

DEBUT® PLUS

Version 1.0

Revision Date 03.01.2018

Ref. 130000144794

This Safety Data Sheet adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name : DEBUT® PLUS
 Synonyms : B11990446
 DPX-NA439

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

Use of the Substance/Mixture : Herbicide

1.3. Details of the supplier of the safety data sheet

Company : Headland Agrochemicals Limited
 Rectors Lane, Pentre, Deeside, Flintshire CH5 2DH
 United Kingdom

E-mail address : SDS.Ronland@fmc.com

1.4. Emergency telephone number

Medical emergencies:

Austria: +43 1 406 43 43

Belgium: +32 70 245 245

Bulgaria: +359 2 9154 409

Cyprus: 1401

Czech Republic: +420 224 919 293

+420 224 915 402

Denmark: +45 82 12 12 12

France: +33 (0) 1 45 42 59 59

Finland: +358 9 471 977

Greece: 30 210 77 93 777

Hungary: +36 80 20 11 99

Ireland (Republic): +352 1 809 2166

Italy: +39 02 6610 1029

Lithuania: +370 523 62052

+370 687 53378

Luxembourg: +352 8002 5500

Netherlands: +31 30 274 88 88

Norway: +47 22 591300

Poland: +48 22 619 66 54

+48 22 619 08 97

Portugal: 808 250 143 (in Portugal only)

+351 21 330 3284

Romania: +40 21318 3606

Slovakia: +421 2 54 77 4 166

Slovenia: +386 41 650 500

Spain: +34 91 562 04 20

Sweden: +46 08-331231

112

Switzerland: 145

United Kingdom: 0870 600 6266 (in the UK only)

U.S.A. & Canada: +1 800 / 331-3148 (ProPharma)

All other countries: +1 651 / 632-6793 (ProPharma - Collect)

For fire, leak, spill or other accident emergencies:

U.S.A.: +1 800 / 424 9300 (CHEMTREC)

All other countries: +1 703 / 527 3887 (CHEMTREC - Collect)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Carcinogenicity, Category 2 H351: Suspected of causing cancer.

Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.

Chronic aquatic toxicity, Category 1 H410: Very toxic to aquatic life with long lasting effects.

2.2. Label elements

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**Warning**

H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P281	Use personal protective equipment as required.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P391	Collect spillage.
P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
 This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

Registration number	Classification according to Regulation (EU) 1272/2008 (CLP)	Concentration (% w/w)
Lenacil (CAS-No.2164-08-1) (EC-No.218-499-0) (M-Factor : 10[Acute] 1[Chronic])		
	Carc. 2; H351 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 70 - <= 75 %
Triflurosulfuron-methyl (CAS-No.126535-15-7) (M-Factor : 100[Acute] 10[Chronic])		
	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 5 - <= 10 %
Sodium diisopropylnaphthalenesulphonate (CAS-No.1322-93-6) (EC-No.215-343-3)		
	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315	>= 1 - < 5 %

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	Eye Irrit. 2; H319 STOT SE 3; H335	
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The above products are compliant to REACH registration obligations; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process (biocide uses, plant protection products), etc.

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

SECTION 4: First aid measures**4.1. Description of first aid measures**

- General advice : Never give anything by mouth to an unconscious person. For specialist advice physicians should contact the National Poisons Information Service: Tel. 111 for England and Wales and Tel. 08454 24 24 24 for Scotland.
- Inhalation : Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician after significant exposure.
- Skin contact : Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use.
- Eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist.
- Ingestion : Obtain medical attention. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

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

- Symptoms : No cases of human intoxication are known and the symptoms of experimental intoxication are not known.

