



REDIGO FS100

Version 5 / ZA
102000006421

1/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name REDIGO FS100
Product code (UVP) 06091563

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

Use Fungicide, Seed treatment

1.3 Details of the supplier of the safety data sheet

Supplier Bayer (Pty) Ltd.
1st Floor, Waterfall Circle
9 Country Estate Drive
Waterfall City
2090 Midrand, Johannesburg
South Africa

Telephone +27 (011) 921 5911
Telefax +27 (011) 921 5766
Responsible Department QHSE - Nigel, South Africa
+27 (011) 365 8675 (during business hours only)

1.4 Emergency telephone no.

Emergency telephone no. +27 (0861) 555 777 (Western Cape Poisons Helpline)
Global Incident Response Hotline (24h) +1 (760) 476 3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Skin sensitisation: Category 1
H317 May cause an allergic skin reaction.

Short-term (acute) aquatic hazard: Category 1
H400 Very toxic to aquatic life.

Long-term (chronic) aquatic hazard: Category 2
H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:



REDIGO FS100

Version 5 / ZA
102000006421

2/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

- Prothioconazole



Signal word: Warning

Hazard statements

H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P391 Collect spillage.
P410 Protect from sunlight.
P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No additional hazards known beside those mentioned.

Polyarylphenylether sulfate, ammonium salt: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Prothioconazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Flowable concentrate for seed treatment (FS)
Prothioconazole 100 g/l

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Prothioconazole	178928-70-6	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	8,70



REDIGO FS100

Version 5 / ZA
102000006421

3/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

cPoly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-[2,4,6-tris(1-phenylethyl)phenoxy]-, ammonium salt	119432-41-6	Aquatic Chronic 3, H412	$\geq 1,0 - < 5,0$
3-Hydroxy-2'-methyl-2-naphthanilide	135-61-5 01-2119473801-38-XXXX	Skin Sens. 1A, H317 Aquatic Chronic 2, H411	$\geq 0,1 - < 1,0$
1,2-Benzisothiazol-3(2H)-one	2634-33-5 01-2120761540-60-XXXX	Acute Tox. 4, H302 Acute Tox. 2, H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	$\geq 0,025 - < 0,05$
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 2, H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	$\geq 0,0002 - < 0,0015$
Glycerine	56-81-5 01-2119471987-18-XXXX	Not classified	$\geq 1,0 - < 25$

Further information

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	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed



REDIGO FS100

Version 5 / ZA
102000006421

4/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

Treatment	Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.
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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable	Water spray, Carbon dioxide (CO ₂), Foam, Sand
Unsuitable	High volume water jet

5.2 Special hazards arising from the substance or mixture	In the event of fire the following may be released: , Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Carbon dioxide (CO ₂), Nitrogen oxides (NO _x), Sulphur oxides
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5.3 Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.
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Further information	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions	Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.
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6.2 Environmental precautions	Do not allow to get into surface water, drains and ground water.
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6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labelled and tightly closed container.
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6.4 Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.
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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation.
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Hygiene measures	Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).
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7.2 Conditions for safe storage, including any incompatibilities



REDIGO FS100

Version 5 / ZA
102000006421

5/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

Requirements for storage areas and containers	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.
Suitable materials	HDPE (high density polyethylene)
7.3 Specific end use(s)	Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Prothioconazole	178928-70-6	1,4 mg/m ³ (SK-ABS)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection	Respiratory protection is not required under anticipated circumstances of exposure. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.										
Hand protection	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. Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet. <table><tr><td>Material</td><td>Nitrile rubber</td></tr><tr><td>Rate of permeability</td><td>> 480 min</td></tr><tr><td>Glove thickness</td><td>> 0,4 mm</td></tr><tr><td>Protective index</td><td>Class 6</td></tr><tr><td>Directive</td><td>Protective gloves complying with EN 374.</td></tr></table>	Material	Nitrile rubber	Rate of permeability	> 480 min	Glove thickness	> 0,4 mm	Protective index	Class 6	Directive	Protective gloves complying with EN 374.
Material	Nitrile rubber										
Rate of permeability	> 480 min										
Glove thickness	> 0,4 mm										
Protective index	Class 6										
Directive	Protective gloves complying with EN 374.										
Eye protection	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).										
Skin and body protection	Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.										
General protective measures	If product is handled while not enclosed, and if contact may occur:										



