1. Identification of the substrate/preparation and of the company/undertaking

1.1. Product identifier

Trade name/designation : CALTECH CONCRETE PRIMER BASE (A)

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

Main use category :Industrial uses
Use of the substance/mixture :Primer

1.3. Manufacturer/Supplier

Supplier:
Alumasc Exterior Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside, WA9 4JG. United Kingdom
Tel: +44 (0)1744 648400 E-mail: roofing@alumasc-exteriors.co.uk

1.4. Emergency telephone number

Emergency telephone :Alumasc 01744 648 400
(Mon-Thur – 08.30-17.00 Fri – 08.30-16.00)

2. Hazards identification

2.1 Classification of the substance or mixture

Product definition: Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2. Labelling according to Regulation (EU) 1272/2008

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.

Precautionary statements
Prevention : P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 In case of inadequate ventilation wear respiratory protection.

Response : P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:
202-966-0 4,4'-methylenediphenyl diisocyanate
227-534-9 diphenylmethane-2,4'-diisocyanate
9016-87-9 Diphenylmethanediisocyanate, isomeres and homologues
219-799-4 2,2'-methylenediphenyl diisocyanate

Additional Labelling:
EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition and information about the components

3.1. Substance

Mixture

3.2. Mixture

Chemical name CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
4,4'-methylenediphenyl diisocyanate 101-68-8 202-966-0 01-2119457014-47-XXXX	Acute Tox.4; H332 Eye Irrit.2; H319 STOT SE3; H335 Skin Irrit.2; H315 Resp. Sens.1; H334 Skin Sens.1; H317 Carc.2; H351 STOT RE2; H373	>= 5 - < 10
diphenylmethane-2,4'-diisocyanate 5873-54-1 227-534-9 01-2119480143-45-XXXX	Acute Tox.4; H332 Eye Irrit.2; H319 STOT SE3; H335 Skin Irrit.2; H315 Resp. Sens.1; H334 Skin Sens.1; H317 Carc.2; H351 STOT RE2; H373	>= 5 - < 10
propyl acetate 109-60-4 203-686-1	Flam. Liq.2; H225 Eye Irrit.2; H319 STOT SE3; H336	>= 5 - < 10
Diphenylmethanediisocyanate, isomeres and homologues 9016-87-9	Acute Tox.4; H332 Skin Irrit.2; H315 Eye Irrit.2; H319 Resp. Sens.1; H334 Skin Sens.1; H317 Carc.2; H351 STOT SE3; H335 STOT RE2; H373	>= 1 - < 2,5

Chemical name CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
2,2'-methylenediphenyl diisocyanate 2536-05-2 219-799-4 01-2119927323-43-XXXX	Acute Tox.4; H332 Eye Irrit.2; H319 STOT SE3; H335 Skin Irrit.2; H315 Resp. Sens.1; H334 Skin Sens.1; H317 Carc.2; H351 STOT RE2; H373	>= 0,1 - < 1
Substances with a workplace exposure limit :		
2-methoxy-1-methylethyl acetate 108-65-6 203-603-9 01-2119475791-29-XXXX Contains: 2-methoxypropyl acetate <= 1 %	Flam. Liq.3; H226	>= 25 - < 50

See Section 16 for the full text of the H statements declared above.

4. First-aid measures

4.1 Description of first aid measures

General : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.

Eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

Inhalation : Move to fresh air.
Consult a physician after significant exposure.

Skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

Ingestion : Do not induce vomiting without medical advice.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Asthmatic appearance Cough Respiratory disorder Allergic reactions Excessive lachrymation Erythema Dermatitis See Section 11 for more detailed information on health effects and symptoms.
Risks	:	irritant effects sensitising effects Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Alcohol-resistant foam, Carbon dioxide (CO2), Dry chemical
Unsuitable extinguishing media	:	Water, High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Do not use a solid water stream as it may scatter and spread fire
Hazardous combustion products	:	No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.
Additional information	:	Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Remove all sources of ignition. Deny access to unprotected persons. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions	:	Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapours or spray mist. Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating

and drinking should be prohibited in the application area. Take precautionary measures against static discharge. Open drum carefully as content may be under pressure. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Follow standard hygiene measures when handling chemical products

Advice on protection against fire and explosion : Use explosion-proof equipment. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take precautionary measures against electrostatic discharges.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations.

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters *	Basis *
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 274 mg/m3	GB EH40
		STEL	100 ppm 548 mg/m3	GB EH40
propyl acetate	109-60-4	TWA	200 ppm 849 mg/m3	GB EH40
		STEL	250 ppm 1.060 mg/m3	GB EH40
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	TWA	0,02 mg/m3	GB EH40
		STEL	0,07 mg/m3	GB EH40

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
4,4'-methylenediphenyl diisocyanate	101-68-8	urinary diamine: 1µmol/mol creatinine (Urine)	Post task	GB EH40 BAT
diphenylmethane-2,4'-diisocyanate	5873-54-1	urinary diamine: 1µmol/mol creatinine (Urine)	Post task	GB EH40 BAT
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	urinary diamine: 1µmol/mol creatinine (Urine)	Post task	GB EH40 BAT
2,2'-methylenediphenyl diisocyanate	2536-05-2	urinary diamine: 1µmol/mol creatinine (Urine)	Post task	GB EH40 BAT

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166
Eye wash bottle with pure water

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manufacturer specifications.
Suitable for short time use or protection against splashes:
Butyl rubber/nitrile rubber gloves (0,4 mm),
Contaminated gloves should be removed.
Suitable for permanent exposure:
Viton gloves (0.4 mm),
breakthrough time >30 min.

