

SAFETY DATA SHEET **GRIPDECK FLEXCOAT HARDENER**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

GRIPDECK FLEXCOAT HARDENER Product name

Internal identification GRIPDECKFCH/12

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

Identified uses Component of Car Park Decking Repair System

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier

Don Construction Products Ltd.,

Hawthorn House

Helions Bumpstead Road

Haverhill Suffolk **CB9 7AA**

Tel: 01538 361799 Mon-Fri 08:30 - 17:00 (excl bank holidays)

Fax: 01538 361899

E-Mail: info.uk@dcp-int.com

1.4. Emergency telephone number

01538 361799 Mon-Fri 8.30am - 5.00pm (excluding Bank Holidays) **Emergency telephone**

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317

Environmental hazards Not Classified

Classification (67/548/EEC or Xn;R20. R42/43. Xi;R36.

1999/45/EC)

Human health See Section 11 for additional information on health hazards.

Environmental The product will harden into a solid mass in contact with water and moisture. The resultant

material is not biodegradable.

2.2. Label elements

GRIPDECK FLEXCOAT HARDENER

Pictogram



Signal word Danger

Hazard statements H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements P261 Avoid breathing vapour/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P284 [In case of inadequate ventilation] wear respiratory protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P313 Get medical advice/ attention.

Contains PREPOLYMER BASED ON AROMATIC POLYISOCYANATE, TOLUENE-2,4-DI-

ISOCYANATE

Supplementary precautionary

P264 Wash contaminated skin thoroughly after handling.

statements P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

PREPOLYMER BASED ON AROMATIC

60-100%

POLYISOCYANATE

CAS number: 37273-56-6

Classification Classification (67/548/EEC or 1999/45/EC)

Eye Irrit. 2 - H319 Xi;R36. R43.

Skin Sens. 1 - H317

TOLUENE-2.4-DI-ISOCYANATE <0.5%

CAS number: 584-84-9 EC number: 209-544-5 REACH registration number: 01-

2119486974-18-0001

Classification Classification (67/548/EEC or 1999/45/EC)

Acute Tox. 1 - H330 Carc. Cat. 3;R40 T+;R26 R42/43 Xi;R36/37/38 R52/53

Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335

Aquatic Chronic 3 - H412

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments Prepolymer based on aromatic polyisocyanate

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information Remove affected person from source of contamination.

Inhalation Move affected person to fresh air at once. Get medical attention.

Ingestion Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get

medical attention.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical

attention if irritation persists after washing.

Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get

medical attention.

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

General information The severity of the symptoms described will vary dependent on the concentration and the

length of exposure.

Inhalation Vapours may cause drowsiness and dizziness. May cause allergy or asthma symptoms or

breathing difficulties if inhaled.

Ingestion May cause discomfort if swallowed.

Skin contact May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing

media

Do not use water, if avoidable.

5.2. Special hazards arising from the substance or mixture

Specific hazards Oxides of carbon. Oxides of nitrogen. Hydrogen cyanide (HCN).

Hazardous combustion

products

Oxides of carbon. Oxides of nitrogen. Hydrogen cyanide (HCN).

be formed.

5.3. Advice for firefighters

Protective actions during

No specific firefighting precautions known.

firefighting

Special protective equipment

for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective

Oxides of carbon. Oxides of nitrogen. When heated, vapours/gases hazardous to health may

clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots,

clothing or apron, as appropriate. Use suitable respiratory protection if ventilation is

inadequate. Avoid contact with skin and eyes.

6.2. Environmental precautions

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Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Contain spillage with sand, earth or other suitable non-combustible material. Containers with

collected spillage must be properly labelled with correct contents and hazard symbol. Do not

close container tightly. Risk of excess pressure build-up.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health

hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid inhalation of vapours. Provide adequate ventilation.

Advice on general Do not eat, drink or smoke when using this product. Good personal hygiene procedures

occupational hygiene should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep separate from food, feedstuffs, fertilisers and other sensitive material. Store in tightly-

closed, original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

TOLUENE-2,4-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0,02 mg/m³ Short-term exposure limit (15-minute): WEL 0,07 mg/m³

Sen as NCO

WEL = Workplace Exposure Limit

Sen = Capable of causing occupational asthma.

