

Protectakote 2K Metal Primer

Prepared in accordance with European Regulation 1907/2006/EC, Article 31

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name: PROTECTAKOTE 2K METAL PRIMER

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

Application of the substance: dual component metal primer

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Zest Polyurethanes

Alternator Avenue, Montague Gardens, Cape Town, South Africa, 7441, Tel: +27 (021) 555-3090

Further information obtainable from: The Technical Manager, Zest Polyurethanes

1.4 Emergency telephone number: Formbar Limited, Manor Farm Court Yard, West Hagbourne OX11 0ND. Tel: +44 (0)1235 850368

2. HAZARDS IDENTIFICATION

2.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR

2.1.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC and Directive 2001/59/EC: F Xn R40,11, 20/21/22, 66, 67, S36/37, 02, 13, 16, 43A, 46, 51.

Classification according to Directive 67/548/EEC and Directive 2006/102/EC: F Xn R40,11, 20/21/22, 66, 67, S36/37, 02, 13, 16, 43A, 46, 51.

Information concerning particular hazards for human and environment: Flammable, irritant.

Classification system: The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.1.2 Label elements

Labelling according to EU guidelines:

The product has been marked in accordance with EU Directives / respective national laws.

The product has been classified and marked in accordance with EU Directive / Ordinance on Hazardous Materials.

The R and S phrases may be omitted if packaging contains no more than 0.125 litre.

Risk phrases:

R10	Flammable
R20	Harmful by inhalation
R36/37/38	Irritating to eyes, respiratory system and skin

Safety phrases:

S24	Avoid contact with skin
S25	Avoid contact with eyes
S42	During spraying wear a cartridge-type respirator with cartridge for organic fumes
S43	In case of fire, use foam/carbon dioxide/dry powder. Use water fog to cool. Do NOT use water jets!

2.1.3 Other hazards

Results of PBT and vPvB assessment: Not applicable.

2.2 PROTECTAKOTE 2K METAL PRIMER BASE

2.2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC and Directive 2001/59/EC: F T N R45, 11, 22, 41, 43, 66, 67, 51/53.

Classification according to Directive 67/548/EEC and Directive 2006/102/EC: S01/02, 36/37/39, 13, 16, 26, 43A.

Information concerning particular hazards for human and environment: Flammable, irritant.

Classification system: The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2.2 Label elements

Labelling according to EU guidelines:

The product has been marked in accordance with EU Directives / respective national laws.

The product has been classified and marked in accordance with EU Directive / Ordinance on Hazardous Materials.

The R and S phrases may be omitted if packaging contains no more than 0.125 litre.

Risk phrases:

R10 Flammable
 R20 Harmful by inhalation
 R36/37/38 Irritating to eyes, respiratory system and skin

Safety phrases:

S24 Avoid contact with skin
 S25 Avoid contact with eyes
 S42 During spraying wear a cartridge-type respirator with cartridge for organic fumes
 S43 In case of fire, use foam/carbon dioxide/dry powder. Use water fog to cool. Do NOT use water jets!
 S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label where possible

2.2.3 Other hazards



Results of PBT and vPvB assessment: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR

3.1.1 Chemical characterisation: Mixtures




Description: Mixture of substances listed below with non-hazardous additions

Dangerous components			
CAS: 67-56-1 EINECS:	METHANOL :	 F, Xn R10, R20/21, R38 S2, S25	>3% by mass
CAS: 64-17-5 EINECS:	ETHYL ALCOHOL :	 XN R10,20	>10% by mass
CAS: 123-86-4 EINECS:	n-BUTYL ACETATE :	R22, R34	>5% by mass
CAS: 7664-38-2 EINECS:	ORTHO-PHOSPHORIC ACID – CONC :	R22, R34	<10% by mass

Refer to Section 16 for hazard symbol codes and statements of R and S phrases listed in this table.

3.2 PROTECTAKOTE 2K METAL PRIMER BASE**3.2.1 Chemical characterisation: Mixtures**

Description: Mixture of substances listed below with non-hazardous additions

Dangerous components			
CAS: 71-23-8 EINECS:	PROPYL ALCOHOL :	 F, Xi	>10% by mass
CAS: - EINECS: 649-356-00-4	SOLVENT NAPHTHA LIGHT AROMATIC	 Xn	>10% by mass
CAS: - EINECS: 024-007-00-3	ZINC CHROMATE PIGMENT :	T N	>5% by mass
CAS: 108-10-1 EINECS: 606-004-00-4	4-METHYLPENTAN-4-ONE :	 F Xi	<20% by mass

Refer to Section 16 for hazard symbol codes and statements of R and S phrases listed in this table.

