

**Gradus Grip WGP65 – (PART B)**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product name** - Gradus Grip WGP65 (PART B)**1.2. Relevant identified uses of the substance or mixture and uses advised against****Identified uses** - Adhesive.**Uses advised against** - No specific uses advised against are identified.**1.3. Details of the supplier of the safety data sheet**

GRADUS Limited  
Park Green  
Macclesfield  
Cheshire  
SK11 7LZ

Tel: +44(0)1625 428922

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Physical hazards** - Not Classified**Health hazards** - Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373**Environmental hazards** - Not Classified**Classification (67/548/EEC or 1999/45/EC)** - Xn;R20,R48/20. Carc. Cat. 3;R40. R42/43. Xi;R36/37/38.**Human health** - May cause sensitisation by inhalation. The liquid may be irritating to skin. Contains non-volatile isocyanate. Heating may generate vapours which irritate the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.**2.2. Label elements****EC number** - 202-966-0**Pictogram**

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<b>Signal word</b>	Danger
<b>Hazard statements</b>	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.
<b>Precautionary statements</b>	EUH204 Contains isocyanates. May produce an allergic reaction.
	P260 Do not breathe vapour/spray.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	P281 Use personal protective equipment as required.
	P284 [In case of inadequate ventilation] wear respiratory protection.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308+P313 If exposed or concerned: Get medical advice/attention.
	P501 Dispose of contents/container in accordance with national regulations.
	RCH004a Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
	RCH004b Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
	RCH004c 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.
	P284 [In case of inadequate ventilation] wear respiratory protection.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308+P313 If exposed or concerned: Get medical advice/attention.
	P501 Dispose of contents/container in accordance with national regulations.
	RCH004a Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
	RCH004b Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
<b>Contains</b>	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

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**2.3. Other hazards**

This product does not contain any substances classified as PBT or vPvB.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

<b>DIPHENYLMETHANE-4,4'-DI-ISOCYANATE</b>		<b>60-100%</b>
<b>CAS number: 101-68-8</b>	<b>EC number: 202-966-0</b>	<b>REACH registration number: 01-2119457014-47</b>
<b>Classification</b> Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373	<b>Classification (67/548/EEC or 1999/45/EC)</b> Carc. Cat. 3;R40 Xn;R20,R48/20 Xi;R36/37/38 R42/43	

The Full Text for all R-Phrases and Hazard Statements are displayed in Section 16.

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

**General information** - Remove affected person from source of contamination.

**Inhalation** - Move affected person to fresh air at once. Get medical attention if any discomfort continues.

**Ingestion** - DO NOT induce vomiting. Get medical attention immediately.

**Skin contact** - Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

**Eye contact** - Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

**General information** - The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation** - Irritation of nose, throat and airway. Coughing, chest tightness, feeling of chest pressure.

**Ingestion** - May cause discomfort if swallowed.

**Skin contact** - Prolonged skin contact may cause redness and irritation.

**Eye contact** - Severe irritation, burning and tearing.

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

**Notes for the doctor** - No specific recommendations. If in doubt, get medical attention promptly.

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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

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

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

**5.2. Special hazards arising from the substance or mixture**

**Specific hazards** - The product is non-combustible. Irritating gases or vapours. Not known.

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

**5.3. Advice for firefighters**

**Protective actions during firefighting** - Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.

**Special protective equipment for firefighters** - Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

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

**6.2. Environmental precautions**

**Environmental precautions** - Do not discharge into drains or watercourses or onto the ground.

**6.3. Methods and material for containment and cleaning up**

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

**6.4. Reference to other sections**

**Reference to other sections** - Wear protective clothing as described in Section 8 of this safety data sheet.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

**Usage precautions** - Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage precautions** - Store in closed original container at temperatures between 5°C and 25°C.