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

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO₂)

- Extinguishing media which shall not be used for safety reasons : High volume water jet, (contamination risk)

5.2. Special hazards arising from the substance or mixture

- Specific hazards during : Hazardous decomposition products formed under fire conditions. Carbon

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firefighting

dioxide (CO₂) Nitrogen oxides (NO_x)**5.3. Advice for firefighters**

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

: (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions : Control access to area. Avoid dust formation. Avoid breathing dust. Use personal protective equipment. Keep people away from and upwind of spill/leak. Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. 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 : Clean-up methods - small spillage Sweep up or vacuum up spillage and collect in suitable container for disposal.

Clean-up methods - large spillage Do not create a powder cloud by using a brush or compressed air. Avoid dust formation. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

If spill area is on ground near valuable plants or trees, remove 5 cm of top soil after initial clean-up.

Other information : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

6.4. Reference to other sections

For personal protection see section 8., For disposal instructions see section 13.

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SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling : Use only according to our recommendations. Use only clean equipment. Avoid contact with skin, eyes and clothing. Do not breathe dust or spray mist. Wear personal protective equipment. For personal protection see section 8. Prepare the working solution as given on the label(s) and/or the user instructions. Use prepared working solution as soon as possible - Do not store. Provide appropriate exhaust ventilation at places where dust is formed. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Avoid exceeding the given occupational exposure limits (see section 8).

Advice on protection against fire and explosion : Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep in properly labelled containers. Keep container tightly closed in a dry and well-ventilated place. Store in a place accessible by authorized persons only. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Advice on common storage : Keep away from: Strong bases

Other data : Stable under recommended storage conditions.

7.3. Specific end use(s)

Plant protection products subject to Regulation (EC) No 1107/2009.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

If sub-section is empty then no values are applicable.

8.2. Exposure controls

Engineering measures : Ensure adequate ventilation, especially in confined areas. Provide for appropriate exhaust ventilation and dust collection at machinery. Contains no substances with occupational exposure limit values.

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection : Material: Nitrile rubber
 Glove thickness: 0.3 mm
 Glove length: Standard glove type.
 Protection index: Class 6
 Wearing time: 8 h
 The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. 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. Gloves must be inspected prior to use. Before removing gloves clean them with soap and water. Gloves should be discarded and replaced if there is any indication of degradation or

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chemical breakthrough. Gauntlets shorter than 35 cm long shall be worn under the combination sleeve.

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|--------------------------|---|---|
| Skin and body protection | : | Manufacturing and processing work: Full protective clothing Type 5 (EN 13982-2) Mixer and loaders must wear: Full protective clothing Type 5 + 6 (EN ISO 13982-2 / EN 13034) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).
Spray application - outdoor: Tractor / sprayer with hood: No personal body protection normally required. Tractor / sprayer without hood: Backpack / knapsack sprayer: Full protective clothing Type 6 (EN 13034) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).
Mechanical automatized spray application in closed tunnel: No personal body protection normally required. |
| Protective measures | : | The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. Only protected handlers may be in the area during application. |
| Hygiene measures | : | Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. For environmental protection remove and wash all contaminated protective equipment before re-use. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Dispose of rinse water in accordance with local and national regulations. |
| Respiratory protection | : | Manufacturing and processing work: Mixer and loaders must wear: Half mask with a particle filter FFP1 (EN149) Spray application - outdoor: Tractor / sprayer with hood: No personal respiratory protective equipment normally required. Tractor / sprayer without hood: Backpack / knapsack sprayer: Half mask with a particle filter P1 (EN 143).
Mechanical automatized spray application in closed tunnel: No personal respiratory protective equipment normally required. |

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

- | | |
|-----------------------------|-----------------------------------|
| Form | : solid |
| Colour | : off-white, brown |
| Odour | : slight |
| Odour Threshold | : not determined |
| pH | : 7.7 |
| Melting point/range | : Not available for this mixture. |
| Boiling point/boiling range | : Not applicable |
| Flash point | : Not applicable |