4. FIRST AID MEASURES**4.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR****4.1.1 Description of first aid measures**

After skin contact: Use hand cleaner/soap and water. Remove contaminated clothing. If skin irritation continues, consult a doctor.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After inhalation: Move to fresh air. In case of any discomfort, seek medical attention immediately.

4.1.2 Most important symptoms and effects, both acute and delayed

Inhalation- move to fresh air.

4.1.3 Indication of any immediate medical attention and special treatment needed

If ingested, induce vomiting. Seek immediate medical attention.

4.2 PROTECTAKOTE 2K METAL PRIMER BASE**4.2.1 Description of first aid measures**

After skin contact: Use hand cleaner/soap and water. Remove contaminated clothing. If skin irritation continues, consult a doctor.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. After

inhalation: Move to fresh air. In case of any discomfort, seek medical attention immediately.

4.2.2 Most important symptoms and effects, both acute and delayed

Inhalation irritant.

4.2.3 Indication of any immediate medical attention and special treatment needed

If ingested, do not induce vomiting. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES**5.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR****5.1.1 Extinguishing media**

Suitable extinguishing agents: Foam. Carbon dioxide. Dry powder. Fog to cool and control.

Unsuitable extinguishing agents, for safety reasons: Do NOT use water jets. Containers can become pressurised if contents are contaminated with water.

5.1.2 Special hazards arising from the substance or mixture

Flammable with toxic fumes.

5.1.3 Advice for firefighters

Wear protective equipment and respirators. Blown or distorted containers should be handled with extreme caution.

5.2 PROTECTAKOTE 2K METAL PRIMER BASE**5.2.1 Extinguishing media**

Suitable extinguishing agents: Foam. Carbon dioxide. Dry powder. Fog to cool and control.

Unsuitable extinguishing agents, for safety reasons: Do NOT use water jets. Containers can become pressurised if contents are contaminated with water.

5.2.2 Special hazards arising from the substance or mixture

Flammable with toxic fumes.

5.2.3 Advice for firefighters

Wear protective equipment and respirators. Blown or distorted containers should be handled with extreme caution.

6. ACCIDENTAL RELEASE MEASURES**6.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR****6.1.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

6.1.2 Environmental precautions

Do not allow to enter drains or sewers / surface or ground water.

6.1.3 Methods and material for containment and cleaning up

Ensure adequate ventilation. Hazardous in liquid state. Solidify by reaction with water before disposal.

6.1.4 Reference to other sections

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for disposal information.

6.2 PROTECTAKOTE 2K METAL PRIMER BASE**6.2.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

6.2.2 Environmental precautions

Do not allow to enter drains or sewers / surface or ground water.

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Ensure adequate ventilation. Hazardous in liquid state. Solidify by reaction with water before disposal.

6.2.4 Reference to other sections

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for disposal information.

7. HANDLING AND STORAGE**7.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR****7.1.1 Precautions for safe handling**

Information about protection against fire and explosion: Flammable. No open flames. No smoking.

7.1.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: Store separately from any reactive substances, especially oxidisers.

Information about storage in one common facility: As above.

Further information about storage conditions: Keep containers tightly sealed.

7.1.3 Specific end use(s)

Open with care. Cover lid / bung with a cloth while releasing pressure.

Generates carbon dioxide gas from reaction with water. Do not seal if contaminated with water due to danger of bursting.

7.2 PROTECTAKOTE 2K METAL PRIMER BASE**7.2.1 Precautions for safe handling**

Information about protection against fire and explosion: Flammable. No open flames. No smoking.

7.2.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: Store separately from any reactive substances, especially oxidisers.

Information about storage in one common facility: As above.

Further information about storage conditions: Keep containers tightly sealed.

7.2.3 Specific end use(s)

Open with care. Cover lid / bung with a cloth while releasing pressure.

Generates carbon dioxide gas from reaction with water. Do not seal if contaminated with water due to danger of bursting.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: Adequate ventilation. See items 7.1 and 7.2.

