

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 17-Jun-2025

Revision Number 1

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

1.1. Product identifier

Product Code(s) 126490
Safety data sheet number 126490
Product Name ONGRONAT XP 1166

Pure substance/mixture Mixture

Contains 4, 4'-MDI/PPG; POLYMERIC MDI; REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATO BENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE

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

Recommended use Manufacture of polyurethane.
Isocyanate component for polyurethanes.

Uses advised against Consumer spray applications
Consumer applications that require heating above room temperature before or during use.
Professional cleaning applications with aprotic polar solvents (meeting the IUPAC definition)
Do not use for private purposes (household)

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Acute toxicity - Inhalation (Vapours)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Respiratory sensitisation	Category 1 - (H334)
Skin sensitisation	Category 1 - (H317)
Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity — single exposure	Category 3 - (H335)
Category 3 Respiratory irritation	
Specific target organ toxicity — repeated exposure	Category 2 - (H373)

2.2. Label elements

Contains 4, 4'-MDI/PPG; POLYMERIC MDI; REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE



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 prolonged or repeated exposure
EUH204 - Contains isocyanates. May produce an allergic reaction

Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P284 - Wear respiratory protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove person to fresh air and keep 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
P308 + P313 - IF exposed or concerned: Get medical advice/attention

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

As from 24 August 2023 adequate training is required before industrial or professional use.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
4, 4'-MDI/PPG 9048-57-1	40 - 60%	500-028-8	-	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Eye Irrit. 2 (H319) Acute Tox. 4 (H332) Resp. Sens. 1 (H334) STOT SE 3 (H335) Carc. 2 (H351) STOT RE 2 (H373)	-	-	-
POLYMERIC MDI 9016-87-9	20 - 40%	-	-	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Eye Irrit. 2 (H319) Acute Tox. 4 (H332) Resp. Sens. 1 (H334) STOT SE 3 (H335) Carc. 2 (H351) STOT RE 2 (H373)	-	-	-
REACTION MASS OF 4,4'-METHYLENEDI PHENYL DIISOCYANATE AND O-(P-ISOCYANATO BENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE	10 - 30%	905-806-4	-	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Eye Irrit. 2 (H319) Acute Tox. 4 (H332) Resp. Sens. 1 (H334) STOT SE 3 (H335) Carc. 2 (H351) STOT RE 2 (H373)	-	-	-

Full text of H- and EUH-phrases: see section 16This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)**SECTION 4: First aid measures****4.1. Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation

May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

	Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash it before reuse.
Ingestion	May produce an allergic reaction. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. Avoid breathing vapours or mists.

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

Symptoms	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.
Inhalation	Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.
Eyes	Causes serious eye irritation.
Dermal	Causes skin irritation. May cause an allergic skin reaction.
Ingestion	No information available

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

Note to doctors	May cause sensitisation in susceptible persons. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Foam. Carbon dioxide (CO2). Dry chemical. Water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Product is or contains a sensitiser. May cause sensitisation by inhalation. May cause sensitisation by skin contact. Thermal decomposition may release: Carbon oxides. Nitrogen oxides (NOx). Hydrocarbons. Isocyanates. Hydrogen cyanide.
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5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Reaction between water and hot isocyanate may be vigorous. Do not allow runoff to sewer, waterway or ground. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cool
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containers with flooding quantities of water until well after fire is out. In the event of fire and/or explosion do not breathe fumes. Cylinders may rupture under extreme heat. Move containers from fire area if you can do it without risk. Due to reaction with water producing carbon dioxide (CO₂) gas, a hazardous build-up of pressure could result if contaminated containers are resealed. Closed containers can burst violently when heated, due to excess pressure build-up.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapours or mists. Call emergency response number for advice. Do not clean-up or dispose of unless adequately trained to do so, or under the supervision of a specialist. Keep unnecessary and unprotected personnel from entering.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not allow runoff to sewer, waterway or ground.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so. Do not breathe vapours/spray. Test atmosphere for MDI vapour.
Methods for cleaning up	Take up with sand, earth or other non-combustible absorbent material. Do not absorb in sawdust or other combustible absorbents. Leave to react for at least 30 minutes. Sweep up and shovel into suitable containers for disposal. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Industrial cleaning with Aprotic Polar Solvents (meeting the IUPAC definition) may lead to formation of (hazardous) primary aromatic amines (> 0.1 %). Flush remainder carefully with plenty of water. The compositions of liquid decontaminants are (percentages by weight or volume): Decontaminant 1: - Sodium carbonate: 5 - 10% - Liquid detergent: 0.2 - 2% - Water: to make up to 100% Decontaminant 2: - Concentrated ammonia solution: 3 - 8% - Liquid detergent: 0.2 - 2% - Water: to make up to 100% Decontaminant 1 reacts slower with diisocyanates but is more environmentally friendly than decontaminant 2. Decontaminant 2 contains ammonia. Ammonia presents health hazards.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See Section 1, 8, 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Avoid breathing vapours or mists. Use with local exhaust ventilation. Use engineering controls to keep exposures below the OEL or DNEL.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Do not breathe vapour or mist. Regular cleaning of equipment, work area and clothing is recommended. Do not allow contact with water. Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Remove contaminated clothing and protective equipment before entering eating areas. Keep away from food, drink and animal feedingstuffs.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Store in accordance with local regulations. Keep only in original packaging. Protect from direct sunlight. Store away from incompatible materials. Keep away from food, drink and animal feedingstuffs. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Use appropriate containment to avoid environmental contamination. Industrial cleaning with Aprotic Polar Solvents (meeting the IUPAC definition) may lead to formation of (hazardous) primary aromatic amines (> 0.1 %).