REDIGO FS100

Version 5 / ZA
102000006421

6/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

Complete suit protecting against chemicals

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	suspension
Colour	red
Odour	weak, characteristic
Odour Threshold	No data available
pH	5,0 - 6,0 (100 %) (23 °C)
Melting point/ range	No data available
Boiling Point	No data available
Flash point	> 100 °C No flash point - Determination conducted up to the boiling point.
Flammability	No data available
Auto-ignition temperature	465 °C
Thermal decomposition	No data available
Ignition temperature	425 °C
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	ca. 1,15 g/cm ³ (20 °C)
Water solubility	miscible
Partition coefficient: n-octanol/water	Polyarylphenylether sulfate, ammonium salt: No data available Prothioconazole: log Pow: 3,82 (20 °C) (pH 7)
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Impact sensitivity	Not impact sensitive.
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive



REDIGO FS100

Version 5 / ZA
102000006421

7/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

92/69/EEC, A.14 / OECD 113

9.2 Other information

Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4 Conditions to avoid	Extremes of temperature and direct sunlight.
10.5 Incompatible materials	Store only in the original container.
10.6 Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in regulation (EC) No 1272/2008

Acute oral toxicity	LD50 (Rat) > 2.500 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 2,735 mg/l Determined in the form of a respirable aerosol. Highest attainable concentration. No deaths
Acute dermal toxicity	LD50 (Rat) > 4.000 mg/kg
Skin corrosion/irritation	No skin irritation (Rabbit)
Serious eye damage/eye irritation	No eye irritation (Rabbit)
Respiratory or skin sensitisation	Skin: Sensitising (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test

Assessment STOT Specific target organ toxicity – single exposure

Polyarylphenylether sulfate, ammonium salt: Based on available data, the classification criteria are not met.
Prothioconazole: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Polyarylphenylether sulfate, ammonium salt: Based on available data, the classification criteria are not met.
Prothioconazole did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Polyarylphenylether sulfate, ammonium salt: This information is not available. Not mutagenic in Ames Test.



REDIGO FS100

Version 5 / ZA
102000006421

8/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Polyarylphenylether sulfate, ammonium salt: This information is not available.
Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Polyarylphenylether sulfate, ammonium salt: This information is not available.
Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity.

Assessment developmental toxicity

Polyarylphenylether sulfate, ammonium salt is not considered a developmental toxicant.
Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole are related to maternal toxicity.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

No further toxicological information is available.

11.2 Information on other hazards

Endocrine disrupting properties

Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 16,4 mg/l Exposure time: 96 h
	NOEC (Oncorhynchus mykiss (rainbow trout)) 2,23 mg/l Exposure time: 96 h
	LC50 (Oncorhynchus mykiss (rainbow trout)) 1,83 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient prothioconazole.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 12,2 mg/l Exposure time: 48 h
	EC50 (Daphnia magna (Water flea)) 1,3 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient prothioconazole.
Toxicity to aquatic plants	ErC50 (Raphidocelis subcapitata (freshwater green alga)) 18,6 mg/l Exposure time: 72 h



REDIGO FS100

Version 5 / ZA
102000006421

9/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

NOEC (Raphidocelis subcapitata (freshwater green alga)) 2,24 mg/l
Exposure time: 72 h

EC50 (Raphidocelis subcapitata (freshwater green alga)) 2,18 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient prothioconazole.

ErC50 (Skeletonema costatum) 0,03278 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient prothioconazole.

EC10 (Skeletonema costatum) 0,01427 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient prothioconazole.

12.2 Persistence and degradability

Biodegradability Polyarylphenylether sulfate, ammonium salt:
Not readily biodegradable.
Prothioconazole:
Not rapidly biodegradable

Koc Polyarylphenylether sulfate, ammonium salt: No data available
Prothioconazole: Koc: 1765

12.3 Bioaccumulative potential

Bioaccumulation Polyarylphenylether sulfate, ammonium salt:
No data available
Prothioconazole: Bioconcentration factor (BCF) 19
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Polyarylphenylether sulfate, ammonium salt: No data available
Prothioconazole: criterion of mobility not fulfilled

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Polyarylphenylether sulfate, ammonium salt: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Prothioconazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods



REDIGO FS100

Version 5 / ZA
102000006421

10/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

Product	In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.
Contaminated packaging	Triple rinse containers. Do not re-use empty containers. Not completely emptied packagings should be disposed of as hazardous waste.

SECTION 14: TRANSPORT INFORMATION

SANS 10231

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROTHIOCONAZOLE SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packaging Group	III
14.5 Environm. Hazardous Mark	YES

IMDG

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROTHIOCONAZOLE SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packaging Group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROTHIOCONAZOLE SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packaging Group	III
14.5 Environm. Hazardous Mark	YES

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to IMO instruments

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

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

Further information

WHO-classification: III (Slightly hazardous)



REDIGO FS100

Version 5 / ZA
102000006421

11/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2020/878 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006, as amended



REDIGO FS100

Version 5 / ZA
102000006421

12/12

Revision Date: 30.07.2025
Print Date: 30.07.2025

Addressees are requested to observe any additional national requirements.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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