SAFETY DATA SHEET
ARDEX R3E Part B

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

1.1. Product identifier

Product name	ARDEX R3E Part B
Product No.	18443, 18444

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

Identified uses	Primer.

1.3. Details of the supplier of the safety data sheet

Supplier	Ardex UK Limited Homefield Road Haverhill Suffolk CB9 8QP Tel. 01440 714939 Fax. 01440 716667
Contact Person	safetydatasheets@ardex.co.uk

1.4. Emergency telephone number

+44 (0)870 190 6777 (24 hours)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Acute Tox. 4 - H302;Acute Tox. 4 - H332;Skin Corr. 1B - H314;Skin Sens. 1 - H317;Repr. 2 - H361f
Environment	Not classified.

Classification (1999/45/EEC) Xn;R20/22. Repr. Cat. 3;R62. C;R34. R43.

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

2.2. Label elements

Contains m-phenylenebis(methylamine)

Label In Accordance With (EC) No. 1272/2008

Signal Word Danger

Hazard Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H361f	Suspected of damaging fertility.

Precautionary Statements

P271	Use only outdoors or in a well-ventilated area.

P280	Wear protective gloves.
	Wear eye protection.
P273	Avoid release to the environment.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local regulations.
	Dispose of contents/container in accordance with regional regulations.
	Dispose of contents/container in accordance with national regulations.
	Dispose of contents/container in accordance with international regulations.

Supplementary Precautionary Statements

P260	Do not breathe vapour/spray.
P302+352	IF ON SKIN: Wash with plenty of soap and water.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

2,4,6-tris(dimethylaminomethyl)phenol — < 10 %

CAS-No.: 90-72-2 EC No.: 202-013-9 Registration Number: 01-2119560597-27-xxxx

Classification (EC 1272/2008)	Classification (67/548/EEC)
Skin Corr. 1B - H314	Xn;R22.
Skin Sens. 1 - H317	C;R34.
Aquatic Chronic 3 - H412	Xi;R36/38.
	R52/53.

3-aminomethyl-3,5,5-trimethylcyclohexylamine — < 10 %

CAS-No.: 2855-13-2 EC No.: 220-666-8 Registration Number: 01-211-9514687-32-xxxx

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	Xn;R21/22.
Acute Tox. 4 - H312	C;R34.
Skin Corr. 1B - H314	R43,R52/53.
Skin Sens. 1 - H317	
Aquatic Chronic 3 - H412	

3-AMINOPROPYLDIMETHYLAMINE — < 10 %

CAS-No.: 109-55-7 EC No.: 203-680-9 Registration Number: 01-2119486842-27-xxxx

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 3 - H226	R10
Acute Tox. 4 - H302	C;R34
Skin Corr. 1B - H314	Xn;R22
Skin Sens. 1 - H317	R43

4,4'-ISOPROPYLIDENEDIPHENOL — < 10 %

CAS-No.: 80-05-7 EC No.: 201-245-8 Registration Number: 01-2119457856-23-xxxx

Classification (EC 1272/2008)	Classification (67/548/EEC)
Eye Dam. 1 - H318	Repr. Cat. 3;R62
Skin Sens. 1 - H317	R43
Repr. 2 - H361f	Xi;R37,R41
STOT SE 3 - H335	

Benzylalkohol		25 - 50 %
CAS-No.: 100-51-6	EC No.: 202-859-9	Registration Number: 01-2119492630-38-xxxx

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302 Acute Tox. 4 - H332 Eye Irrit. 2 - H319	Xn;R20/22

m-phenylenebis(methylamine)		< 10 %
CAS-No.: 1477-55-0	EC No.: 216-032-5	Registration Number: 01-2119480150-50-xxxx

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Xn;R20/22. C;R34. R43,R52/53.

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

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Inhalation

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion

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

Immediately flush with plenty of water. Remove any contact lenses and open eyes wide apart. Call an ambulance and continue flushing during transportation to hospital. Bring these instructions.

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

General information

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation

Vapours may cause headache, fatigue, dizziness and nausea.

Ingestion

Nausea, vomiting.

Skin contact

Skin irritation. Allergic rash.

Eye contact

May cause blurred vision and serious eye damage.

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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Use: Powder. Carbon dioxide (CO_2). Water.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire, toxic gases (CO, CO2, NOx) may be formed.

