



SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

ISOCYANATE 174

Version 1.1

Revision Date 20.05.2015

Print Date 15.06.2015

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : ISOCYANATE 174
Substance name : Isocyanate component for crosslinking

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

Use of the Substance/Mixture : Chemical intermediate
Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company: Supplier
Chemtura Manufacturing UK Limited
Tenax Road, Trafford Park
Manchester
United Kingdom
M17 1WT

Manufacturer
Baxenden Chemicals Ltd, a Chemtura Company
Paragon Works
Baxenden, Nr Accrington
Lancashire BB5 2SL
United Kingdom



Prepared by msdsrequest@chemtura.com

Further information for the safety data sheet :
msdsrequest@chemtura.com

1.4 Emergency telephone number

Emergency telephone number: +44 (0) 1235 239 670 (NCEC)
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.



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2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H332: Harmful if inhaled.
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	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

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

Harmful	R20: Harmful by inhalation. R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Sensitising	R42/43: May cause sensitisation by inhalation and skin contact.
Irritant	R36/37/38: Irritating to eyes, respiratory system and skin.
Carcinogenic Carcinogenic Category 3	R40: Limited evidence of a carcinogenic effect. :

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word : Danger

Hazard statements	:	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



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prolonged or repeated exposure.

Supplemental Hazard Statements : EUH204 Contains isocyanates. May produce an allergic reaction.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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.

Hazardous components which must be listed on the label:

- 9016-87-9 Diphenylmethanediisocyanate
- 101-68-8 4,4'-methylenediphenyl diisocyanate

2.3 Other hazards

Contains isocyanates. See information supplied by the manufacturer.

3. Composition/information on ingredients

3.2 Mixtures

Chemical nature : Isocyanates

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Diphenylmethanediisocyanate	9016-87-9	Xn; R20-R42/43 Xi; R36/37/38 Xn; R40 Xn; R48/20	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334	>= 50 - <= 60



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			Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373 Acute Tox. 4; H332 Carc. 2; H351	
4,4'-methylenediphenyl diisocyanate	101-68-8 202-966-0	Xn; R20-R48/20 Xi; R36/37/38 R42/43 Carc.Cat.3; R40	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	>= 40 - < 50

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of first aid measures

- If inhaled : Keep respiratory tract clear.
Remove to fresh air.
If breathing is difficult, give oxygen.
Get medical attention immediately.
- In case of skin contact : Remove contaminated clothing and shoes.
Wash off with soap and plenty of water.
Obtain medical attention.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,
for at least 15 minutes.
Get medical attention immediately.
- If swallowed : Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : carcinogenic effects
irritant effects
Respiratory disorder
sensitising effects

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : For specialist advice physicians should contact the Poisons



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Information Service.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO₂)
Foam
Dry powder

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Burning produces noxious and toxic fumes.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Further information : Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Wear suitable protective equipment.

6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.
Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Ventilate the area.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin, eyes and clothing.



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Do not breathe vapours or spray mist.
Use only in well-ventilated areas.
Open drum carefully as content may be under pressure.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed.
Keep in a dry, cool and well-ventilated place.
Protect from moisture.
Keep under nitrogen.
Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

Other data : Stable under recommended storage conditions.

7.3 Specific end use(s)

Specific use(s) : Raw material for industry

8. Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Diphenylmethanediisocyanate (Polymer)	9016-87-9	TWA	0.02 mg/m ³		GB EH40
		STEL	0.07 mg/m ³		GB EH40
		TWA	0.02 mg/m ³	2011-12-01	GB EH40
		STEL	0.07 mg/m ³	2011-12-01	GB EH40
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0.02 mg/m ³	2011-12-01	GB EH40
		STEL	0.07 mg/m ³	2011-12-01	GB EH40



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8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
In the case of vapour formation use a respirator with an approved filter.

Hand protection : Impervious butyl rubber gloves

Eye protection : Safety glasses with side-shields
or
Tightly fitting safety goggles

Skin and body protection : impervious clothing

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.

Environmental exposure controls

General advice : Should not be released into the environment.
Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : dark brown

Odour : characteristic

Odour Threshold : No information available.

Flash point : 200 - 250 °C



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Method: open cup

Ignition temperature	:	not determined
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Flammability (solid, gas)	:	No information available.
Auto-ignition temperature	:	No information available.
pH	:	No information available.
Melting point/range	:	< 10 °C
Boiling point/boiling range	:	> 250 °C at 999.915 hPa Note: Decomposes
Vapour pressure	:	<0.0001 hPa
Density	:	No information available.
Relative density	:	1.21 - 1.25 at 25 °C
Water solubility	:	insoluble, Reacts
Partition coefficient: n-octanol/water	:	No information available.
Solubility in other solvents	:	slightly soluble Medium: Hydrocarbons
Relative vapour density	:	No information available.
Evaporation rate	:	No information available.

