicity : Category 2

## GHS Label element

## Hazard pictograms

Signal word : Danger

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Hazard statements	: H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H351 Suspected of causing cancer.
Precautionary statements	: <p><b>Prevention:</b></p> <p>P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear eye protection/ face protection. P280 Wear protective gloves. P281 Use personal protective equipment as required.</p> <p><b>Response:</b></p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P310 Immediately call a POISON CENTER or doctor/ physician. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse.</p> <p><b>Storage:</b></p> <p>P405 Store locked up.</p> <p><b>Disposal:</b></p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>

### Potential Health Effects

#### Carcinogenicity:

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	Confirmed animal carcinogen with unknown relevance to humans Hydroquinone
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Preparation

#### Hazardous components

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Chemical Name	CAS-No.	Concentration [%]
ethane-1,2-diol	107-21-1	>= 20 - < 30
Aluminum sulfate octadecahydrate	7784-31-8	>= 1 - < 5
hydroquinone	123-31-9	>= 0.1 - < 1

### SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Move to fresh air.  
  
Move to fresh air.  
If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Keep respiratory tract clear.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.
- Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Further information : Collect contaminated fire extinguishing water separately. This

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must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : Wear self contained breathing apparatus for fire fighting if necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures  
Environmental precautions

: Use personal protective equipment.  
Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up

: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling

: Do not breathe vapours/dust.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.  
To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

Conditions for safe storage

: Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid

:

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethane-1,2-diol	107-21-1	C	50 ppm 125 mg/m <sup>3</sup>	OSHA P0
Aluminum sulfate	7784-31-8	TWA	2 mg/m <sup>3</sup>	OSHA P0

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octadecahydrate		TWA	2 mg/m3	NIOSH REL
hydroquinone	123-31-9	TWA	1 mg/m3	ACGIH
		C	2 mg/m3	NIOSH REL
		TWA	2 mg/m3	OSHA Z-1
		TWA	2 mg/m3	OSHA P0

### Personal protective equipment

#### Hand protection

Material : Protective gloves

#### Remarks

: The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. This recommendation is only valid for the product mentioned in the safety data sheet and provided by us and for the application specified by us. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

#### Eye protection

: Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

#### Skin and body protection

: impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

: When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

: liquid

#### Colour

: reddish-violet

#### Odour

: none

#### pH

: acidic

#### Melting point/range

: no data available

#### Boiling point/boiling range

: no data available

#### Flash point

:  
does not flash

#### Flammability (solid, gas)

: The product is not flammable.

#### Upper explosion limit

: no data available

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Lower explosion limit	: no data available
Solubility(ies)	
Water solubility	: completely miscible
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: no data available
Incompatible materials	: Acids Bases Oxidizing agents  no data available
Hazardous decomposition products	: Carbon oxides

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## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Product:**

Acute inhalation toxicity	: Acute toxicity estimate : > 40 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
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**Components:**

**Aluminum sulfate octadecahydrate:**

Acute oral toxicity	: LD50 rat: > 9,000 mg/kg
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LD50 mouse: > 9,000 mg/kg

**hydroquinone:**

Acute oral toxicity	: LD50 Oral rat: 302 mg/kg
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Acute dermal toxicity	: LD50 Dermal rabbit: > 2,001 mg/kg
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### Skin corrosion/irritation

#### Components:

##### **hydroquinone:**

Remarks: May cause skin irritation and/or dermatitis.

### Serious eye damage/eye irritation

#### Product:

Remarks: May cause irreversible eye damage.

#### Components:

##### **Aluminum sulfate octadecahydrate:**

Result: Risk of serious damage to eyes.

##### **hydroquinone:**

Result: Risk of serious damage to eyes.

Remarks: May cause irreversible eye damage.

### Respiratory or skin sensitisation

#### Components:

##### **hydroquinone:**

Species: rabbit

Result: May cause sensitisation by skin contact.

### Germ cell mutagenicity

#### Components:

##### **hydroquinone:**

Germ cell mutagenicity-

: In vitro tests showed mutagenic effects

Assessment

### Carcinogenicity

#### Components:

##### **hydroquinone:**

Carcinogenicity -

: Limited evidence of a carcinogenic effect.

Assessment

### Reproductive toxicity

no data available

### STOT - single exposure

#### Components:

##### **Aluminum sulfate octadecahydrate:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

##### **hydroquinone:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single

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exposure.