Packaging materials Suitable container/equipment material: Steel, stainless steel.
Unsuitable container/equipment material: copper, Copper alloys, Galvanized containers.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE -			0.1 mg/m ³ [5] [7] 0.05 mg/m ³ [5] [6]

[4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.
 [7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE -			0.05 mg/m ³ [5] [7] 0.025 mg/m ³ [5] [6]

[4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.
 [7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE -	3.7 µg/L	37 µg/L	0.37 µg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE /	11.7 mg/L	1.17 mg/L		2.33 mg/kg	

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
METHYLENE DIPHENYL DIISOCYANATE -					

8.2. Exposure controls

Engineering controls

Ensure adequate ventilation. Use engineering controls to keep exposures below the OEL or DNEL. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection

Wear suitable gloves. Impervious gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Neoprene gloves	≥ 0.5 mm	≥ 480 minutes
Long term (repeated)	Nitrile/butadiene rubber ("nitrile" or "NBR").	≥ 0.35 mm	≥ 480 minutes
Long term (repeated)	Butyl rubber	≥ 0.5 mm	≥ 480 minutes
Long term (repeated)	Fluorinated rubber	≥ 0.4 mm	≥ 480 minutes

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection

Breathing apparatus, full face mask respirator. Respirator type protection can be used in combination with an organic vapour filter type A, and where dusts or aerosols could be present, a minimum of A/P2 filter can be used.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Do not breathe vapour or mist. Regular cleaning of equipment, work area and clothing is recommended. Do not allow contact with water. Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Remove contaminated clothing and protective equipment before entering eating areas. Keep away from food, drink and animal feedingstuffs.

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure all waste water is collected and treated via a waste water treatment plant. Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	brown
Odour	No information available.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	5 °C	Crystallisation point. @ 10 °C.
Initial boiling point and boiling range	> 300 °C	Read-across.
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	> 200 °C	Closed cup.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity	3000 - 5000 mPa s	@ 25 °C.
Water solubility	Insoluble in water 0.03 mg/L	@ 22 °C. Read-across.
Solubility(ies)		No information available.
Partition coefficient		No information available.
Vapour pressure	< 0.00001 mbar	@ 25 °C.
Relative density		No information available.
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	Not considered to be explosive.	
Oxidising properties	No data available	

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Reacts with:.. Water. Acids. Alcohols. Amines. Bases. Oxidising agents.

10.2. Chemical stability

Stability The main removal mechanism of MDI in the environment is hydrolysis. MDI reacts quickly with water to form predominantly solid, insoluble polyureas.

Stability in organic solvents: All MDI isomers and forms are highly unstable in dimethyl sulfoxide (DMSO) solvent, water content of the DMSO increasing breakdown. The corresponding diamine is identified as one of the breakdown products. MDI is more stable in EGDE (ethyleneglycoldimethylether) as solvent.

Polymerization: Polymerises at about 200 °C with evolution of CO₂.

(Read-across based on 4,4'-methylenediphenyl diisocyanate - CAS 101-68-8.).

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Reaction is slow with cold or warm water (< 50 °C), with hot water or steam the reaction is faster, producing carbon-dioxide causing pressure increase. Acids, alcohols, amines, bases

and oxidants cause fire and explosion hazard.