9.2 Other information

Oxidising potential : Note: No information available.

10. Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.



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10.3 Possibility of hazardous reactions

Hazardous reactions : Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Conditions to avoid : Contamination
Exposure to moisture.
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Water
Alcohols
Strong oxidizing agents
Amines
Strong acids and strong bases

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon oxides
Hydrocarbons
Nitrogen oxides (NO_x)
Isocyanates

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : Remarks: Not classified due to lack of data.

Acute oral toxicity

Diphenylmethanediisocyanate : LD50: > 5,000 mg/kg
Species: Rat

4,4'-methylenediphenyl diisocyanate : LD50: 31,690 mg/kg
Species: Rat

Acute dermal toxicity : Remarks: Not classified due to lack of data.

Acute dermal toxicity

Diphenylmethanediisocyanate : LD50: > 5,000 mg/kg
Species: Rat

Skin corrosion/irritation

Skin irritation : Remarks: Irritating to skin.



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Skin irritation

Diphenylmethanediisocyanat
e : Result: Mild skin irritation
4,4'-methylenediphenyl : Species: Rabbit
diisocyanate Result: Skin irritation

Serious eye damage/eye irritation

Eye irritation : Remarks: Irritating to eyes.

Eye irritation

Diphenylmethanediisocyanat : Result: Eye irritation
e
4,4'-methylenediphenyl : Species: Rabbit
diisocyanate Result: Eye irritation

Respiratory or skin sensitisation

Sensitisation : Remarks: May cause sensitisation by inhalation and skin contact.

Sensitisation

Diphenylmethanediisocyanat : Classification: May cause sensitisation by inhalation.
e
Classification: May cause sensitisation by skin contact.
4,4'-methylenediphenyl : Species: Guinea pig
diisocyanate Classification: May cause sensitisation by inhalation.
Result: Causes sensitisation.
Species: Guinea pig
Classification: May cause sensitisation by skin contact.
Result: Causes sensitisation.

Germ cell mutagenicity

Diphenylmethanediisocyanat : Ames test
e Result: negative
4,4'-methylenediphenyl : Ames test
diisocyanate Result: positive

Mutagenicity Assessment

Remarks : Not classified due to lack of data.



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Carcinogenicity Assessment

Remarks : Suspected of causing cancer.

Reproductive toxicity Assessment

Remarks : Not classified due to lack of data.

Target Organ Systemic Toxicant - Single exposure

: Remarks: May cause respiratory irritation.

Target Organ Systemic Toxicant - Repeated exposure

: Remarks: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Aspiration toxicity : No aspiration toxicity classification

Toxicology Assessment

Further information : The product itself has not been tested.

12. Ecological information

12.1 Toxicity

Toxicity to fish :
Remarks:
No data available

Toxicity to fish
Diphenylmethanediisocyanate : LC50: > 1,000 mg/l
Species: Zebra fish (Brachydanio rerio)

4,4'-methylenediphenyl diisocyanate : LC50: > 1,000 mg/l
Exposure time: 96 h
Species: Danio rerio (zebra fish)

12.2 Persistence and degradability



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Biodegradability : Result: No data available

12.3 Bioaccumulative potential

Bioaccumulation : Remarks:
No data available

12.4 Mobility in soil

Mobility : Remarks:
No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Additional ecological information : The product itself has not been tested.

13. Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.
Dispose of wastes in an approved waste disposal facility.
Do not contaminate ponds, waterways or ditches with
chemical or used container.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

14. Transport information

ADR
Not dangerous goods

IATA
Not dangerous goods

IMDG
Not dangerous goods

RID



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Not dangerous goods

15. Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Major Accident Hazard Legislation : 96/82/EC Update: 2003
Directive 96/82/EC does not apply

Water contaminating class (Germany) : WGK 1 slightly water endangering

Notification status

US.TSCA : On TSCA Inventory
DSL : All components of this product are on the Canadian DSL.
AICS : On the inventory, or in compliance with the inventory
NZIoC : On the inventory, or in compliance with the inventory
ENCS : Not in compliance with the inventory
KECI : On the inventory, or in compliance with the inventory
PICCS : On the inventory, or in compliance with the inventory
IEGSC : On the inventory, or in compliance with the inventory

15.2 Chemical Safety Assessment

No information available.

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R20 Harmful by inhalation.
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.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Full text of H-Statements referred to under sections 2 and 3.



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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.

Further information

Carechem24 International Worldwide Coverage

Emergency Phone Number

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285
	Vietnam	+65 3158 1255
	India	+65 3158 1198
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Bangladesh	+65 3158 1200
<u>Middle East / Africa:</u>	Arabic speaking countries	+44 (0) 1235 239 671
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States / Canada	001866 928 0789
<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
	Mexico	+52 555 004 8763



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