TOLUENE-2,4-DI-ISOCYANATE (CAS: 584-84-9)

DNEL Workers - Inhalation; Short term systemic effects: 0.14 mg/m³

Workers - Inhalation; Long term systemic effects: 0.035 mg/m³ Workers - Inhalation; Long term local effects: 0.035 mg/m³ Workers - Inhalation; Short term local effects: 0.14 mg/m³

Available hazard data do not enable the derivation of a DNEL for dermal irritant

effects.

PNEC - Fresh water; 0.013 mg/l

- Marine water; 0.00125 mg/l

- Soil; >1 mg/kg - STP; >1 mg/l

8.2. Exposure controls

Protective equipment









Appropriate engineering

controls

Provide adequate general and local exhaust ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Personal protection

Always check applicability with your supplier of protective equipment.

Eye/face protection

If there is a risk of splashing, wear chemical resistant goggles or visor approved to BS EN166.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Nitrile gloves to BSEN374 are recommended. Break through times can vary depending on thickness, use and source.

Change gloves regularly.

Other skin and body

protection

Wear suitable protective clothing as protection against splashing or contamination. Wear

apron or protective clothing in case of contact.

Hygiene measures

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. Remove contaminated clothing and wash the skin thoroughly with soap and

water after work. Do not eat, drink or smoke when using this product.

Respiratory protection

In the case of hypersensitivity of the respiratory tract (eg asthmatics and those who suffer from chronic bronchitis) it is inadviseable to work with this product. In case of inadequate ventilation use a respirator suitable for organic vapours. Consult respirator manufacturer for

specific advice.

Environmental exposure

controls

Residues and empty containers should be taken care of as hazardous waste according to

local and national provisions.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Clear, yellowish liquid.

Odour Almost odourless.

Odour threshold Not determined.

pН pH (concentrated solution):

Melting point Not applicable.

Initial boiling point and range Not determined.

Flash point 190 approx°C

Evaporation rate Not applicable.

Evaporation factor Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or

explosive limits

Not applicable.

Other flammability Not applicable.

Vapour pressure approx 17 mbar @ °C

Vapour density Not determined.

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Relative density 1.05 approx @ 20°C

Bulk density Not determined.

Solubility(ies) Insoluble in water.

Partition coefficient Not applicable.

Auto-ignition temperature Not applicable.

Decomposition Temperature Not applicable.

Viscosity 7000 approx mPa s @ 20°C

Explosive properties Not applicable.

Explosive under the influence

of a flame

Not considered to be explosive.

Oxidising properties Not known.

Comments Information given is applicable to the product as supplied.

9.2. Other information

Other information None.

Refractive index Not determined.

Particle size Not applicable.

Molecular weight Not determined.

Volatility Not determined.

Saturation concentration Not determined.

Critical temperature Not determined.

Volatile organic compound This product contains a maximum VOC content of 4 (when mixed with resin) g/l.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The product will harden into a solid mass in contact with water and moisture.

10.2. Chemical stability

Stability Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous

Under normal conditions of storage and use, hazardous reactions will not occur.

reactions

10.4. Conditions to avoid

Conditions to avoid Water, moisture.

10.5. Incompatible materials

Materials to avoid Amines. Alcohols, glycols. Reacts with water forming carbon dioxide. Risk of bursting owing to

increased pressure in closed containers.

10.6. Hazardous decomposition products

Hazardous decomposition

products

Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Acute toxicity - oral

Notes (oral LD₅₀) No specific test data are available.

Acute toxicity - dermal

Notes (dermal LD₅₀) No specific test data are available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No specific test data are available.

ATE inhalation (vapours mg/l) 21.4

Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin.

Animal data No specific test data are available.

Human skin model test No specific test data are available.

Extreme pH No specific test data are available.

Serious eye damage/irritation

Serious eye damage/irritation Irritation of eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation Sensitising.

Skin sensitisation

Skin sensitisation Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitroNo specific test data are available.

Genotoxicity - in vivoNo specific test data are available.

Carcinogenicity

Carcinogenicity Suspected of causing cancer.

Target organ for

No specific target organs known.

carcinogenicity

IARC carcinogenicity Not listed.

Reproductive toxicity

Reproductive toxicity - fertility No specific test data are available.

Reproductive toxicity -

development

Not considered to be toxic to the reproductive system.

