C.I.M. Industries Inc.
A Chase Corporation Company

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture	CIM 1000TG Cartridge Activator
Registration number	-
Synonyms	None.
Issue date	27-July-2016
Version number	01

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

Identified uses	Activator for CIM Urethanes
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	CIM INDUSTRIES INC	
Address	6900 NELMS STREET HOUSTON, TX 77061 United States	
Division	A CHASE CORPORATION COMPANY	
Telephone	General Assistance	800 543-3458
e-mail	info@chasecorp.com	
Contact person	Not available.	

1.4. Emergency telephone number

	Chemtrec (US - 24 hrs)	800 424-9300
	Chemtrec (INTL - 24 hrs)	703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification Carc. Cat. 3;R40, T+;R26, Xn;R48/20, Xi;R36/37/38, R42/43

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/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 tract irritation	H335 - May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Category 2	H373 - May cause damage to organs through prolonged or repeated exposure.

Hazard summary

Physical hazards Not classified for physical hazards.

Health hazards Very toxic by inhalation. Irritating to eyes, respiratory system and skin. Limited evidence of a carcinogenic effect. May cause sensitisation by inhalation and skin contact. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Occupational exposure to the substance or mixture may cause adverse health effects.

Environmental hazards Not classified for hazards to the environment.

Specific hazards None known.

Main symptoms Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES]

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 prolonged or repeated exposure.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist or vapour.
P264	Wash 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.
P280	Wear eye protection/face protection.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of 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.
P312	Call a POISON CENTER/doctor if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES]	90 - 100	9016-87-9 202-966-0	-	615-005-00-9	

Classification:

DSD:	Carc. Cat. 3;R40, Xn;R20-48/20, Xi;R36/37/38, R42/43	C,2
CLP:	Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Acute Tox. 4;H332, Resp. Sens. 1;H334, STOT SE 3;H335, Carc. 2;H351, STOT RE 2;H373	2,C

Isomer

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
4,4'-Methylenediphenyl diisocyanate	55 - 65	101-68-8 202-966-0	-	615-005-00-9	

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16. Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9

SECTION 4: First aid measures

General information IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Water. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	Ceiling	0,1 mg/m3
		0,01 ppm
	MAK	0,05 mg/m3
		0,005 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	Ceiling	0,1 mg/m3
		0,01 ppm
	MAK	0,05 mg/m3
		0,005 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,052 mg/m3
		0,005 ppm

Belgium. Exposure Limit Values.

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,052 mg/m3
		0,005 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,07 mg/m3
	TWA	0,05 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,07 mg/m3
	TWA	0,05 mg/m3

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,2 mg/m3
		0,02 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,2 mg/m3
		0,02 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	Ceiling	0,1 mg/m3
	TWA	0,05 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	Ceiling	0,1 mg/m3
	TWA	0,05 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TLV	0,05 mg/m3
		0,005 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TLV	0,05 mg/m3
		0,005 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	Ceiling	0,1 mg/m3
		0,01 ppm
	TWA	0,05 mg/m3
		0,005 ppm

Finland. Workplace Exposure Limits

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,035 mg/m3

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	VLE	0,2 mg/m3
		0,02 ppm
	VME	0,1 mg/m3
		0,01 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	VLE	0,2 mg/m3
		0,02 ppm
	VME	0,1 mg/m3
		0,01 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,05 mg/m3	Inhalable fraction.

Isomer	Type	Value	Form
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,05 mg/m3	Inhalable fraction.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	AGW	0,05 mg/m3	Inhalable fraction.

Isomer	Type	Value	Form
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	AGW	0,05 mg/m3	Fume and aerosol.

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,2 mg/m3
		0,02 ppm
	TWA	0,2 mg/m3
		0,02 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,2 mg/m3
		0,02 ppm
	TWA	0,2 mg/m3
		0,02 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,05 mg/m3
	TWA	0,05 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,05 mg/m3
	TWA	0,05 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,1 mg/m3
		0,01 ppm
	TWA	0,05 mg/m3
		0,005 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,1 mg/m3
		0,01 ppm
	TWA	0,05 mg/m3
		0,005 ppm

Ireland. Occupational Exposure Limits

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,07 mg/m3
	TWA	0,02 mg/m3

Italy. Occupational Exposure Limits

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,005 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,005 ppm

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	Ceiling	0,1 mg/m3
		0,01 ppm
	TWA	0,05 mg/m3
		0,005 ppm