10.4. Conditions to avoid

Conditions to avoid Excessive heat. Protect from moisture. Protect from light. Industrial cleaning with Aprotic Polar Solvents (meeting the IUPAC definition) may lead to formation of (hazardous) primary aromatic amines (> 0.1 %).

10.5. Incompatible materials

Incompatible materials Water. Acids. Alcohols. Amines. Bases. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition may release: Carbon oxides. Nitrogen oxides (NOx). Hydrocarbons. Isocyanates. Hydrogen cyanide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause sensitisation in susceptible persons. (based on components). May cause irritation of respiratory tract. Harmful by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitisation by skin contact. Causes skin irritation. May cause an allergic skin reaction.
Ingestion	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation".

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
4, 4'-MDI/PPG	-	-	11 mg/L (Vapours)
POLYMERIC MDI	-	> 9400 mg/kg (Rabbit)	11 mg/L (Vapours)
REACTION MASS OF	> 2000 mg/kg (Rat)	-	11 mg/L (Vapours)

4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE			
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Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Classification based on data available for ingredients. Causes skin irritation.

4, 4'-MDI/PPG (9048-57-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Dermal			Causes skin irritation

POLYMERIC MDI (9016-87-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Dermal			Causes skin irritation

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404	Rabbit	Dermal		4 hours 14 days	Causes skin irritation

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes serious eye irritation.

4, 4'-MDI/PPG (9048-57-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		eye			Causes serious eye irritation

POLYMERIC MDI (9016-87-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		eye			Causes serious eye irritation

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405	Rabbit	eye		21 days	Not classified
	Human evidence	eye			Causes serious eye irritation

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

4, 4'-MDI/PPG (9048-57-1)

Method	Species	Exposure route	Results
		Dermal	May cause an allergic skin reaction
		Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled

POLYMERIC MDI (9016-87-9)

Method	Species	Exposure route	Results
		Dermal	May cause an allergic skin reaction
		Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE (-)

Method	Species	Exposure route	Results
		Dermal	May cause an allergic skin reaction
		Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled

Germ cell mutagenicity

No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer. Industrial cleaning with Aprotic Polar Solvents (meeting the IUPAC definition) may lead to formation of (hazardous) primary aromatic amines (> 0.1 %). Primary aromatic amines are chemicals that are regarded as potentially carcinogenic for humans based on animal testing. Some of these chemicals are known human carcinogens. Compliance with the control measures recommended in the exposure scenario is expected to protect against these effects.

Component Information

4, 4'-MDI/PPG (9048-57-1)

Method	Species	Results
		Suspected of causing cancer

POLYMERIC MDI (9016-87-9)

Method	Species	Results
		Suspected of causing cancer

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE (-)

Method	Species	Results
		Suspected of causing cancer

Reproductive toxicity

No information available.

STOT - single exposure

May cause respiratory irritation.

4, 4'-MDI/PPG (9048-57-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Inhalation			May cause respiratory irritation

POLYMERIC MDI (9016-87-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Inhalation			May cause respiratory irritation

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Inhalation			May cause respiratory irritation

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Component Information
4, 4'-MDI/PPG (9048-57-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause damage to organs through prolonged or repeated exposure

POLYMERIC MDI (9016-87-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause damage to organs through prolonged or repeated exposure

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause damage to organs through prolonged or repeated exposure

Aspiration hazard

No information available.

Other adverse effects

No information available.

SECTION 12: Ecological information

12.1. Toxicity**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

12.2. Persistence and degradability**Persistence and degradability**

No information available.

12.3. Bioaccumulative potential**Bioaccumulation**

No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
4, 4'-MDI/PPG	The substance is not PBT / vPvB
POLYMERIC MDI	The substance is not PBT / vPvB
REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Product restricted per REACH Annex XVII: 3

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
4, 4'-MDI/PPG - 9048-57-1	56	-
POLYMERIC MDI - 9016-87-9	56	-
REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE / METHYLENE DIPHENYL DIISOCYANATE - -	56, 74	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status

PICCS Contact supplier for inventory compliance status
 AIIC Contact supplier for inventory compliance status
 NZIoC Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

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

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note ***Indicates updated data since last publication

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method

Aspiration hazard
Ozone

Calculation method
Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By N Bajaj

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Training Advice Only trained personnel should use this material.

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet