

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Commercial Product Name : Battery Pack cpl. NGBG

Mat.-No./ Genisys-No. : 04882326001

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

Recommended restrictions : For professional users only.  
on use

#### 1.3 Details of the supplier of the safety data sheet

Company : Roche Diagnostics Deutschland GmbH  
-  
Sandhoferstrasse 116  
68305 Mannheim  
E-mail address : mannheim.umweltschutz@roche.com  
Telephone : +496217590  
Telefax : +496217592890  
Responsible Department : +49(0)621-759-2012 +49(0)621-759-4848+49(0)8856-60-2629  
In case of emergencies: : Central Works Security +49(0)621-759-2203  
Roche Diagnostics GmbH  
Centre for detoxification: : Mainz +49(0)6131-19240  
Munich +49(0)89-19240

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Oxidizing solids, Category 3

H272: May intensify fire; oxidiser.

Skin sensitization, Category 1

H317: May cause an allergic skin reaction.

Carcinogenicity, Category 2

H351: Suspected of causing cancer.

##### Classification (67/548/EEC, 1999/45/EC)

Oxidising

R 8: Contact with combustible material may cause fire.

Harmful

R42, R22, R48/20: May cause sensitization by inhalation., Harmful if swallowed., Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Carcinogenic Category 3

R40: Limited evidence of a carcinogenic effect.

Harmful, Sensitising

R43: May cause sensitization by skin contact.

## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :  
Hazard pictograms



Signal word :  
Warning

Hazard statements : H272 May intensify fire; oxidiser.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P210 Keep away from heat.  
P221 Take any precaution to avoid mixing with combustibles.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Hazardous components which must be listed on the label:  
12190-79-3 cobalt lithium dioxide

7440-02-0 nickel

#### Additional Labelling:

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 10 %

### 2.3 Other hazards

No information available.

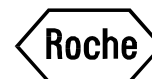
## 3. Composition/information on ingredients

### 3.2 Mixtures

Hazardous components

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
cobalt lithium dioxide	12190-79-3 235-362-0	Xn; R42/43	Skin Sens. 1; H317	>= 25 - < 50
diphenyl carbonate	102-09-0 203-005-8	Xn; R22	Acute Tox. 4; H302	>= 25 - < 50
lithium nitrate	7790-69-4 232-218-9	O; R 8	Ox. Sol. 3; H272	< 10
nickel	7440-02-0 231-111-4	Carc.Cat.3; R40 T; R48/23 R43 R52-R53	Carc. 2; H351 STOT RE 1; H372 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 2,5 - < 10

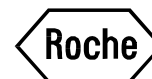
For the full text of the R-phrases mentioned in this Section, see Section 16.

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

### 4. First aid measures

#### 4.1 Description of first aid measures

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : 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.  
If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
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.



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

## 5. Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : High volume water jet

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : No information available.

### 5.3 Advice for firefighters

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

Further information : For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.

## 6. Accidental release measures

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

Personal precautions : Use personal protective equipment.  
Avoid dust formation.  
Avoid breathing dust.

### 6.2 Environmental precautions

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.

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

Methods for cleaning up : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

disposal according to local regulations (see section 13).  
Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

Treat recovered material as described in the section "Disposal considerations".

## 7. Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Avoid formation of respirable particles.  
Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
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.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Advice on protection against fire and explosion : Avoid dust formation.  
Provide appropriate exhaust ventilation at places where dust is formed.  
Keep away from combustible material.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : 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.
- Further information on storage conditions : See label or package insert
- German storage class : 5.1B Oxidizing hazardous materials
- Other data : No decomposition if stored and applied as directed.

### 7.3 Specific end uses

- Specific use(s) : Laboratory chemicals

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

### 8. Exposure controls/personal protection

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### Personal protective equipment

- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.  
Dust safety masks are recommended when the dust concentration is more than 10 mg/m<sup>3</sup>.
- Hand protection : 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
- Skin and body protection : 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.

##### Environmental exposure controls

- General advice : 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.

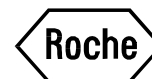
### 9. Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

- Appearance : solid
- Flash point : not applicable
- Lower explosion limit : no data available
- Upper explosion limit : no data available
- Thermal decomposition : no data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

### 9.2 Other information

Conductivity : no data available

Oxidising potential : no data available

Surface tension : no data available

### 10. Stability and reactivity

#### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : Further information: No decomposition if stored and applied as directed.

