

INNOTECH Nickellegierungspaste 360

Revision date: 11.11.2019

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

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

Lubricating agent

For use in industrial installations and professional treatment only.

1.3. Details of the supplier of the safety data sheet

Company name:	innotech-Vertriebs GmbH	
Street:	Junkerstrasse 16	
Place:	D-93055 Regensburg	
Telephone:	+49 (0) 941 70 08 78	Telefax: +49 (0) 941 70 46 60
e-mail:	info@innotech-r.de	
Contact person:	Mr. Massen	
Internet:	www.innotech-r.de	
Responsible Department:	sales department	

1.4. Emergency telephone number: +49 (0) 941 70 08 78
Only available during office hours.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Serious eye damage/eye irritation: Eye Irrit. 2

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Signal word:** Warning**Pictograms:****Hazard statements**

H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container to in accordance with local/regional/national/international regulation.

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Special labelling of certain mixtures

EUH208

Contains Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide and amines, C12-14- alkyl (branched), Nickel. May produce an allergic reaction.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7782-42-5	graphite			10-20 %
	231-955-3		01-2119486977-12	
7429-90-5	Aluminium			5-7,5 %
	231-072-3		01-2119529243-45	
	Flam. Sol. 2; H228			
64742-95-6	Low boiling point naphtha - unspecified, Solvent naphtha (petroleum), light arom.			2,5-5 %
	265-199-0		01-2119455851-35	
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411 EUH066			
7440-47-3	Cromium			1-2,5 %
	231-157-5		01-2119485652-31	
108-32-7	propylene carbonate			1-2,5 %
	203-572-1		01-2119537232-48	
	Eye Irrit. 2; H319			
68457-79-4	Phosphorodithioic acid, mixed O,O-bis (iso-Bu and pentyl)esters, zinc salts			1-2,5 %
	270-608-0		01-2119493628-22	
	Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 2; H315 H318 H411			
	Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide and amines, C12-14- alkyl (branched)			<1,0 %
	931-384-6		01-2119493620-38	
	Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H302 H318 H317 H411			
7440-02-0	Nickel			<1,0 %
	231-111-4		01-2119438727-29	
	Carc. 2, Skin Sens. 1, STOT RE 1; H351 H317 H372			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

After contact with skin

Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. After contact with skin, wash immediately with plenty of water and soap.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink plenty of water. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

No information available.

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

Treat symptomatically.

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

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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

No special measures are necessary.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

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7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels

Keep container tightly closed.

Hints on joint storage

No special measures are necessary.

7.3. Specific end use(s)

For use in industrial installations and professional treatment only.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7429-90-5	Aluminium metal, respirable dust	-	4		TWA (8 h)	WEL
7440-47-3	Chromium	-	0.5		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7429-90-5	Aluminium			
Worker DNEL, long-term		inhalation	systemic	3,72 mg/m ³
Worker DNEL, long-term		inhalation	local	3,72 mg/m ³
Consumer DNEL, long-term		oral	systemic	7,9 mg/kg bw/day
64742-95-6	Low boiling point naphtha - unspecified, Solvent naphtha (petroleum), light arom.			
Worker DNEL, acute		inhalation	systemic	1300 mg/m ³
Worker DNEL, long-term		inhalation	local	840 mg/m ³
Worker DNEL, acute		inhalation	local	1100 mg/m ³
Consumer DNEL, acute		inhalation	systemic	1200 mg/m ³
Consumer DNEL, long-term		inhalation	local	180 mg/m ³
Consumer DNEL, acute		inhalation	local	640 mg/m ³
7440-02-0	Nickel			
Worker DNEL, long-term		inhalation	systemic	0,05 mg/m ³
Worker DNEL, long-term		inhalation	local	0,05 mg/m ³
Worker DNEL, acute		inhalation	local	11,9 mg/m ³
Worker DNEL, long-term		dermal	local	0,035 mg/cm ²
Consumer DNEL, acute		inhalation	local	0,8 mg/m ³
Consumer DNEL, long-term		dermal	local	0,035 mg/cm ²
Consumer DNEL, long-term		oral	systemic	0,011 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,37 mg/kg bw/day

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PNEC values

CAS No	Substance	
Environmental compartment		Value
7429-90-5	Aluminium	
Micro-organisms in sewage treatment plants (STP)		20 mg/l
7440-02-0	Nickel	
Freshwater		0,0071 mg/l
Freshwater (intermittent releases)		0 mg/l
Marine water		0,0086 mg/l
Freshwater sediment		109 mg/kg
Marine sediment		109 mg/kg
Secondary poisoning		0,12 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,33 mg/l
Soil		29,9 mg/kg

8.2. Exposure controls
Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Eye/face protection

Suitable eye protection: goggles. DIN EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Recommended material: NBR (Nitrile rubber) EN ISO 374

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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

Physical state:	Paste
Colour:	silver grey
Odour:	characteristic
pH-Value:	not applicable
Changes in the physical state	
Melting point:	not determined
Initial boiling point and boiling range:	162 °C
Flash point:	220 °C
Flammability	
Solid:	not determined
Gas:	not applicable

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Explosive properties

The product is not: Explosive.