8.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR

8.1.1 Control parameters

Ingredients with limit values that require monitoring in the workplace: Monitoring is not required. The product has no quantities of materials with critical values.

Additional information:

Component:	IOELV TWA (8 hours):		IOELV STEL (15 minutes):		Notes:
METHANOL	50 ppm	220 mg/m ³	100 ppm	441 mg/m ³	Skin
ETHYL ALCOHOL	1000 ppm	1900 mg	1000 ppm	1900 mg	-
n-BUTYL ACETATE	150 ppm	710 mg	200 ppm	950 mg	-
ORTHO-PHOSPHORIC ACID	2 mg	-	2 mg	-	-

8.1.2 Exposure controls

General protective and hygiene measures: Wash hands before breaks and at the end of work. Do not inhale gases/fumes.

Personal protective equipment:



Respiratory protection:

A cartridge-type respirator with cartridge for organic fumes is essential for spraying operations.



Eye protection:

Wear tightly sealed goggles or face shield.



Hand protection:

Wear nitrile rubber gloves.

Material of gloves: The selection of suitable gloves also depends on marks of quality, which vary from manufacturer to manufacturer. The resistance of the glove material cannot be calculated in advance and therefore has to be checked prior to the time of application.

Penetration of glove material: Observe the exact breakthrough time supplied by the manufacturer.

Skin protection: Wear overalls and safety boots.

8.2 PROTECTAKOTE 2K METAL PRIMER BASE

8.2.1 Control parameters

Ingredients with limit values that require monitoring in the workplace: Monitoring is not required. The product has no quantities of materials with critical values.

Additional information:

Component:	IOELV TWA (8 hours):		IOELV STEL (15 minutes):		Notes:
METHANOL	200 ppm	260 mg/m ³	250 ppm	310 mg/m ³	Skin

ETHYL ALCOHOL	1000 ppm	1900 mg	-	1	-
n-BUTYL ACETATE	200 ppm	950 mg	200 ppm	950 mg	-
ORTHO-PHOSPHORIC ACID	-	2 mg	-	2 mg	-

8.2.2 Exposure controls

General protective and hygiene measures: Wash hands before breaks and at the end of work. Do not inhale gases/fumes.

Personal protective equipment:



Respiratory protection:

A cartridge-type respirator with cartridge for organic fumes is essential for spraying operations.



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Penetration of glove material: Observe the exact breakthrough time supplied by the manufacturer.

Skin protection: Wear overalls and safety boots

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR

9.1.1 General information

Appearance:

Physical state	Liquid
Colour	Clear
Odour	Solvent
Odour threshold	Not determined
pH value:	N/A

Change in condition:

Melting point/Melting range	N/A
Boiling point/Boiling range	>35 °C
Flash point	23 °C
Flammability (solid, gaseous)	Flammable
Ignition temperature	-
Decomposition temperature	200 °C
Self-igniting	Product is not self-igniting.
Danger of explosion	Explosion of mixtures with oxygen possible.

Explosion limits:

Upper	2.1 % by volume
Lower	11.5 % by volume
Vapour pressure at 20 °C	14.2 hPa
Density at 20 °C	0.86 g/cm ³
Relative density	0.86 (water = 1.00)
Vapour density	Heavier than air

Evaporation rate	Not determined
Solubility in / Miscibility with water	Not miscible, reacts with water
Segregation coefficient (n-octanol/water)	Not determined

Viscosity:

Dynamic at 20 °C	90-110 ku (Krebbs units)
Kinematic	Not determined

Solvent content:

Organic solvents	< 50 % by mass
Water	< 0.1 % by mass
Solids content	> 40 % by mass or 35 % by volume

9.1.2 Other information

No further relevant information available.

VOC (EU)	< 50 % by mass
VOC(EU)	< 650 g/l
VOCV	< 65 % by volume

9.2 PROTECTAKOTE 2K METAL PRIMER BASE**9.2.1 General information****Appearance:**

Physical state	Liquid
Colour	Clear
Odour	Pungent
Odour threshold	Not determined
pH value:	N/A

Change in condition:

Melting point/Melting range	< -46 °C
Boiling point/Boiling range	>35 °C
Flash point	23 °C
Flammability (solid, gaseous)	Flammable
Ignition temperature	> 200 °C
Decomposition temperature	200 °C
Self-igniting	Product is not self-igniting.
Danger of explosion	Explosion of mixtures with oxygen possible.