Specific target organ toxicity - single exposure

STOT - single exposure No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

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General information The product contains small quantities of isocyanate. May cause respiratory allergy. May

cause respiratory system irritation.

Inhalation Harmful by inhalation. Vapours irritate the respiratory system. May cause coughing and

difficulties in breathing. May cause sensitisation by inhalation.

Ingestion May cause discomfort if swallowed.

Skin contact May cause an allergic skin reaction.

Eye contact Causes serious eye damage.

Acute and chronic health

hazards

Prolonged exposure to the preparation may cause serious health effects. Frequent inhalation

of vapours may cause respiratory allergy.

Route of entry Inhalation Skin and/or eye contact

Target organs Eyes Respiratory system, lungs Skin

Medical symptoms Skin irritation. Irritation of eyes and mucous membranes. Gas or vapour in high concentrations

may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting. Prolonged or repeated exposure may cause the following adverse effects: Allergic rash. General respiratory distress, unproductive cough.

Difficulty in breathing.

Medical considerations Skin disorders and allergies. Pre-existing eye problems. Chronic respiratory and obstructive

airway diseases.

PREPOLYMER BASED ON AROMATIC POLYISOCYANATE

Acute toxicity - oral

Acute toxicity oral (LD₅o

mg/kg)

5,000.0

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Acute toxicity inhalation

(LC₅₀ vapours mg/l)

3,820.0

Species Rat

ATE inhalation (vapours

3,820.0

mg/l)

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Animal data Slightly irritating.

Serious eye damage/irritation

Serious eye Irritation of eyes is assumed.

damage/irritation

Respiratory sensitisation

Respiratory sensitisation Not sensitising. Guinea pig: Not sensitising.

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Skin sensitisation

Skin sensitisation - Guinea pig: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Ames test: Negative.

TOLUENE-2,4-DI-ISOCYANATE

Acute toxicity - oral

Acute toxicity oral (LD₅o

mg/kg)

5,110.0

Species Rat

ATE oral (mg/kg) 5,110.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 9,400.0

mg/kg)

Species Rabbit

ATE dermal (mg/kg) 9,400.0

Acute toxicity - inhalation

Acute toxicity inhalation

0.107

(LC50 vapours mg/l)

Species Rat

Notes (inhalation LC50) LD₅₀ 0.47, 1h mg/l, Inhalation, Rat

ATE inhalation (vapours

mg/l)

0.107

Skin corrosion/irritation

Severe skin irritation. Skin corrosion/irritation

Serious eye damage/irritation

Irritation of eyes is assumed. Serious eye

damage/irritation

Respiratory sensitisation

Respiratory sensitisation There is evidence that the product can cause respiratory hypersensitivity.

Skin sensitisation

Skin sensitisation - Guinea pig: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Ames test: Positive.

Carcinogenicity

Carcinogenicity Dose level: 0-0.05 - 0,15 ppm, Inhalation, Rat Suspected of causing cancer.

Reproductive toxicity

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Reproductive toxicity -

fertility

Two-generation study - NOAEL 0.08 ppm, Inhalation, Rat P Two-generation study - NOAEL 0.03 ppm, Inhalation, Rat F1 Two-generation study - NOAEL 0.02 ppm,

Inhalation, Rat F2a

Reproductive toxicity -

development

Teratogenicity: - NOAEL: 0.5 ppm, Inhalation, Rat Maternal toxicity: - NOAEL: 0.1 ppm, Inhalation, Rat Developmental toxicity: - NOAEL: 0.1 ppm, Inhalation, Rat

Specific target organ toxicity - single exposure

STOT - single exposure A single exposure may cause the following adverse effects: Asthma, pulmonary

sensitisation.

Not relevant.

Target organs Respiratory tract

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard

Inhalation Very toxic: danger of very serious irreversible effects through inhalation. May cause

sensitisation by inhalation.

Skin contact Prolonged or repeated exposure may cause severe irritation. May cause

sensitisation by skin contact.

Eye contact May cause severe eye irritation.

SECTION 12: Ecological Information

Ecotoxicity The product should not be allowed to enter drains, sewers or watercourses.

TOLUENE-2,4-DI-ISOCYANATE

Ecotoxicity Harmful to aquatic organisms. May cause long term adverse effects in the aquatic

environment.