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	250 °C

Auto-ignition temperature

Solid:	not determined
Gas:	not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapour pressure:	not determined
Density:	not determined
Water solubility: (at 20 °C)	practically insoluble

Solubility in other solvents

not determined

Partition coefficient:	not determined
Vapour density:	not determined
Evaporation rate:	not determined
Solvent content:	4,5%

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

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

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7782-42-5	graphite				
	oral	LD50 > 2000 mg/kg	Rat	OECD Guideline 423	
7429-90-5	Aluminium				
	oral	LD50 > 15900 mg/kg	Rat	Study report (1969)	OECD Guideline 401
64742-95-6	Low boiling point naphtha - unspecified, Solvent naphtha (petroleum), light arom.				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1989)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1989)	OECD Guideline 402
	inhalation (4 h) vapour	LC50 > 4,96 mg/l	Rat	Study report (1992)	OECD Guideline 403
68457-79-4	Phosphorodithioic acid, mixed O,O-bis (iso-Bu and pentyl)esters, zinc salts				
	oral	LD50 3600 mg/kg	Rat	16CFR1500.3	
	Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide and amines, C12-14-alkyl (branched)				
	oral	LD50 > 2000 mg/kg	Rat	OECD Guideline 401	
7440-02-0	Nickel				
	oral	LD50 > 9000 mg/kg	Rat	Study report (1983)	OECD Guideline 401

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Contains Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide and amines, C12-14- alkyl (branched), Nickel. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

Harmful to aquatic life with long lasting effects.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7429-90-5	Aluminium					
	Acute fish toxicity	LC50 mg/l	(6,17)	96 h	Oncorhynchus mykiss	Canadian Journal of Fisheries and Aquati Juvenile rainbow trout were exposed to f
	Acute algae toxicity	ErC50 mg/l	(0,0169)	72 h	Pseudokirchneriella subcapitata	Study report (2009) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	(1,9)	48 h	Ceriodaphnia dubia	Study report (1986) Acute exposures were conducted with four
	Fish toxicity	NOEC mg/l	(0,4)	7 d	Pimephales promelas	Study report (1992) other: USEPA 1989. Short-term Methods fo
	Crustacea toxicity	NOEC mg/l	1,02	6 d	Ceriodaphnia dubia	Study report (1992) other: US EPA
64742-95-6	Low boiling point naphtha - unspecified, Solvent naphtha (petroleum), light arom.					
	Acute fish toxicity	LC50	10 mg/l	96 h	Brachydanio rerio (zebra-fish)	
	Acute algae toxicity	ErC50	10 mg/l	72 h		
	Acute crustacea toxicity	EC50	4,5 mg/l	48 h	Daphnia magna	Study report (1995) OECD Guideline 202
	Fish toxicity	NOEC	2,6 mg/l	21 d	Daphnia magna	Study report (1999) other: OECD Guideline 211
	Crustacea toxicity	NOEC	2,6 mg/l	21 d	Daphnia magna	Study report (1999) OECD Guideline 211
7440-47-3	Cromium					
	Acute fish toxicity	LC50 mg/l	14,3	96 h	Cyprinus carpio (Common Carp)	
	Acute crustacea toxicity	EC50 mg/l	0,07	48 h	Daphnia magna (Big water flea)	
7440-02-0	Nickel					
	Acute fish toxicity	LC50 mg/l	15,3	96 h	Oncorhynchus mykiss	Aquatic Toxicology 63 (2003) 65-82 (2003) other: not reported
	Acute algae toxicity	ErC50 mg/l	0,237	72 h	Ankistrodesmus falcatus	Publication (2009) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,276	48 h	Ceriodaphnia dubia	Study report (2005) Test methods were in accordance with app
	Fish toxicity	NOEC mg/l	0,057	32 d	Pimephales promelas	Water Resources Research Institute. Kent other: ASTM 1980, E-729
	Algea toxicity	NOEC	0,6 mg/l	14 d	Anabaena cylindrica	Environ. Pollut. (Series A). 25(4):241-2 other: not reported
	Crustacea toxicity	NOEC	0,0053 - 0,0153 mg/l	7 d	Ceriodaphnia dubia	Environmental Toxicology and Chemistry, other: EPA/600/4-91/002
	Acute bacteria toxicity	(33 mg/l)		0,5 h	Activated sludge	Journal of Hazardous Materials. B139:332 ISO 8192

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12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
	Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide and amines, C12-14- alkyl (branched)	3,6

BCF

CAS No	Chemical name	BCF	Species	Source
	Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide and amines, C12-14- alkyl (branched)	3,2		
7440-02-0	Nickel	45	other aquatic crustacea: Cambarus bartoni	Bull. Environ. Conta

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

120112 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; spent waxes and fats; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information
Land transport (ADR/RID)**14.1. UN number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

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Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No dangerous good in sense of this transport regulation.

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

Restrictions on use (REACH, annex XVII):

Entry 27: Nickel

Entry 28: Low boiling point naphtha - unspecified, Solvent naphtha (petroleum), light arom.

2010/75/EU (VOC): 4,5 %

2004/42/EC (VOC): 4,5 %

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 2 - clearly water contaminating

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information
Changes

This data sheet contains changes from the previous version in section(s): 1,15.

Abbreviations and acronymsADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Eye Irrit. 2; H319	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H228	Flammable solid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

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H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide and amines, C12-14- alkyl (branched), Nickel. May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)