Unusual Fire & Explosion Hazards

Fire causes formation of toxic gases.

Specific hazards

The product is non-combustible. If heated, toxic vapours may be formed.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours. Use supplied air respirator if product is involved in a fire.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Absorb in vermiculite, dry sand or earth and place into containers.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Mechanical ventilation or local exhaust ventilation is required.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container. Keep separate from food, feedstuffs, fertilisers and other sensitive material.

Storage Class

Unspecified storage.

7.3. 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

Benzylalkohol (CAS: 100-51-6)

DNEL				
Industry	Dermal	Long Term	9, 5	mg/kg/day
Industry	Inhalation.	Long Term	90	mg/m3
PNEC				
Freshwater	1	mg/l		
Marinewater	0, 1	mg/l		

4,4'-ISOPROPYLIDENEDIPHENOL (CAS: 80-05-7)

DNEL			
Professional	Dermal	1, 4	mg/kg/day
Professional	Inhalation.	10	mg/m3
PNEC			
Freshwater	0, 018	mg/l	
Marinewater	0, 016	mg/l	

m-phenylenebis(methylamine) (CAS: 1477-55-0)

PNEC		
Freshwater	0.094	mg/l
Marinewater	0.0094	mg/l

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

DNEL				
Professional	Inhalation.	Long Term	Systemic Effects	0, 526 mg/kg/day
Professional	Inhalation.	Short Term	Local Effects	20, 1 mg/m3
Consumer	Oral	Long Term	Systemic Effects	0, 526 mg/kg/day
PNEC				
Soil	1, 121	mg/kg		
Freshwater	0, 06	mg/l		
Sediment	5, 784	mg/kg		
Marinewater	0, 006	mg/l		
Sediment (Marinewater)	0, 578	mg/kg		

8.2. Exposure controls

Protective equipment

Process conditions

Provide eyewash station.

Engineering measures

Provide adequate ventilation.

Respiratory equipment

Wear suitable respiratory protection. It is recommended to use respiratory equipment with combination filter, type A2/P2.

Hand protection

Use suitable protective gloves if risk of skin contact. Gloves of nitrile rubber, PVA or Viton are recommended.

Eye protection

Wear approved, tight fitting safety glasses where splashing is probable.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash contaminated clothing before reuse. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Fluid.
Colour	Yellowish
Odour	Amine.
Solubility	Not soluble in water.
Initial boiling point and boiling range (°C)	ca. 135°C
Melting point (°C)	
Not determined.	
Relative density	1.02 23°C

Bulk Density
Not applicable.

Vapour pressure	0.3 mbar

pH-Value, Conc. Solution
Not determined.

Viscosity	600 - 1400 mPas 25°C
Flash point (°C)	ca. 86°C
Auto Ignition Temperature (°C)	380°C

Explosive properties
Not applicable.

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

No particular stability concerns.

10.3. Possibility of hazardous reactions

Not known.
Hazardous Polymerisation
Not relevant

10.4. Conditions to avoid

Not known.

10.5. Incompatible materials

Materials To Avoid
Strong oxidising substances.

10.6. Hazardous decomposition products

When heated, toxic and corrosive vapours/gases may be formed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information
No information available.

Inhalation
Vapour may irritate respiratory system or lungs.

Ingestion
Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.

Skin contact
May cause sensitisation by skin contact.

Eye contact
Irritation of eyes and mucous membranes.

Health Warnings
Irritating to skin. Irritant of eyes and mucous membranes.

Route of entry
Inhalation.
Skin and/or eye contact.

Toxicological information on ingredients.

Benzylalkohol (CAS: 100-51-6)

Toxic Dose 1 - LD 50
1040 mg/kg (oral-mouse)
Toxic Dose 2 - LD 50
1230 mg/kg (oral rat)

Acute toxicity:
Acute Toxicity (Oral LD50)
1040 mg/kg Rabbit

Acute Toxicity (Dermal LD50)
2000 mg/kg Rabbit

3-AMINOPROPYLDIMETHYLAMINE (CAS: 109-55-7)