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Flammability (solid, gas)	: Does not sustain combustion.
Auto-ignition temperature	: Test Type :Auto-ignition temperatureno data available
Oxidizing properties	: The product is not oxidizing.
Explosive properties	: Not explosive
Lower explosion limit/ lower flammability limit	: no data available
Upper explosion limit/ upper flammability limit	: no data available
Vapour pressure	: Not available for this mixture.
Relative density	: Not available for this mixture.
Bulk density	: 482 kg/m3 , packed
Water solubility	: dispersible
Partition coefficient: n-octanol/water	: Not applicable
Viscosity, kinematic	: not determined
Relative vapour density	: Not applicable
Evaporation rate	: Not applicable

9.2. Other information

Phys.-chem./other information : No other data to be specially mentioned.

SECTION 10: Stability and reactivity

10.1. Reactivity	: No hazards to be specially mentioned.
10.2. Chemical stability	: The product is chemically stable under recommended conditions of storage, use and temperature.
10.3. Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use. Polymerization will not occur. No decomposition if stored and applied as directed.
10.4. Conditions to avoid	: To avoid thermal decomposition, do not overheat. Under severe dusting conditions, this material may form explosive mixtures in air. Decomposes slowly on exposure to water. Exposure to moisture
10.5. Incompatible materials	: Incompatible with bases.
10.6. Hazardous decomposition products	: Sulphur oxides Hydrogen fluoride

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SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute oral toxicity

LD50 / Rat : > 5,000 mg/kg

Method: OECD Test Guideline 401

The toxicological data has been taken from products of similar composition. Information source: Internal study report (Data on the product itself)

Acute inhalation toxicity

Acute toxicity estimate : > 5 mg/l

Method: Calculation method

Acute dermal toxicity

LD50 / Rabbit : > 2,000 mg/kg

Method: OECD Test Guideline 402

The toxicological data has been taken from products of similar composition. Information source: Internal study report (Data on the product itself)

Skin irritation

Result: Irritating to skin.

Information source: Internal study report (Data on the product itself)

Eye irritation

Result: Irritating to eyes.

Information source: Internal study report (Data on the product itself)

Sensitisation

May cause sensitisation by skin contact. Information source: Internal study report (Data on the product itself)

Repeated dose toxicity

• Lenacil

The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Ingestion Not tested on animals

Exposure time: 90 d

NOAEL: > 100 mg/kg

No toxicologically significant effects were found.

Oral - feed Mouse

Exposure time: 90 d

Increased liver weight

Oral - feed Dog

Exposure time: 90 d

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Liver effects, Spleen effects

- Triflurosulfuron-methyl

The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral - feed multiple species

Reduced body weight gain, Liver effects, Abnormal decrease in number of red blood cells

Mutagenicity assessment

- Lenacil

Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

- Triflurosulfuron-methyl

Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Animal testing did not show any mutagenic effects.

Carcinogenicity assessment

- Lenacil

Suspected human carcinogens

- Triflurosulfuron-methyl

Suspected human carcinogens An increased incidence of tumours was observed in laboratory animals.

Target(s): Testes Liver

The observed tumors do not appear to be relevant for men.

Toxicity to reproduction assessment

- Triflurosulfuron-methyl

No toxicity to reproduction Animal testing did not show any effects on fertility.

Assessment teratogenicity

- Lenacil

Animal testing showed no developmental toxicity.

- Triflurosulfuron-methyl

Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

STOT - single exposure

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

STOT - repeated exposure

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

Aspiration hazard

The mixture does not have properties associated with aspiration hazard potential.