#### 10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.

#### 10.5 Incompatible materials

Materials to avoid : no data available

#### 10.6 Hazardous decomposition products

Hazardous decomposition products : Hydrogen fluoride  
Decomposes in contact with water.

### 11. Toxicological information

#### 11.1 Information on toxicological effects

##### Product

Acute oral toxicity : Acute toxicity estimate: 6.000 mg/kg, Calculation method

Acute inhalation toxicity : not applicable

Acute dermal toxicity : not applicable

Acute toxicity (other routes of administration) : not applicable

Skin corrosion/irritation : May cause skin irritation and/or dermatitis.

Serious eye damage/eye : Product dust may be irritating to eyes, skin and respiratory

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

irritation	system.
Respiratory or skin sensitization	: Causes sensitization.
STOT - single exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	: no data available
Further information	: no data available

### Components:

#### **cobalt lithium dioxide:**

Acute oral toxicity	: no data available
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: no data available
Acute toxicity (other routes of administration)	: no data available
Skin corrosion/irritation	: May cause eye and skin irritation.
Serious eye damage/eye irritation	: Product dust may be irritating to eyes, skin and respiratory system.
Respiratory or skin sensitization	: Result: The product is a skin sensitizer, sub-category 1A., Causes sensitization. May cause allergic skin reaction.
Acute effects (Assessment)	:

#### **diphenyl carbonate:**

Acute oral toxicity	: LD50: 1.500 mg/kg, rat
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: no data available
Acute toxicity (other routes of administration)	: no data available



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

- Skin corrosion/irritation : This information is not available.
- Serious eye damage/eye irritation : This information is not available.
- Respiratory or skin sensitization : Result: no data available
- STOT - single exposure : Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
- STOT - repeated exposure : Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
- Aspiration toxicity : no data available
- Further information : no data available  
**lithium nitrate:**
- Acute oral toxicity : no data available
- Acute inhalation toxicity : no data available
- Acute dermal toxicity : no data available
- Acute toxicity (other routes of administration) : no data available
- Skin corrosion/irritation : This information is not available.
- Serious eye damage/eye irritation : This information is not available.
- Further information : no data available  
**nickel:**
- Acute oral toxicity : no data available
- Acute inhalation toxicity : no data available
- Acute dermal toxicity : no data available
- Acute toxicity (other routes of administration) : no data available
- Skin corrosion/irritation : May cause skin irritation and/or dermatitis.
- Serious eye damage/eye : Product dust may be irritating to eyes, skin and respiratory

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

irritation	system.
Respiratory or skin sensitization	: Result: no data available
STOT - single exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	: no data available
Further information	: no data available

## 12. Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : no data available  
Toxicity to daphnia and other aquatic invertebrates. : no data available

Toxicity to algae : no data available

Toxicity to bacteria : no data available

#### **Ecotoxicology Assessment**

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

Other organisms relevant to the environment : no data available  
Further information

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 10 %

#### Components:

##### **cobalt lithium dioxide:**

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates. : no data available

Toxicity to algae : no data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

Toxicity to bacteria : no data available

### Ecotoxicology Assessment

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

Other organisms relevant to the environment : no data available

### diphenyl carbonate:

Toxicity to fish : LC50: 200 mg/l, 72 h, Leuciscus idus (Golden orfe)

Toxicity to daphnia and other aquatic invertebrates. : no data available

Toxicity to algae : no data available

Toxicity to bacteria : no data available

### Ecotoxicology Assessment

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

Other organisms relevant to the environment : no data available

### lithium nitrate:

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates. : no data available

Toxicity to algae : no data available

Toxicity to bacteria : no data available

### Ecotoxicology Assessment

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

Other organisms relevant to the environment : no data available

### nickel:

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates. : no data available

Toxicity to algae : no data available

Toxicity to bacteria : no data available

### Ecotoxicology Assessment

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

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

Other organisms relevant to the environment : no data available

### 12.2 Persistence and degradability

#### Product:

Biodegradability : no data available

#### Components:

##### **cobalt lithium dioxide:**

Biodegradability : no data available

##### **diphenyl carbonate:**

Biodegradability : no data available

##### **lithium nitrate:**

Biodegradability : no data available

##### **nickel:**

Biodegradability : no data available

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : no data available

#### Components:

##### **cobalt lithium dioxide:**

Bioaccumulation : no data available

##### **diphenyl carbonate:**

Bioaccumulation : no data available

##### **lithium nitrate:**

Bioaccumulation : no data available

##### **nickel:**

Bioaccumulation : no data available

### 12.4 Mobility in soil

#### Product:

Mobility : no data available

Distribution among environmental compartments : no data available

Environmental fate and : no data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