Explosion limits:

Upper	2.1 % by volume
Lower	11.5 % by volume
Vapour pressure at 20 °C	14.2 hPa
Density at 20 °C	0.9 g/cm ³
Relative density	0.9 (water = 1.00)
Vapour density	Heavier than air
Evaporation rate	Not determined
Solubility in / Miscibility with water	Not miscible, reacts with water
Segregation coefficient (n-octanol/water)	Not determined

Viscosity:

Dynamic at 20 °C	56 - 58 ku (Krebbs units)
Kinematic	Not determined

Solvent content:

Organic solvents	< 30 % by mass
Water	< 0.1 % by mass
Solids content	> 70 % by mass or 65 % by volume

9.2.2 Other information

No further relevant information available.

VOC (EU)	< 60 % by mass
VOC(EU)	< 650 g/l
VOCV	< 65 % by volume

10. STABILITY AND REACTIVITY**10.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR****10.1.1 Reactivity**

None.

10.1.2 Chemical stability

Thermal decomposition / conditions to be avoided: Could produce static discharge – use earthing.

10.1.3 Possibility of hazardous reactions

Stable if stored under normal conditions.

10.1.4 Conditions to avoid

When exposed to abnormally high temperatures containers will bulge and possibly burst.

10.1.5 Incompatible materials

Oxidisers. Reacts with water, generating carbon dioxide gas.

10.1.6 Hazardous decomposition products

Hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke may be produced.

10.2 PROTECTAKOTE 2K METAL PRIMER BASE**10.2.1 Reactivity**

As per alcohols.

10.2.2 Chemical stability

Thermal decomposition / conditions to be avoided: Could produce static discharge – use earthing.

10.2.3 Possibility of hazardous reactions

Stable if stored under normal conditions.

10.2.4 Conditions to avoid

When exposed to abnormally high temperatures containers will bulge and possibly burst.

10.2.5 Incompatible materials

Oxidisers. Reacts with water, generating carbon dioxide gas.

10.2.6 Hazardous decomposition products

Hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke may be produced.

11. TOXICOLOGICAL INFORMATION**11.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR****Information on toxicological effects**

Acute toxicity: LD₅₀ / LC₅₀ values relevant for classification:

Oral (LD ₅₀)	>500 mg (derived)
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Human carcinogen Cat. 1

Primary irritant effect: Skin and Inhalation irritant.

11.2 PROTECTAKOTE 2K METAL PRIMER BASE**Information on toxicological effects**

Acute toxicity: LD₅₀ / LC₅₀ values relevant for classification:

Oral (LD ₅₀)	t.b.e.
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Human carcinogen Cat 1.

12. ECOLOGICAL INFORMATION**12.1 PROTECTAKOTE 2K METAL PRIMER ACTIVATOR****12.1.1 Toxicity**

Aquatic toxicity: None of the components is persistent in the aquatic environment.

12.1.2 Persistence and degradability

Biodegradable. Once solidified, can be disposed of in landfill sites (consult local regulations).

12.1.3 Bioaccumulative potential

Not bioaccumulative.

12.1.4 Mobility in soil

Low.

Additional ecological information:

General notes: Medium to long-term environmental effects. Contain, monitor and remove.

12.1.5 Results of PBT and vPvB assessment

Not applicable.

12.1.6 Other adverse effects

No further relevant information available.

12.2 PROTECTAKOTE 2K METAL PRIMER BASE**12.2.1 Toxicity**

Aquatic toxicity: None of the components is persistent in the aquatic environment.

12.2.2 Persistence and degradability

Biodegradable. Once solidified, can be disposed of in landfill sites (consult local regulations).

12.2.3 Bioaccumulative potential

Not bioaccumulative.

12.2.4 Mobility in soil

Low.

Additional ecological information:

General notes: Medium to long term environmental effects. Contain, monitor and remove. Contains chromate.

12.2.5 Results of PBT and vPvB assessment

Not applicable.

12.2.6 Other adverse effects

No further relevant information available.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Recommendation: Hazardous in liquid state. Solidify by reaction with water before disposal. Danger of bursting – do not seal. Use reputable waste disposal contractors. Destroy used containers. Consult local official regulations.