Acute toxicity:
Acute Toxicity (Oral LD50)
410 mg/kg Rat

Acute Toxicity (Dermal LD50)
1200 mg/kg Rat

Acute Toxicity (Inhalation LC50)
24.8 mg/l (vapours) Rat 4 hours

4,4'-ISOPROPYLIDENEDIPHENOL (CAS: 80-05-7)

Toxic Dose 1 - LD 50
3250 mg/kg (oral rat)

Acute toxicity:

Acute Toxicity (Dermal LD50)
3000 mg/kg Rabbit

Acute Toxicity (Inhalation LC50)
> 5 mg/l (dust/mist) Rat 4 hours

m-phenylenebis(methylamine) (CAS: 1477-55-0)

Toxic Conc. - LC 50
1, 42 mg/l/4h (inh-rat)

Acute toxicity:
Acute Toxicity (Oral LD50)
930 mg/kg Rat

Acute Toxicity (Dermal LD50)
> 3100 mg/kg Rabbit

Skin Corrosion/Irritation:
Corrosive to skin.

Respiratory or skin sensitisation:
Skin sensitisation
Local Lymph Node Assay (LLNA) Mouse
Sensitising. OECD 429 Skin Sensitization: Local Lymph / Node Assay : skin - guinea pig / mouse - sensitization

Germ cell mutagenicity:
OECD 473 In vitro Mammalian Chromosomal Aberration Test: negativ OECD 476 In vitro Mammalian Cell Gene Mutation Test: negativ
This substance has no evidence of mutagenic properties.
OECD 471 Bacterial Reverse Mutation Test: negativ OECD 474 Mammalian Erythrocyte Micronucleus Test: negativ
Does not contain any substances known to be mutagenic.

Carcinogenicity:
No evidence of carcinogenicity in animal studies

Reproductive Toxicity:
Reproductive Toxicity - Fertility
NOAEL 150 mg/kg Oral Rat
OECD 421 Reproduction / Developement Toxicity Screening Test: Rat - Oral 150 mg/kg NOEL

Aspiration hazard:
Health Warnings
OECD 407 Repeated Dose 28-day Oral Toxicity Study in Rodents - NOEL - 150 mg/Kg

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

Acute toxicity:
Acute Toxicity (Oral LD50)
1030 mg/kg Rat

Acute Toxicity (Dermal LD50)
1840 mg/kg Rabbit

Skin Corrosion/Irritation:
OECD 405 Acute Eye Irritation/Corrosion: rabit / eyes / corrosive

Respiratory or skin sensitisation:
Skin sensitisation
Guinea pig maximization test (GPMT): Guinea Pig

Germ cell mutagenicity:
Based on available data the classification criteria are not met.

Reproductive Toxicity:
Reproductive Toxicity - Development
Developmental toxicity: NOAEL > 250 mg/kg Rat

Specific target organ toxicity - repeated exposure:
OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents / NOAEL / result 60 mg/kg / target: kidneys

Acute toxicity:

Acute Toxicity (Oral LD50)

2169 mg/kg Rat

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Dangerous for the environment if discharged into watercourses. Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Acute Fish Toxicity

Giftig für Fische

Ecological information on ingredients.

Benzylalkohol (CAS: 100-51-6)

Acute Toxicity - Fish

LC50 96 hours 10 mg/l Lepomis macrochirus (Bluegill)
LC50 96 hours 460 mg/l Pimephales promelas (Fat-head Minnow)
EC 50, 48 Hrs, Daphnia, mg/l

23 mg/l
Acute Toxicity - Aquatic Plants

EC50 3 hours 35 mg/l Marinewater algae
EC50 96 hours 640 mg/l Scenedesmus subspicatus

3-AMINOPROPYLDIMETHYLAMINE (CAS: 109-55-7)

Acute Toxicity - Fish

LC50 96 hours 122 mg/l Leuciscus idus (Golden orfe)
EC 50, 48 Hrs, Daphnia, mg/l

59, 5
Acute Toxicity - Aquatic Plants

EC50 72 hours 53, 5 mg/l Scenedesmus subspicatus
Acute Toxicity - Microorganisms

EC50 30 min > 1000 mg/l Activated sludge

4,4'-ISOPROPYLIDENEDIPHENOL (CAS: 80-05-7)

LC 50, 96 Hrs, Fish mg/l

42
Acute Toxicity - Aquatic Plants

< 10 mg/l Marinewater plants

m-phenylenebis(methylamine) (CAS: 1477-55-0)