### STOT - repeated exposure

#### Components:

##### **Aluminum sulfate octadecahydrate:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Aspiration toxicity

#### Components:

##### **Aluminum sulfate octadecahydrate:**

no data available

##### **hydroquinone:**

no data available

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

Ecotoxicology Assessment

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : no data available

#### Components:

##### **ethane-1,2-diol :**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l  
Exposure time: 96 h

LC50 (Carassius auratus (goldfish)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC0 (Scenedesmus quadricauda (Green algae)): > 10,000 mg/l  
Exposure time: 7 d

Toxicity to bacteria : EC0 (Pseudomonas putida): > 10,000 mg/l  
Exposure time: 16 h

Ecotoxicology Assessment

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Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : no data available

### Aluminum sulfate octadecahydrate :

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 235 mg/l  
Exposure time: 96 h

### Ecotoxicology Assessment

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : no data available

### hydroquinone :

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 0.15 mg/l  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 0.15 mg/l

Toxicity to algae : EC0 (Scenedesmus quadricauda (Green algae)): 0.93 mg/l  
Exposure time: 168 h

Toxicity to bacteria : EC0 (Pseudomonas putida): 58 mg/l  
Exposure time: 16 h

### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : no data available

### Persistence and degradability

#### Components:

#### ethane-1,2-diol :

Biodegradability : Biodegradation: 100 %  
Exposure time: 28 d  
Method: OECD Test Guideline 302

#### hydroquinone :

Biodegradability : Biodegradation: 92 %  
Exposure time: 28 d

Biodegradation: 65 %  
Exposure time: 14 d

Biodegradation: 48 %  
Exposure time: 7 d

Biodegradation: 35 %

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Exposure time: 5 d

Method: OECD Test Guideline 302

Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

### Bioaccumulative potential

**Components:**

**ethane-1,2-diol :**

Partition coefficient: n-octanol/water : log Pow: -1.36

### Mobility in soil

no data available

### Other adverse effects

no data available

**Product:**

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

### International regulation

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

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

Not applicable for product as supplied.

### National Regulations

#### 49 CFR

Not regulated as a dangerous good

### Special precautions for user

Remarks : Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, ICAO/IATA-DGR

## SECTION 15. REGULATORY INFORMATION

**OSHA Hazards** : Severe eye irritant, Carcinogen

**WHMIS Classification** : D2A: Very Toxic Material Causing Other Toxic Effects  
Toxic Material Causing Other Toxic Effects

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydroquinone	123-31-9	100	
hydroquinone	123-31-9	100	

**SARA 302** : The following components are subject to reporting levels established by SARA Title III, Section 302:  
hydroquinone 123-31-9 0.9999 %

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
ethane-1,2-diol 107-21-1 25 %

### Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

ethane-1,2-diol	107-21-1	25 %
hydroquinone	123-31-9	0.9999 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMi Intermediate or Final VOC's (40 CFR 60.489):

ethane-1,2-diol	107-21-1	25 %
hydroquinone	123-31-9	0.9999 %

### Clean Water Act

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The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Aluminum sulfate octadecahydrate	7784-31-8	3.52 %
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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Aluminum sulfate octadecahydrate	7784-31-8	3.52 %
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This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

### US State Regulations

#### Massachusetts Right To Know

ethane-1,2-diol	107-21-1	20 - 30 %
Aluminum sulfate octadecahydrate	7784-31-8	1 - 5 %
hydroquinone	123-31-9	0.1 - 1 %

#### Pennsylvania Right To Know

water	7732-18-5	50 - 70 %
ethane-1,2-diol	107-21-1	20 - 30 %
Aluminum sulfate octadecahydrate	7784-31-8	1 - 5 %
hydroquinone	123-31-9	0.1 - 1 %

#### New Jersey Right To Know

water	7732-18-5	50 - 70 %
ethane-1,2-diol	107-21-1	20 - 30 %
Aluminum sulfate octadecahydrate	7784-31-8	1 - 5 %
cycloheptapentylose	7585-39-9	1 - 5 %

**California Prop 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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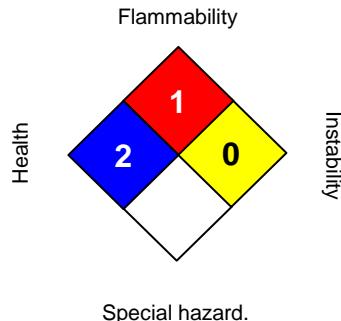
## SECTION 16. OTHER INFORMATION

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**Further information****NFPA:****HMIS III:**

<b>HEALTH</b>	<b>2*</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 =Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

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