



SAFETY DATA SHEET

A07504

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

1.1. Product identifier

Product name A07504

Product number A07504, FP-000634

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

Identified uses Adhesive.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier APOLLO CHEMICALS LTD
SANDY WAY
AMINGTON INDUSTRIAL ESTATE
TAMWORTH
STAFFS
B77 4DS
T: +44 (0) 1827 54281
F: +44 (0) 1827 53030
E: sds@apollo.co.uk

1.4. Emergency telephone number

Emergency telephone +44 01827 69662 (NOT 24HRS - 8am-5pm mon-fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

Environmental hazards Not Classified

Human health Contains non-volatile isocyanate. Heating may generate vapours which irritate the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

Pictogram



Signal word Danger

A07504

Hazard statements	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. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	EUH204 Contains isocyanates. May produce an allergic reaction. P260 Do not breathe vapour/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P281 Use personal protective equipment as required. P284 [In case of inadequate ventilation] wear respiratory protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 Get medical advice/ attention if you feel unwell. P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor. P501 Dispose of contents/ container in accordance with national regulations.
Contains	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
Supplementary precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing vapour/spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P312 Call a POISON CENTER/ doctor if you feel unwell. P313 Get medical advice/ attention. P321 Specific treatment (see medical advice on this label). P332+P313 If skin irritation occurs: Get medical advice/ attention. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 If eye irritation persists: P362 Take off contaminated clothing. P363 Wash contaminated clothing before reuse. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

A07504

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE			30-60%
CAS number: 101-68-8	EC number: 202-966-0	REACH registration number: 01-2119457014-47-0000	
Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373			

2,2'DIMORPHOLINYLDIETHYL ETHER			<1%
CAS number: 6425-39-4	EC number: 229-194-7	REACH registration number: 01-2119969278-20-0000	
Classification Eye Irrit. 2 - H319			

The full text for all hazard statements is displayed in Section 16.

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 if any discomfort continues.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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	Irritation of nose, throat and airway. Coughing, chest tightness, feeling of chest pressure.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	Severe irritation, burning and tearing.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

A07504

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

Specific hazards	The product is non-combustible. Irritating gases or vapours.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting	Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.
Special protective equipment for firefighters	Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with non-combustible, absorbent material. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.
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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in closed original container at temperatures between 5°C and 25°C.
Storage class	Chemical storage.

7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

A07504

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³(Sen)

WEL = Workplace Exposure Limit

Ingredient comments

WEL = Workplace Exposure Limits

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE (CAS: 101-68-8)**DNEL**

Workers - Inhalation; Short term systemic effects: 0.1 mg/m³
 Workers - Dermal; Short term local effects: 28.7 mg/cm²
 Workers - Inhalation; Short term local effects: 0.1 mg/m³
 Workers - Inhalation; Long term systemic effects: 0.05 mg/m³
 Workers - Inhalation; Long term local effects: 0.05 mg/m³
 Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day
 Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day
 Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day
 Consumer - Dermal; Short term local effects: 17.2 mg/cm²
 Consumer - Inhalation; Short term local effects: 0.05 mg/m³
 Consumer - Inhalation; Long term systemic effects: 0.025 mg/m³
 Consumer - Inhalation; Long term local effects: 0.025 mg/m³
 Consumer - Inhalation; Short term systemic effects: 0.05 mg/m³

PNEC

- Marine water; 0.1 mg/l
 - STP; 1 mg/l
 - Fresh water; 1 mg/l
 - Soil; 1 mg/kg

2,2'DIMORPHOLINYLDIETHYL ETHER (CAS: 6425-39-4)**DNEL**

Workers - Inhalation; Long term systemic effects: 7.28 mg/m³
 Workers - Dermal; Long term systemic effects: 1 mg/kg bw/day
 Consumer - Inhalation; Long term systemic effects: 1.8 mg/m³
 Consumer - Dermal; Long term systemic effects: 0.5 mg/kg bw/day
 Consumer - Oral; Long term systemic effects: 0.5 mg/kg bw/day

PNEC

- Fresh water; 0.1 mg/l
 - Marine water; 0.01 mg/l
 - Intermittent release; 1 mg/l
 - Sediment (Freshwater); 8.2 mg/kg
 - Sediment (Marinewater); 0.82 mg/kg
 - STP; 100 mg/l
 - Soil; 1.58 mg/kg

8.2. Exposure controls**Protective equipment****Appropriate engineering controls**

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

Eye/face protection

Wear chemical splash goggles.