LC 50, 96 Hrs, Fish mg/l

87, 6 mg/l
Acute Toxicity - Fish

LC50 96 hours > 100 mg/l Onchorhynchus mykiss (Rainbow trout)
LC50 96 hours 75 mg/l Leuciscus idus (Golden orfe)
EC 50, 48 Hrs, Daphnia, mg/l

15, 2 mg/l
Acute Toxicity - Aquatic Plants

EC50 72 hours 20, 3 mg/l Selenastrum capricornutum
EC50 72 hours 12 mg/l Scenedesmus subspicatus
Acute Toxicity - Microorganisms

EC50 30 min > 1000 mg/l Activated sludge

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

Acute Toxicity - Fish

LC50 96 hours 110 mg/l Leuciscus idus (Golden orfe)
EC 50, 48 Hrs, Daphnia, mg/l

23 mg/l
DIN 38412 (Lumistox test)
Endpoint: Akut EC 50
Exposition: 24 h
Spezies: Daphnia
Result: 42 mg/l
Acute Toxicity - Aquatic Plants

EC50 72 hours 37 mg/l Scenedesmus subspicatus
72 hours > 50 (ErC50) mg/l Scenedesmus subspicatus

2,4,6-tris(dimethylaminomethyl)phenol (CAS: 90-72-2)

Acute Toxicity - Aquatic Plants

EC50 72 hours 84 mg/l Scenedesmus subspicatus

12.2. Persistence and degradability

No further relevant information available.
Degradability

The product is expected to be slowly biodegradable.

Ecological information on ingredients.

m-phenylenebis(methylamine) (CAS: 1477-55-0)

OECD 301B Ready Biodegradability - CO2 Evolution Test / 28 days: 49 %

Degradability

The product is not readily biodegradable.

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

EU EC C.4-A Biodegradation: Determination of the "Ready " Biodegradability: Dissoveld Organic Carbon (DOC) Die-Away test. 28 days: 8 %

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

Ecological information on ingredients.

m-phenylenebis(methylamine) (CAS: 1477-55-0)

Bioaccumulation factor

BCF < 3 Cyprinus carpio (Common carp)

Partition coefficient

log Pow 0.18 OECD Test 107

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

low

12.4. Mobility in soil

Mobility:

Not relevant, due to the form of the product.

Ecological information on ingredients.

m-phenylenebis(methylamine) (CAS: 1477-55-0)

Mobility:

The product is non-volatile.

Henry's Law Constant

6.94 E-11 atm m3/mol 25°C

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

Mobility:

Not availiable

Adsorption/Desorption Coefficient

Soil Koc 928

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

Ecological information on ingredients.

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

No information required.

Ecological information on ingredients.

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2)

Not known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority. The packaging must be empty (drop-free, when inverted). The packaging should be collected for reuse.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

Waste Class

08 04 10: adhesive and sealant waste with exception of 08 04 09

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN)	2735
UN No. (IMDG)	2735
UN No. (ICAO)	2735

14.2. UN proper shipping name

Proper Shipping Name	AMINES, LIQUID, CORROSIVE, N.O.S. (2, 4, 6-tris(dimethylaminomethyl)phenol, Isophorondiamine)

14.3. Transport hazard class (es)

ADR/RID/ADN Class	8
ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label No.	8
IMDG Class	8
ICAO Class/Division	8

Transport Labels

14.4. Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS	F-A, S-B
Emergency Action Code	2X
Hazard No. (ADR)	80
Tunnel Restriction Code	(E)

14.7. Transport in bulk according to 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

EU Legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

Water hazard classification

WGK 2

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Issued By	Research and Development Manager
Revision Date	26/04/2017
Revision	5
Supersedes date	22/04/2015

Risk Phrases In Full

R34	Causes burns.
R10	Flammable.
R20/22	Harmful by inhalation and if swallowed.
R20	Harmful by inhalation.
R22	Harmful if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36/38	Irritating to eyes and skin.
R37	Irritating to respiratory system.
R43	May cause sensitisation by skin contact.
R62	Possible risk of impaired fertility.
R41	Risk of serious damage to eyes.

Hazard Statements In Full

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H412	Harmful to aquatic life with long lasting effects.