

SAFETY DATA SHEET

BAYFERROX 318



Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : BAYFERROX 318
Product code : 000000000000249394

Manufacturer or supplier's details

Supplier : LANXESS Pty Ltd
2d Factory Street
Granville, NSW 2142, Australia
Responsible Department : +612 8868 7211
infosds@lanxess.com
Emergency telephone number : YLXS-YADD00000000174
For 24/7 multilingual emergency please call toll free
CHEMTREC APAC: +65 3163 8374 and mention CCN
1001750.

Recommended use of the chemical and restrictions on use

Recommended use : Colorants (pigments and dyestuffs), inorganic

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

|| Not a hazardous substance or mixture.

GHS label elements

|| Not a hazardous substance or mixture.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Chemical nature : Fe₃O₄

Components

Chemical name	CAS-No.	Concentration (% w/w)
calcium sulfate (Dust containing < 1% SiO ₂)	7778-18-9	< 10
calcium chloride	10043-52-4	< 10

SAFETY DATA SHEET

BAYFERROX 318



Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

SECTION 4. FIRST AID MEASURES

- General advice : Do not leave the victim unattended.
- If inhaled : Move the victim to fresh air.
Get medical attention if symptoms occur.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
If unconscious, place in recovery position and get medical attention immediately.
Loosen tight clothing such as a collar, tie, belt or waistband.
- In case of skin contact : No special measures required.
- In case of eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
If easy to do, remove contact lens, if worn.
Continue to rinse for at least 10 minutes.
Get medical attention if symptoms appear.
- If swallowed : No special measures required.

Most important symptoms and effects, both acute and delayed

- Symptoms : See Section 11 for more detailed information on health effects and symptoms.
- Risks : See Section 11 for more detailed information on health effects and symptoms.
- Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.
- Notes to physician : Treat symptomatically.
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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : No information available.
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SAFETY DATA SHEET

BAYFERROX 318



Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

- Hazardous combustion products : The product itself does not burn.
- Specific extinguishing methods : Standard procedure for chemical fires.
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : No action shall be taken involving any personal risk or without suitable training.
Keep unnecessary and unprotected personnel from entering.
Avoid breathing dust.
Use personal protective equipment.
Avoid dust formation.
- Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.
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SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.
- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
- Hygiene measures : General industrial hygiene practice.

When using do not eat, drink or smoke.
Wash face, hands and any exposed skin thoroughly after handling.
Wash contaminated clothing before reusing.
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BAYFERROX 318

Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
 Country / Language: AU / 6N

- Conditions for safe storage : Store in accordance with local regulations.
 Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.
 Keep containers tightly closed in a dry, cool and well-ventilated place.
 Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : No materials to be especially mentioned.
- Recommended storage temperature : < 80 °C
- Further information on storage stability : Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
calcium sulfate (Dust containing < 1% SiO ₂)	7778-18-9	TWA	10 mg/m ³	AU OEL
		TWA (Inhalable particulate matter)	10 mg/m ³ (Calcium)	ACGIH

Engineering measures : This information is not available.

Personal protective equipment

- Respiratory protection : Dust-protection mask if there is a risk of dust formation.
- Filter type : P1 filter
- Hand protection
- Wearing time : < 60 min
- Material : Leather gloves
- Eye protection : Safety glasses
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
 Additional body garments should be used (e.g. sleevelets, apron, disposable suit etc.), based on the task being per-

SAFETY DATA SHEET

BAYFERROX 318



Version
2.0

Revision Date:
08.04.2021

SDS Number:
203000012120

Date of last issue: 23.09.2020
Country / Language: AU / 6N

formed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Physical state	:	solid
Colour	:	black
Odour	:	odourless
Odour Threshold	:	Not applicable
pH	:	4 - 8 Concentration: 5 %
Melting point/range	:	1,597 °C
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Self-ignition	:	No data available
Burning number	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative density	:	No data available
Density	:	4.6 g/cm ³ (20 °C)
Bulk density	:	300 - 1,000 kg/m ³
Solubility(ies) Water solubility	:	insoluble

SAFETY DATA SHEET

BAYFERROX 318



Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : > 80 °C

Viscosity

 Viscosity, dynamic : No data available

 Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is chemically stable.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : At temperatures above 80 °C the product may become unstable and oxidise. This generates additional heat which, under unfavourable conditions, may result in the combustion of flammable materials. The product should therefore not be stored near heat sources.

Incompatible materials : No specific data.

Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation
Eye contact
Skin contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Remarks: Information refers to the main component.

BAYFERROX 318

Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

- Acute oral toxicity : Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat, male and female): > 2.61 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Dosage caused no mortality
- Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

calcium chloride:

- Acute oral toxicity : LD50 (Rat, male and female): 2,301 mg/kg
Method: OECD Test Guideline 401
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

- Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Information refers to the main component.

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

- Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation

calcium chloride:

- Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation

BAYFERROX 318

Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

GLP : yes

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

calcium chloride:

Species : Rabbit
Result : Irritating to eyes.
Method : OECD Test Guideline 405
GLP : yes

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

Exposure routes : Skin contact
Species : Guinea pig
Result : Not a skin sensitizer.
Remarks : Information refers to the main component.