A07504

Hand protection	It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber.
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. Wash hands after handling. When using do not eat, drink or smoke.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3. Wear a respirator fitted with the following cartridge: Organic vapour filter.
Environmental exposure controls	Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Coloured liquid.
Colour	Various colours.
Odour	Musty (mouldy).
Odour threshold	Not available.
pH	Not available.
Melting point	<10°C
Initial boiling point and range	330°C @ mbar
Flash point	>200°C CC (Closed cup).
Evaporation rate	slow
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not available.
Vapour pressure	0.01 Pa @ °C
Vapour density	8.5
Relative density	1.12 @ 20°C
Bulk density	Not relevant.
Solubility(ies)	Insoluble in water. Hardens in contact with water.
Partition coefficient	Not available.
Auto-ignition temperature	>600°C
Decomposition Temperature	Not available.
Viscosity	Kinematic viscosity > 20.5 mm²/s.
Explosive properties	Not available.

A07504

Explosive under the influence of a flame Not considered to be explosive.

Oxidising properties Not available.

Comments Information given is applicable to the product as supplied.

9.2. Other information

Other information No information required.

Refractive index Not available.

Particle size Not available.

Molecular weight Not available.

Volatility Not available.

Saturation concentration Not available.

Critical temperature Not available.

Volatile organic compound Not relevant.

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 at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions May polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with water.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity - inhalation**

ATE inhalation (vapours mg/l) 24.44

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation Sensitising.

A07504**Carcinogenicity**

Carcinogenicity Suspected carcinogen based on limited evidence.

Target organ for carcinogenicity No specific target organs known.

Reproductive toxicity

Reproductive toxicity - development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation Irritating to respiratory system. May cause sensitisation by inhalation.

Ingestion May cause stomach pain or vomiting.

Skin contact Irritating to skin. May cause sensitisation by skin contact.

Eye contact Irritation of eyes and mucous membranes.

Acute and chronic health hazards May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.

Route of entry Inhalation Skin and/or eye contact

Medical symptoms Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.

Medical considerations Chronic respiratory and obstructive airway diseases.

Toxicological information on ingredients.**DIPHENYLMETHANE-4,4'-DI-ISOCYANATE****Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 10,000.0

Species Rat

ATE oral (mg/kg) 10,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 9,400.0

Species Rabbit

ATE dermal (mg/kg) 9,400.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 0.31

Species Rat

A07504

**ATE inhalation (vapours
mg/l)** 11.0

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

2,2'DIMORPHOLINYLDIETHYL ETHER**Acute toxicity - oral**

**Acute toxicity oral (LD₅₀
mg/kg)** 2,025.0

Species Rat

Notes (oral LD₅₀) No information available.

Acute toxicity - dermal

**Acute toxicity dermal (LD₅₀
mg/kg)** 3,038.0

Species Rabbit

Notes (dermal LD₅₀) No information available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

Skin corrosion/irritation

Skin corrosion/irritation No information available.

Serious eye damage/irritation

**Serious eye
damage/irritation** No information available.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Carcinogenicity

IARC carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Inhalation May be harmful if inhaled. Spray/mists may cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin contact May be absorbed through the skin. May be harmful in contact with skin. May cause skin irritation.

Eye contact May cause eye irritation.

SECTION 12: Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

A07504

Acute toxicity - fish	LC ₅₀ , 96 hours: > 1000 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >500 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients.**DIPHENYLMETHANE-4,4'-DI-ISOCYANATE**

Acute toxicity - fish	LC ₅₀ , 96 hours: >1000 mg/l, Marinewater fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 24 hours: >1000 mg/l, Daphnia magna
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: >10 mg/l, Daphnia magna

2,2'DIMORPHOLINYLDIETHYL ETHER

Acute toxicity - fish	LC ₅₀ , 96 hours: 2150 mg/l,
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >100 mg/l, Daphnia magna
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: >1000 mg/l, Bacteria

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Stability (hydrolysis) Reacts with water.

Biological oxygen demand < 10 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not available.

Ecological information on ingredients.**DIPHENYLMETHANE-4,4'-DI-ISOCYANATE**

Partition coefficient log Pow: 4.51

12.4. Mobility in soil

Mobility The product is non-volatile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

A07504

General information	Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General	Wear protective clothing as described in Section 8 of this safety data sheet.
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14.1. UN number

Not applicable.

14.2. UN proper shipping name**14.3. Transport hazard class(es)****14.4. Packing group****14.5. Environmental hazards**

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code****SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). Health and Safety at Work etc. Act 1974 (as amended). Control of Substances Hazardous to Health Regulations 2002 (as amended).
EU legislation	Dangerous Preparations Directive 1999/45/EC. 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 (as amended).
Guidance	Isocyanates: Health hazards and precautionary measures EH16. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG228.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	Only trained personnel should use this material.
Issued by	Compliance
Revision date	11/06/2018
Revision	21
Supersedes date	11/11/2015
SDS status	Approved.

A07504

Hazard statements in full	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. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Store Between	Store Between 5'c - 25'c
Contains SVHC	NO

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.