pathways  
Physico-chemical : no data available  
removability

### Components:

#### **cobalt lithium dioxide:**

Mobility : no data available

Distribution among : no data available  
environmental compartments

Environmental fate and : no data available  
pathways

Physico-chemical : no data available  
removability

#### **diphenyl carbonate:**

Mobility : no data available

Distribution among : no data available  
environmental compartments

Environmental fate and : no data available  
pathways

Physico-chemical : no data available  
removability

#### **lithium nitrate:**

Mobility : no data available

Distribution among : no data available  
environmental compartments

Environmental fate and : no data available  
pathways

Physico-chemical : no data available  
removability

#### **nickel:**

Mobility : no data available

Distribution among : no data available  
environmental compartments

Environmental fate and : no data available



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

pathways

Physico-chemical  
removability : no data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

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

#### Components:

##### **cobalt lithium dioxide:**

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

##### **diphenyl carbonate:**

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

##### **lithium nitrate:**

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

##### **nickel:**

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

### 12.6 Other adverse effects

#### Product:

Biochemical Oxygen  
Demand (BOD) : no data available

Dissolved organic carbon  
(DOC) : no data available

Chemical Oxygen Demand  
(COD) : no data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

Adsorbed organic bound halogens (AOX) : no data available

Additional ecological information : no data available

### **Components:**

#### **cobalt lithium dioxide:**

Biochemical Oxygen Demand (BOD) : no data available

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : no data available

Adsorbed organic bound halogens (AOX) : no data available

#### **diphenyl carbonate:**

Biochemical Oxygen Demand (BOD) : no data available

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : no data available

Adsorbed organic bound halogens (AOX) : no data available

#### **lithium nitrate:**

Biochemical Oxygen Demand (BOD) : no data available

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : no data available

Adsorbed organic bound halogens (AOX) : no data available

#### **nickel:**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

Biochemical Oxygen Demand (BOD) : no data available

Dissolved organic carbon (DOC) : no data available

Chemical Oxygen Demand (COD) : no data available

Adsorbed organic bound halogens (AOX) : no data available

### 13. Disposal considerations

#### 13.1 Waste treatment methods

Product : 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.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

### 14. Transport information

#### 14.1 UN number

ADR : 3480

IMDG : 3480

IATA : 3480

#### 14.2 Proper shipping name

ADR : Lithium ion batteries

IMDG : Lithium ion batteries

IATA : Lithium ion batteries

#### 14.3 Transport hazard class

ADR : 9





## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

**IMDG** : 9

**IATA** : 9

### 14.4 Packing group

#### ADR

Packaging group : II

Classification Code : M4

Labels : 9

#### IMDG

Packaging group : II

Labels : 9

#### IATA

Packing instruction (cargo aircraft) : 965

Packaging group : II

Labels : 9

### 14.5 Environmental hazards

#### ADR

Environmentally hazardous : no

#### IMDG

Marine pollutant : no

#### IATA

Environmentally hazardous : no

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

### 14.6 Special precautions for user

no data available

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

Remarks : not applicable

## 15. Regulatory information

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

Major Accident Hazard : 96/82/EC Update: 2003  
Legislation Oxidising  
3  
Quantity 1: 50 t  
Quantity 2: 200 t

Water contaminating class : WGK 3 highly water endangering  
(Germany) VVWS A4

TA Luft List (Germany) : Total dust: not applicable  
Inorganic substances in powdered form: : portionClass 2: 45 %  
: portionClass 3: 15 %  
Inorganic substances in vapour or gaseous form: not applicable  
Organic Substances: not applicable  
Carcinogenic substances: : portionClass 2: 5 %  
Mutagenic: not applicable  
Toxic to reproduction: not applicable

### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

## 16. Other information

Full text of R-phrases referred to under sections 2 and 3

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Battery Pack cpl. NGBG

Version 1.2

Revision Date 29.09.2011

Print Date 06.01.2012

R 8	Contact with combustible material may cause fire.
R22	Harmful if swallowed.
R40	Limited evidence of a carcinogenic effect.
R42	May cause sensitization by inhalation.
R42/43	May cause sensitization by inhalation and skin contact.
R43	May cause sensitization by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R52	Harmful to aquatic organisms.
R53	May cause long-term adverse effects in the aquatic environment.

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

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

### Further information

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.