European waste catalogue	
08 00 00	Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks.
08 01 00	Wastes from MFSU and removal of paint and varnish.
08 01 11	Waste paint and varnish containing organic solvents or other dangerous substances.

13.2 Uncleaned packaging

Recommendation: Leave container unsealed for 3 to 4 days to solidify from atmospheric moisture. Once solid, container may be disposed of in a landfill site. Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION**14.1 UN-Number**

ADR, IMDG, IATA UN 1263



14.2 UN proper shipping name

ADR 1263 PAINT

IMDG, IATA

PAINT

14.3 Transport hazard classes

ADR		IMDG, IATA	
			
Class	3 Flammable liquids	Class	3 Flammable liquids
Label	3	Label	3

IMO class: 3.2
 EA code: 153
 HAZCHEM code: 3 W E

14.4 Packing group

ADR, IMDG, IATA III

14.5 Environmental hazards

Marine pollutant: ND (Not Dangerous)

14.6 Special precautions for user

Warning: Flammable liquids
 Danger code (Kemler): 38
 EMS Number: F-E~S-E

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

Not applicable

Transport/Additional information: For ADR and IMDG: Transport and packing are in accordance with the regulation for limited quantities. This product is therefore non-dangerous goods.

ADR

Limited quantities (LQ) 1 L and 4 L
 Transport category 3

15. REGULATORY INFORMATION

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

Labelling according to EU guidelines:

The product has been marked in accordance with EU Directives / respective national laws.

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

The R and S phrases may be omitted if packaging contains no more than 0.125 litre.

Conforms to EC regulation number 1907/2006 REACH, Annex II.

Risk phrases: R10 Flammable
 R20 Harmful by inhalation
 R36/37/38 Irritating to eyes, respiratory system and skin
 R42 May cause sensitisation by inhalation

Safety phrases: S24 Avoid contact with skin
 S25 Avoid contact with eyes
 S42 During spraying wear a cartridge-type respirator with cartridge for organic fumes
 S43 In case of fire, use foam/carbon dioxide/dry powder. Use water fog to cool. Do NOT use water jets!
 S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label where possible

EC Label Name:
EC Classification:
EC Symbols:
National legislation

PAINT
 Flammable. Harmful.
 F, Xn



Further information:

HS (G) 178, Spraying of Flammable Liquids, HSE., HS (G) 176, Storage of Flammable Liquids in Tanks, HSE., HS (G) 51, Storage of Flammable Liquid in Containers, HSE., HS (G) 37, An introduction to Local Exhaust Ventilation, HSE., Health and Safety at Work etc Act, 1974, and relevant Statutory Provisions., Environmental Protection Act, 1990 and associated legislation., The Special Waste Regulations, 1996 and amendments., The Chemicals (Hazard Information and Packaging for Supply) Regulations, 1994 and amendments., EH 40, Occupational Exposure Limits, HSE. Revised annually., HS(G) 53, Respiratory Protective Equipment - A Practical Guide for Users, HSE., HS(G) 97, A Step by Step guide to COSHH Regulations, HSE., EH 173, Monitoring Strategies for Toxic Substances, HSE.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

16. OTHER INFORMATION

PAY SPECIAL ATTENTION TO STORAGE AND HANDLING REQUIREMENTS.

IN CASE OF ANY DISCOMFORT FROM CONTACT WITH THE MIXTURE, ALWAYS SEEK MEDICAL ADVICE.

Hazard codes, R phrases and S phrases listed in item 3.2:

F = Flammable; N = Dangerous for the environment; T = Toxic; Xn = Harmful

R10	Flammable	S2	Keep out of the reach of children
R20/21	Harmful by inhalation and in contact with skin	S25	Avoid contact with eyes
R23	Toxic by inhalation	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
R36/37/38	Irritating to eyes, respiratory system and skin	S28	After contact with skin, wash immediately with plenty of soap and water
R38	Irritating to skin	S38	In case of insufficient ventilation, wear suitable respiratory equipment
R42/43	May cause sensitisation by inhalation and skin contact	S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment	S61	Avoid release into the environment. Refer to special instructions/ safety data sheet

This MSDS is prepared in accordance with European Regulation 1907/2006/EC, Article 31, Addendum II.

All information is given in good faith, but without any guarantee in respect of accuracy. No responsibility is accepted for errors or omissions or the consequences thereof.

Updated: March 2015 (this supercedes all previous publications)