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TLV	0,05 mg/m3
		0,005 ppm
		0,005 ppm

Norway. Administrative Norms for Contaminants in the Workplace

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,01 ppm
	TLV	0,05 mg/m3
		0,005 ppm

Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,09 mg/m3
	TWA	0,03 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,09 mg/m3
	TWA	0,03 mg/m3

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,005 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,005 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,15 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,15 mg/m3

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,03 mg/m3
		0,002 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,03 mg/m3
		0,002 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,05 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,05 mg/m3

Spain. Occupational Exposure Limits

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	TWA	0,052 mg/m3
		0,005 ppm

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0,052 mg/m3
		0,005 ppm

Sweden. Occupational Exposure Limit Values

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	Ceiling	0,05 mg/m3
		0,005 ppm
	TWA	0,03 mg/m3
		0,002 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,02 mg/m3
	TWA	0,02 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,02 mg/m3
	TWA	0,02 mg/m3

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	STEL	0,07 mg/m3
	TWA	0,02 mg/m3

Isomer	Type	Value
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	STEL	0,07 mg/m3
	TWA	0,02 mg/m3

Biological limit values

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling time
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	10 µg/g	4,4'-Diaminodiphenylmethan	Creatinine in urine	*

Isomer	Value	Determinant	Specimen	Sampling time
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	10 µg/g	4,4'-Diaminodiphenylmethan	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Chemical respirator with organic vapour cartridge and full facepiece.
Skin protection	
- Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Chemical respirator with organic vapour cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
Environmental exposure controls	Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Colour	Brown.
Odour	Musty.
Odour threshold	0,4 ppm
pH	Not available.
Melting point/freezing point	Forms crystals below 10°C
Initial boiling point and boiling range	> 300 °C (> 572 °F)
Flash point	> 200,0 °C (> 392,0 °F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	No Test Data Available
Flammability limit - upper (%)	No Test Data Available
Vapour pressure	0,000007 hPa estimated
Vapour density	8,5
Relative density	Not available.
Solubility(ies)	
Solubility (water)	6,8 mg/l
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 600 °C (> 1112 °F)
Decomposition temperature	Not available.
Viscosity	40 - 60 cP

Viscosity temperature	25 °C (77 °F)
Explosive properties	Not explosive.
Oxidising properties	Not oxidising. No oxidizing properties.

9.2. Other information

Density	1,18 - 1,24 g/cm3
Explosivity	Not explosive
Specific gravity	1,2 estimated

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Acids. Alcohols.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on toxicological effects

Acute toxicity	Harmful if inhaled. May cause an allergic skin reaction. May cause respiratory irritation.

Components	**Species**	**Test results**
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)		
Acute		
Inhalation		
LC50	Rat	0,369 mg/l, 4 Hours

Isomer	**Species**	**Test results**
4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)		
Acute		
Inhalation		
LC50	Rat	0,369 mg/l, 4 Hours

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)	3 Not classifiable as to carcinogenicity to humans.
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	Not available.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN2206
14.2. UN proper shipping name	ISOCYANATES, TOXIC, N.O.S. or ISOCYANATE SOLUTION, TOXIC, N.O.S. (DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES])
14.3. Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Label(s)	6.1
Hazard No. (ADR)	60
Tunnel restriction code	E
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN2206
14.2. UN proper shipping name	ISOCYANATES, TOXIC, N.O.S. or ISOCYANATE SOLUTION, TOXIC, N.O.S. (DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES])
14.3. Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Label(s)	6.1
14.4. Packing group	III

14.5. Environmental hazards No.

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number UN2206

14.2. UN proper shipping name Isocyanates, Toxic, [or isocyanate solution, toxic, n.o.s.] (DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES])

14.3. Transport hazard class(es)

Class 6.1(PGIII)

Subsidiary risk -

Label(s) 6.1

14.4. Packing group III

14.5. Environmental hazards No.

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code Not established.

ADN; ADR; RID

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)

Directive 94/33/EC on the protection of young people at work, as amended

4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] (CAS 9016-87-9)

Other regulations	The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Pregnant women should not work with the product, if there is the least risk of exposure.
National regulations	Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any statements or R-phrases and H-statements under Sections 2 to 15	R20 Harmful by inhalation. R26 Very toxic 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. 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.
Revision information	Product and Company Identification: Product and Company Identification
Training information	Follow training instructions when handling this material.
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