

SAFETY DATA SHEET

ISOFLEX LIQUID RUBBER

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

1.1 Product identifier

Product name : ISOFLEX LIQUID RUBBER

Product code : RON017879

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

Material uses : Paint or paint related material.

1.3 Details of the supplier of the safety data sheet

Sherwin Williams Diversified Brands Limited
Thornccliffe Park
Chapelton
Sheffield
S35 2YP

National contact

Sherwin Williams Diversified Brands Limited
Thornccliffe Park
Chapelton
Sheffield
S35 2YP

e-mail address of person responsible for this SDS : SDS@Ronseal.co.uk

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : National Poisons Information Service +44 844 892 0111 / 112

Supplier

Telephone number : +44 (0)114 246 7171 (08:30 - 17:00)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226

Acute Tox. 4, H332

Resp. Sens. 1, H334

Skin Sens. 1, H317

Carc. 2, H351

STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects)

Aquatic Chronic 3, H412

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 70%

Ingredients of unknown ecotoxicity : Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 66%

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
Carc. Cat. 3; R40
Xn; R20
Xi; R37
R42/43, R66
R52/53

Physical/chemical hazards : Flammable.

SECTION 2: Hazards identification

Human health hazards : Limited evidence of a carcinogenic effect. Harmful by inhalation. Irritating to respiratory system. May cause sensitisation by inhalation and skin contact. Repeated exposure may cause skin dryness or cracking.

Environmental hazards : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements**Hazard pictograms**

Signal word : Danger

Hazard statements : Flammable liquid and vapour.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves and eye or face protection. Use only outdoors or in a well-ventilated area. Keep away from flames and hot surfaces. - No smoking.

Response : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : Solvent naphtha (petroleum), light arom.

4, 4'-Diphenylmethane Diisocyanate

Diphenylmethane Diisocyanate Polymer

Toluene Diisocyanate

Supplemental label elements : Contains isocyanates. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Yes, applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 265-199-0 Index: 649-356-00-4	>=20 - <25	R10 Xn; R65 Xi; R37 R66, R67 N; R51/53	Flam. Liq. 3, H226 STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects) Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
4, 4'-Diphenylmethane Diisocyanate	REACH #: 01-2119457014-47 EC: 202-966-0 CAS: 101-68-8 Index: 615-005-00-9	>=1 - <3	Carc. Cat. 3; R40 Xn; R20, R48/20 Xi; R36/37/38 R42/43	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 (Respiratory tract irritation) STOT RE 2, H373	[1] [2]
Diphenylmethane Diisocyanate Polymer	CAS: 9016-87-9	>=1 - <3	Carc. Cat. 3; R40 Xn; R20, R48/20 Xi; R36/37/38 R42/43	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 (Respiratory tract irritation) STOT RE 2, H373	[1] [2]
Toluene Diisocyanate	REACH #: 01-2119454791-34 EC: 247-722-4 CAS: 26471-62-5 Index: 615-006-00-4	>=0.25 - <1	Carc. Cat. 3; R40 T+; R26 Xi; R36/37/38 R42/43 R52/53 See Section 16 for the full text of the R-phrases declared above.	Acute Tox. 2, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 (Respiratory tract irritation) Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

SECTION 3: Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
If swallowed, rinse mouth with water (only if the person is conscious). Get immediate medical attention.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains 4,4'-methylenediphenyl diisocyanate, Diphenylmethane Diisocyanate Polymer, m-tolyldiene diisocyanate. May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, carbon dioxide, powders

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

: Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

Appropriate breathing apparatus may be required.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

: Keep unnecessary and unprotected personnel from entering.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

: Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13).

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this mixture.

7.1 Precautions for safe handling : Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Care should be taken when re-opening partly-used containers. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurisation. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or watercourses.

Information on fire and explosion protection
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations.

Notes on joint storage
Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep container tightly closed. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Incompatible with heavy metals.
Keep away from reducing agents.
Contaminated absorbent material may pose the same hazard as the spilt product.