Skin and body protection : Protective clothing (e.g. Safety shoes acc. to EN ISO 20345, long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionally recommended for mixing and stirring work.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
organic vapor (Type A) and particulate filter
A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm
P1: Inert material; P2, P3: hazardous substances
Ensure adequate ventilation. This can be achieved by local exhaust extraction or by general ventilation. (EN 689 - Methods for determining inhalation exposure). This applies in particular

to the mixing / stirring area. In case this is not sufficient to keep the concentrations under the occupational exposure limits then respiration protection measures must be used.

Environmental exposure controls

General advice : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	light yellow
Odour	:	characteristic
Odour Threshold	:	No data available
Flash point	:	40 °C
Autoignition temperature	:	333 °C
Lower explosion limit (Vol-%)	:	1,5 %(V)
Upper explosion limit (Vol-%)	:	10,8 %(V)
Flammability	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
pH	:	No data available
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapour pressure	:	0,0337 hPa
Density	:	ca.1,1 g/cm3 at 20 °C
Water solubility	:	insoluble
Partition coefficient: noctanol /water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	>7 mm2/s at 40 °C
Relative vapour density	:	No data available
Evaporation rate	:	No data available

9.2 Other information

No additional information.

10. Stability and reactivity

10.1 Reactivity:

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability:

The product is chemically stable.

10.3 Possibility of hazardous reactions:

Hazardous reactions	:	Stable under recommended storage conditions. Vapours may form explosive mixture with air.

10.4 Conditions to avoid:

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials:

Materials to avoid	:	No data available

10.6 Hazardous decomposition products:

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

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Not classified based on available information.

Components:

4,4'-methylenediphenyl diisocyanate:
Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Test atmosphere: dust/mist
Method: Expert judgement

Diphenylmethanediisocyanate, isomeres and homologues:
Acute oral toxicity : LD50 Oral (Rat): > 10.000 mg/kg
Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement
Acute dermal toxicity : LD50 Dermal (Rabbit): > 9.400 mg/kg

2-methoxy-1-methylethyl acetate:
Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg
Acute dermal toxicity : LD50 Dermal (Rabbit): > 5.000 mg/kg

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitisation
Skin sensitisation: May cause an allergic skin reaction.
Respiratory sensitisation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Suspected of causing cancer.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
May cause respiratory irritation.

STOT - repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

12. Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Product:
Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

13. Disposal considerations

13.1 Waste treatment methods

Product : The generation of waste should be avoided or minimized wherever possible.
Empty containers or liners may retain some product residues.
This material and its container must be disposed of in a safe way.
Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Contaminated packaging : 15 01 10* packaging containing residues of or contaminated by dangerous substances

14. Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	Paint related material	Paint related material	Paint related material
14.3 Transport hazard class(es)	3. 	3. 	3. 
14.4 Packing group	III	III	III
14.5 Environmental hazards	No.	No.	No.
Additional information	ADR Tunnel code: (D/E)	**Emergency schedules (EmS):** F-E + S-E **Marine pollutant** (P) NO	

14.6 Special precautions for user

No data available

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

Not applicable

15. Regulatory information

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

Prohibition/Restriction
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Banned and/or restricted
(4,4'-methylenediphenyl diisocyanate)
(diphenylmethane-2,4'-diisocyanate)
(Diphenylmethanediisocyanate, isomeres and homologues)
(2,2'-methylenediphenyl diisocyanate)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	None of the components are listed (=> 0.1 %).
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

REACH Information : All substances contained in our Products are
- preregistered or registered by our upstream suppliers, and/or
- preregistered or registered by us, and/or
- excluded from the regulation, and/or
- exempted from the registration.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P5c	FLAMMABLE LIQUIDS	5.000 t	50.000 t
VOC-CH (VOCV)	: 33,86 %		
VOC-EU (solvent)	: 33,86 %		

If other regulatory information applies that is not already provided elsewhere in the Safety Data Sheet, then it is described in this subsection.

Health, safety and environmental regulation/legislation specific for the substance or mixture: : The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002
Control of Substances Hazardous to Health Regulations 2002
The Management of Health and Safety at Work Regulations 1999
Health and Safety at Work Act 1974
Environmental Protection Act 1990 & Subsidiary Regulations

15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

16. Other information

Full text of H-Statements

H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H332	:	Harmful if inhaled.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H351	:	Suspected of causing cancer.
H373	:	May cause damage to organs through prolonged or repeated exposure.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
Resp. Sens.	Respiratory sensitisation
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation
STOT SE	Specific target organ toxicity - single exposure
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
CAS	Chemical Abstracts Service
DNEL	Derived no-effect level
EC50	Half maximal effective concentration
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Code for Dangerous Goods
LD50	Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	Occupational Exposure Limit
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted no effect concentration
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	Substances of Very High Concern
vPvB	Very persistent and very bioaccumulative

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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