12.1. Toxicity

Toxicity Not measured. Do not allow to enter waterways or drains

Acute toxicity - fish Not determined

Acute toxicity - aquatic

invertebrates

Not determined.

Acute toxicity - aquatic plants Not determined.

Acute toxicity - Not determined.

microorganisms

Acute toxicity - terrestrial Not determined.

Chronic toxicity - fish early life Not determined.

stage

Short term toxicity - embryo

and sac fry stages

Not determined.

Chronic toxicity - aquatic

invertebrates

Not determined.

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PREPOLYMER BASED ON AROMATIC POLYISOCYANATE

Acute toxicity - fish LC₅₀, 96 hours: No toxic effects, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic

invertebrates

EC₅₀, 48 hours: No toxic effects, Daphnia magna

Acute toxicity - aquatic

plants

EC₅₀, 72 hours: No toxic effects, Scenedesmus subspicatus

Acute toxicity -

microorganisms

EC₅₀, : >10000 mg/l, Activated sludge

TOLUENE-2,4-DI-ISOCYANATE

Acute toxicity - fish LC50, 96 hours: 133 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic

invertebrates

EC₅₀, 48 hours: 12.5 mg/l, Daphnia magna

Acute toxicity - aquatic

plants

EC₅₀, 96 hours: 4300 mg/l, Freshwater algae

Acute toxicity -

microorganisms

EC₅₀, 3 hours: > 100 mg/l, Activated sludge

Acute toxicity - terrestrial NOEC, 14 days: >1000 mg/kg, Eisenia Fetida (Earthworm)

Chronic toxicity - aquatic

invertebrates

NOEC, : 1.1 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product reacts with water to form a solid, insoluble reaction product which is not

biodegradable.

Phototransformation Not determined.

Stability (hydrolysis) Not determined.

Biodegradation Not readily biodegradable.

Biological oxygen demand Not determined.

Chemical oxygen demand Not determined.

PREPOLYMER BASED ON AROMATIC POLYISOCYANATE

Persistence and degradability

The product is not readily biodegradable.

TOLUENE-2,4-DI-ISOCYANATE

Phototransformation Water - Half-life: 1.71 days

Biodegradation - Degradation (%) 0: 28 days

Water - Half-life: 0.7 hours

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

GRIPDECK FLEXCOAT HARDENER

Partition coefficient Not applicable.

TOLUENE-2,4-DI-ISOCYANATE

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product is non-volatile.

Adsorption/desorption

Not determined.

coefficient

Henry's law constant Not determined.

Surface tension Not determined.

TOLUENE-2,4-DI-ISOCYANATE

Mobility Not considered mobile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB

This substance is not classified as PBT or vPvB according to current EU criteria.

assessment

TOLUENE-2,4-DI-ISOCYANATE

Results of PBT and vPvB This substance is not classified as PBT or vPvB according to current EU criteria. assessment

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Residues and empty containers should be taken care of as hazardous waste according to

local and national provisions.

Disposal methods Should be disposed of as hazardous waste via a licensed waste operator.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods

(IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Transport labels

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

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

National regulations Control of Substances Hazardous to Health Regulations 2002 (as amended).

Guidance Workplace Exposure Limits EH40.

Safety Data Sheets for Substances and Preparations.

Authorisations (Title VII

Regulation 1907/2006)

No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information Don Construction Products Ltd. Technical Datasheet.

Key literature references and

sources for data

Health and Safety Executive Guidance Note EH40 (amended annually). Workplace Exposure Limits. Type of Regulated Paint under the Air Pollution Control (Volatile Organic Compounds) Regulation of Hong Kong (Floor Coverings). VOC Content (mixed with resin) not exceeding

4g/litre.

Revision comments Section 1 update

Revision date 28/02/2017

Revision 12

Supersedes date 05/05/2016
SDS status Approved.

Risk phrases in full R20 Harmful by inhalation.

R26 Very toxic by inhalation.

R36 Irritating to eyes.

R36/37/38 Irritating to eyes, respiratory system and skin.

R40 Limited evidence of a carcinogenic effect.

R42/43 May cause sensitisation by inhalation and skin contact.

R43 May cause sensitisation by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

Hazard statements in full H3

H315 Causes skin irritation.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H330 Fatal if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H351 Suspected of causing cancer.

H412 Harmful to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.