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SECTION 12: Ecological information**12.1. Toxicity**

Toxicity to fish

- Lenacil
static test / LC50 / 96 h / Oncorhynchus mykiss (rainbow trout): > 2.0 mg/l
Method: OECD Test Guideline 203
Information source: Internal study report

Toxicity to aquatic invertebrates

- Lenacil
EC50 / 48 h / Daphnia magna (Water flea): > 4.4 mg/l
Method: OECD Test Guideline 202
Information source: Internal study report

Chronic toxicity to fish

- Lenacil
Early Life-Stage / NOEC / 90 d / Oncorhynchus mykiss (rainbow trout): 0.16 mg/l
Method: OECD Test Guideline 210
Information source: Internal study report
- Triflurosulfuron-methyl
NOEC / 21 d / Oncorhynchus mykiss (rainbow trout): > 210 mg/l
Method: OECD Test Guideline 204

Chronic toxicity to aquatic Invertebrates

- Lenacil
NOEC / 21 d / Daphnia magna (Water flea): 0.48 mg/l
Method: OECD Test Guideline 202
Information source: Internal study report
- Triflurosulfuron-methyl
NOEC / 21 d / Daphnia magna (Water flea): 11 mg/l

12.2. Persistence and degradability

Biodegradability

Not readily biodegradable. Estimation based on data obtained on active ingredient.

12.3. Bioaccumulative potential

Bioaccumulation

Does not bioaccumulate. Estimation based on data obtained on active ingredient.

12.4. Mobility in soil

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Mobility in soil

Potentially mobile, but the leaching potential is mitigated by rapid degradation.

12.5. Results of PBT and vPvB assessment**PBT and vPvB assessment**

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). / This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6. Other adverse effects**Additional ecological information**

No data is available on the product itself. No other ecological effects to be specially mentioned See product label for additional application instructions relating to environmental precautions.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

- Product : In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate ponds, waterways or ditches with chemical or used container.
- Contaminated packaging : Do not re-use empty containers.
- European Waste Catalogue number : 020108: agrochemical waste containing dangerous substances

SECTION 14: Transport information**ADR**

- 14.1. UN number: 3077
- 14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lenacil, Triflurosulfuron methyl)
- 14.3. Transport hazard class(es): 9
- 14.4. Packing group: III
- 14.5. Environmental hazards: Environmentally hazardous
- 14.6. Special precautions for user: (E)
- Tunnel restriction code:

IATA_C

- 14.1. UN number: 3077
- 14.2. UN proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Lenacil, Triflurosulfuron methyl)
- 14.3. Transport hazard class(es): 9
- 14.4. Packing group: III
- 14.5. Environmental hazards : Environmentally hazardous
- 14.6. Special precautions for user: no data available

IMDG

- 14.1. UN number: 3077

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- 14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lenacil, Triflurosulfuron methyl)
- 14.3. Transport hazard class(es): 9
- 14.4. Packing group: III
- 14.5. Environmental hazards : Marine pollutant
- 14.6. Special precautions for user: no data available

- 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code**
Not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Other regulations : The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008. Take note of Dir 94/33/EC on the protection of young people at work. Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers. Take note of Directive 96/82/EC on the control of major-accident hazards involving dangerous substances. Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values.

15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.
The mixture is registered as a plant protection product under Regulation (EC) No. 1107/2009.
Refer to the label for exposure assessment information.

SECTION 16: Other information**Full text of H-Statements referred to under section 3.**

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

- ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE Acute toxicity estimate
- CAS-No. Chemical Abstracts Service number
- CLP Classification, Labelling and Packaging
- EbC50 Concentration at which 50% reduction of biomass is observed
- EC50 Median effective concentration
- EN European Norm
- EPA Environmental Protection Agency
- ErC50 Concentration at which a 50% inhibition of growth rate is observed

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EyC50	Concentration at which 50 % inhibition of yield is observed
IATA_C	International Air Transport Association (Cargo)
IBC	International Bulk Chemical Code
ICAO	International Civil Aviation Organization
ISO	International Standard Organization
IMDG	International Maritime Dangerous Goods
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides and Toxic Substances
PBT	Persistent, Bioaccumulative and Toxic
STEL	Short term exposure limit
TWA	Time Weighted Average (TWA):
vPvB	very Persistent and very Bioaccumulative

Significant change from previous version is denoted with a double bar.

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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.