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.
GLP : yes

BAYFERROX 318

Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

calcium chloride:

Exposure routes : Skin contact
Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro : Test Type: Ames test
Test system: Bacteria
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: Information refers to the main component.

Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Remarks: Information refers to the main component.

Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
Remarks: Information refers to the main component.

Components:

calcium sulfate (Dust containing < 1% SiO₂):

Genotoxicity in vitro : Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Species: Mouse (male)
Application Route: Oral
Exposure time: 1 d
Method: OECD Test Guideline 474
Result: negative
GLP: yes

BAYFERROX 318

Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

calcium chloride:

Genotoxicity in vitro : Test system: Bacteria
Metabolic activation: with metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test system: Chinese hamster fibroblasts
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Duration of Single Treatment: 2 Weeks
General Toxicity - Parent: NOAEL: 790 mg/kg body weight
General Toxicity F1: NOAEL: 790 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes

Effects on foetal development : Species: Rat
Application Route: Oral
Duration of Single Treatment: 10 Days
General Toxicity Maternal: NOAEL: 1,600 mg/kg body weight
Method: OECD Test Guideline 414
GLP: no

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

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

BAYFERROX 318

Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

Repeated dose toxicity**Product:**

Species : Rat, male
LOAEL : >185,6 mg/m³
Application Route : Inhalation
Test atmosphere : dust/mist
Exposure time : 2 Weeks
Number of exposures : 5 days/week
Remarks : Information refers to the main component.

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

Species : Rat, male and female
NOAEL : 79 mg/kg
Application Route : Oral
Exposure time : 35 Days
Number of exposures : daily
Method : OECD Test Guideline 422
GLP : yes

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : LC₀ (Danio rerio (zebra fish)): > 10,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Fresh water
Information refers to the main component.

Toxicity to daphnia and other aquatic invertebrates : EC₀ (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: Regulation (EC) No. 440/2008, Annex, C.2
Remarks: Fresh water
Information refers to the main component.

Toxicity to microorganisms : EC₅₀ (adapted and activated sludge micro-organism): > 10,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Fresh water
Information refers to the main component.

BAYFERROX 318

Version	Revision Date:	SDS Number:	Date of last issue: 23.09.2020
2.0	08.04.2021	203000012120	Country / Language: AU / 6N

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

- Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 79 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203
 GLP: yes
 Remarks: Dosage caused no mortality
- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia (water flea)): > 79 mg/l
 Exposure time: 48 h
 Remarks: Dosage caused no mortality
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 79 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 GLP: yes

Ecotoxicology Assessment

- Acute aquatic toxicity : This product has no known ecotoxicological effects.
 Remarks: No harmful effect in the area of water solubility.
- Chronic aquatic toxicity : This product has no known ecotoxicological effects.
 Remarks: No harmful effect in the area of water solubility.

calcium chloride:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4,630 mg/l
 Exposure time: 96 h
 Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 2,400 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202
 GLP: yes
 Remarks: Fresh water
- NOEC (Daphnia magna (Water flea)): 2,000 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202
 GLP: yes
 Remarks: Fresh water
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): 2,900 mg/l
 End point: Biomass
 Exposure time: 96 h
 Method: OECD Test Guideline 201
 GLP: yes

BAYFERROX 318

Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

EC50 (Pseudokirchneriella subcapitata (microalgae)): > 4,000 mg/l
End point: Growth rate
Exposure time: 96 h
Method: OECD Test Guideline 201
GLP: yes

Persistence and degradability**Components:****calcium sulfate (Dust containing < 1% SiO₂):**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

calcium chloride:

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential**Components:****calcium sulfate (Dust containing < 1% SiO₂):**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : Remarks: Not applicable

Mobility in soil

No data available

Other adverse effects**Product:**

Additional ecological information : Ecotoxicological data are not available.
No known significant effects or critical hazards.

Components:**calcium sulfate (Dust containing < 1% SiO₂):**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

SAFETY DATA SHEET

BAYFERROX 318



Version Revision Date: SDS Number: Date of last issue: 23.09.2020
2.0 08.04.2021 203000012120 Country / Language: AU / 6N

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Examine possibilities for re-utilisation.
Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations.
When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
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SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations

ADG

Not regulated as a dangerous good

Hazard and Handling Notes.

Not dangerous cargo., Keep separated from foodstuffs.

SECTION 15. REGULATORY INFORMATION

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

Standard for the Uniform : Schedule 6
Scheduling of Medicines and
Poisons

International Chemical Weapons Convention (CWC) : Not applicable
Schedules of Toxic Chemicals and Precursors

SAFETY DATA SHEET

BAYFERROX 318



Version 2.0 Revision Date: 08.04.2021 SDS Number: 203000012120 Date of last issue: 23.09.2020
Country / Language: AU / 6N

Prohibition/Licensing Requirements : There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regulations.

SECTION 16. OTHER INFORMATION

Revision Date : 08.04.2021

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.

ACGIH / TWA : 8-hour, time-weighted average
AU OEL / TWA : Exposure standard - time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - Unit-

SAFETY DATA SHEET

BAYFERROX 318



Version	Revision Date:	SDS Number:	Date of last issue: 23.09.2020
2.0	08.04.2021	203000012120	Country / Language:AU / 6N

ed Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. 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 to be a guidance for processing and does not contain any 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. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.