: Store in accordance with: Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR)

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

Good housekeeping standards, regular safe removal of waste materials will minimise the risks of spontaneous combustion and other fire hazards.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters**Occupational exposure limits**

Product/ingredient name	Exposure limit values
4, 4'-Diphenylmethane Diisocyanate	EH40/2005 WELs (United Kingdom (UK), 12/2011). Skin sensitiser. STEL: 0.07 mg/m ³ , (as NCO) 15 minutes. TWA: 0.02 mg/m ³ , (as NCO) 8 hours.
Diphenylmethane Diisocyanate Polymer	EH40/2005 WELs (United Kingdom (UK), 12/2011). Skin sensitiser. STEL: 0.07 mg/m ³ , (as NCO) 15 minutes. TWA: 0.02 mg/m ³ , (as NCO) 8 hours.
Toluene Diisocyanate	EH40/2005 WELs (United Kingdom (UK), 12/2011). Skin sensitiser. STEL: 0.07 mg/m ³ , (as NCO) 15 minutes. TWA: 0.02 mg/m ³ , (as NCO) 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this mixture.

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Occupational exposure controls.)

: Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Individual protection measures

SECTION 8: Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Use safety eyewear designed to protect against splash of liquids.
- Skin protection**
- Hand protection** : Wear suitable gloves tested to EN374.
- Gloves** : Short Term Exposure less than 30 minutes Continuous use LDPE gloves, 30 microns or Butyl gloves 0.7mm
Long Term Exposure Spill / For prolonged or repeated handling, use PE / PE Lamine gloves > 8 hours (breakthrough time) .
There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The breakthrough time must be greater than the end use time of the product.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Always ensure that gloves are free from defects and that they are stored and used correctly.
The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Body protection** : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.
: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.
Recommended: organic vapour (Type AX) and particulate filter (EN14387), P3 (EN14387).

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.
- Environmental exposure controls** : Do not allow to enter drains or watercourses.
- Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations.**

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

Physical state	: Liquid.
Colour	: Black.
Odour	: Hydrocarbon. [Strong]
Odour threshold	: Not available.
pH	: Testing not technically possible.
Melting point/freezing point	: Not Available (Not Tested).
Initial boiling point and boiling range	: Not Available (Not Tested).
Flash point	: Closed cup: 45°C
Evaporation rate	: Not applicable.
Flammability (solid, gas)	: Not Available (Not Tested).
Burning time	: Not Available (Not Tested).
Burning rate	: Not Available (Not Tested).
Upper/lower flammability or explosive limits	: Not Available (Not Tested).
Vapour pressure	: 1.3 kPa [at 20°C]
Vapour density	: Not Available (Not Tested).
Relative density	: 1.1
Solubility(ies)	: Not Available (Not Tested).
Solubility in water	: Not Available (Not Tested).
Partition coefficient: n-octanol/ water	: Not Available (Not Tested).
Auto-ignition temperature	: Not Available (Not Tested).
Decomposition temperature	: Not Available (Not Tested).
Viscosity	: Not Available (Not Tested).
Explosive properties	: Not Available (Not Tested).
Oxidising properties	: Under normal conditions of storage and use, hazardous reactions will not occur.

9.2 Other information

Heat of combustion : 14.15 kJ/g

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.
10.4 Conditions to avoid	: In a fire, hazardous decomposition products may be produced.
10.5 Incompatible materials	: Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains 4,4'-methylenediphenyl diisocyanate, Diphenylmethane Diisocyanate Polymer, m-tolyldiene diisocyanate. May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	8400 mg/kg	-
4, 4'-Diphenylmethane Diisocyanate	LD50 Oral	Rat	9200 mg/kg	-
Diphenylmethane Diisocyanate Polymer	LC50 Inhalation Vapour	Rat	490 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>9400 mg/kg	-
	LD50 Oral	Rat	49 g/kg	-
Toluene Diisocyanate	LD50 Oral	Rat	4130 mg/kg	-

Acute toxicity estimates

Route	ATE value
Inhalation (gases)	134910 ppm
Inhalation (vapours)	14.48 mg/l
Inhalation (dusts and mists)	14.99 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
4, 4'-Diphenylmethane Diisocyanate	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
Diphenylmethane Diisocyanate Polymer	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
Toluene Diisocyanate	Skin - Severe irritant	Rabbit	-	500 milligrams	-

Sensitisation

SECTION 11: Toxicological information

No data available

Mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Solvent naphtha (petroleum), light arom.	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
4, 4'-Diphenylmethane Diisocyanate	Category 3	Not applicable.	Respiratory tract irritation
Diphenylmethane Diisocyanate Polymer	Category 3	Not applicable.	Respiratory tract irritation
Toluene Diisocyanate	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
4, 4'-Diphenylmethane Diisocyanate	Category 2	Not determined	Not determined
Diphenylmethane Diisocyanate Polymer	Category 2	Not determined	Not determined

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1

Other information : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
No data available				
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
No data available				

SECTION 12: Ecological information**12.3 Bioaccumulative potential**

Product/ingredient name	LogP _{ow}	BCF	Potential
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high
4, 4'-Diphenylmethane Diisocyanate	-	200	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods**Product**

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC) : waste isocyanates
08 05 01*

Disposal considerations : Do not allow to enter drains or watercourses. Residues in empty containers should be neutralised with a decontaminant (see section 6).
Dispose of according to all federal, state and local applicable regulations.
If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.
For further information, contact your local waste authority.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

**European waste catalogue (EWC)
Contaminated packaging** : Recycling possible. Ensure packaging is completely empty before recycling.
Dispose of uncured residues in the same way as the product itself. Plastic articles 15 01 02 - metallic packaging 15 01 04 - mixed packaging 15 01 06. 15 01 10* packaging containing residues of or contaminated by dangerous substances

SECTION 13: Disposal considerations

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport Hazard Class(es)/ Label(s)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.
Additional information	<p><u>Viscous substance exemption</u> This class 3 material can be considered non hazardous in packagings up to 450 L. Exempted according to 2.2.3.1.5 (Viscous substance exemption)</p>	<p><u>Viscous substance exemption</u> This class 3 material can be considered non hazardous in packagings up to 30 L. Exempted according to 2.3.2.5 (Viscous substance exemption)</p>	-

This mixture is not classified as dangerous according to international transport regulations (ADR/RID, IMDG, ICAO/IATA).

Do not carry by air without prior consent of the airline

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Other EU regulations

Integrated pollution prevention and control list (IPPC) - Air : Listed

Integrated pollution prevention and control list (IPPC) - Water : Listed

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
4, 4'-Diphenylmethane Diisocyanate	Carc. 2, H351	-	-	-
Diphenylmethane Diisocyanate Polymer	Carc. 2, H351	-	-	-
Toluene Diisocyanate	Carc. 2, H351	-	-	-

Seveso II Directive : This product is controlled under the Seveso II Directive.

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

SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SECTION 16: Other information

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Resp. Sens. 1, H334	Calculation method
Skin Sens. 1, H317	Calculation method
Carc. 2, H351	Calculation method
STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects)	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements	: H226	Flammable liquid and vapour.
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H330	Fatal if inhaled.
	H332	Harmful if inhaled.
	H332 (inhalation)	Harmful if inhaled.
	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
	H335 (Respiratory tract irritation)	May cause respiratory irritation. (Respiratory tract irritation)
	H335 and H336 (Respiratory tract irritation and Narcotic effects)	May cause respiratory irritation. May cause drowsiness or dizziness. (Respiratory tract irritation and Narcotic effects)
	H351	Suspected of causing cancer.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.	
Full text of classifications [CLP/GHS]	: Acute Tox. 2, H330	ACUTE TOXICITY (inhalation) - Category 2
	Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
	Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2
	Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
	Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
	Carc. 2, H351	CARCINOGENICITY - Category 2
	Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

SECTION 16: Other information

Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Resp. Sens. 1, H334	RESPIRATORY SENSITIZATION - Category 1
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3, H335 (Respiratory tract irritation)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3

Full text of abbreviated R phrases

: R10- Flammable.
R40- Limited evidence of a carcinogenic effect.
R26- Very toxic by inhalation.
R20- Harmful by inhalation.
R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65- Harmful: may cause lung damage if swallowed.
R37- Irritating to respiratory system.
R36/37/38- Irritating to eyes, respiratory system and skin.
R42/43- May cause sensitisation by inhalation and skin contact.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapours may cause drowsiness and dizziness.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD]

: Carc. Cat. 3 - Carcinogen category 3
T+ - Very toxic
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

PREPARATION OF SURFACES PRIOR TO FINISHING Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood or metal as they may contain harmful lead. Where possible, wet flattening methods or chemical strippers should be used to avoid the creation of dust. When dry flattening cannot be avoided and local exhaust ventilation is not available, a dust respirator to BS 2091, fitted with a particulate cartridge, and suitable for lead dust, should be worn.

People not involved with the work should be excluded from the area, until thorough cleaning has been carried out. Children and pregnant women should particularly be excluded.

Refer to the Control of Lead at Work Regulations regarding protective clothing and personal hygiene measures. Dusts should be contained and effectively and thoroughly cleaned up.

Date of printing : 06, Mar, 2015.

Date of issue/ Date of revision : 06, Mar, 2015.

Date of previous issue : No previous validation.

: If there is no previous validation date please contact your supplier for more information.

Version : 1

Notice to reader

SECTION 16: Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.