**Storage class** - Chemical storage.

**7.3. Specific end use(s)**

**Specific end use(s)** - The identified uses for this product are detailed in Section 1.2.

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### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>(Sen)

##### DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>(Sen)

WEL = Workplace Exposure Limit

**Ingredient comments** WEL = Workplace Exposure Limits

	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE (CAS: 101-68-8)
<b>DNEL</b>	Workers - Inhalation; Short term systemic effects: 0.1 mg/m <sup>3</sup> Workers - Dermal; Short term local effects: 28.7 mg/cm <sup>2</sup> Workers - Inhalation; Short term local effects: 0.1 mg/m <sup>3</sup> Workers - Inhalation; Long term systemic effects: 0.05 mg/m <sup>3</sup> Workers - Inhalation; Long term local effects: 0.05 mg/m <sup>3</sup> Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day Consumer - Dermal; Short term local effects: 17.2 mg/cm <sup>2</sup> Consumer - Inhalation; Short term local effects: 0.05 mg/m <sup>3</sup> Consumer - Inhalation; Long term systemic effects: 0.025 mg/m <sup>3</sup> Consumer - Inhalation; Long term local effects: 0.025 mg/m <sup>3</sup> Consumer - Inhalation; Short term systemic effects: 0.05 mg/m <sup>3</sup>
<b>PNEC</b>	- Marine water; 0.1 mg/l - STP; 1 mg/l - Fresh water; 1 mg/l - Soil; 1 mg/kg

#### 8.2. Exposure controls

##### Protective equipment



**Appropriate engineering controls** - Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection** - Wear chemical splash goggles.

**Hand protection** - It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber. To protect hands from chemicals, gloves should comply with European Standard EN374.

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**Other skin and body protection** - Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

**Hygiene measures** - Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling. When using do not eat, drink or smoke.

**Respiratory protection** - If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type AX. Gas and combination filter cartridges should comply with European Standard EN14387. Adequate ventilation would be not less than 3 to 5 air changes per hour in the work area. Open windows and doors to provide ventilation.

**Environmental exposure controls** - Keep container tightly sealed when not in use.

## SECTION 9: Physical and Chemical Properties

## 9.1. Information on basic physical and chemical properties

Appearance	Coloured liquid
Colour	Brown
Odour	Musty
Odour threshold	Not available
pH	Not available
Melting point	<10°C
Initial boiling point and range	330°C @ mbar
Flash point	>200°C CC (Closed cup).
Evaporation rate	Slow
Evaporation factor	Not available
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	Not available
Other flammability	Not available
Vapour pressure	0.01 Pa @ °C
Vapour density	8.5
Relative density	1.24 @ 20°C
Bulk density	Not available
Solubility(ies)	Insoluble in water. Hardens in contact with water.
Partition coefficient	Not available
Auto-ignition temperature	600°C
Decomposition Temperature	Not available
Viscosity	90-130 mPa s @ 25°C
Explosive properties	Not available
Explosive under the influence of a flame	Not considered to be explosive
Oxidising properties	Not available

**Comments** - Information given is applicable to the product as supplied.

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## 9.2. Other information

Other information	No information required
Refractive index	Not available
Particle size	Not available
Molecular weight	Not available
Volatility	Not available
Saturation concentration	Not available
Critical temperature	Not available

## SECTION 10: Stability and reactivity

## 10.1. Reactivity

The product will harden into a solid mass in contact with water and moisture.

## 10.2. Chemical stability

Stable at normal ambient temperatures and when used as recommended.

## 10.3. Possibility of hazardous reactions

Not applicable. May polymerise.

## 10.4. Conditions to avoid

Avoid contact with water.

## 10.5. Incompatible materials

## 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

## 11.1. Information on toxicological effects

Acute toxicity	Oral
Acute toxicity oral (LD <sub>50</sub> mg/kg)	10,000.0
Species	Rat

Acute toxicity	Dermal
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	10,000.0
Species	Rabbit

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<b>Acute toxicity</b>	Inhalation
<b>Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)</b>	0.493
<b>Species</b>	Rat
<b>ATE inhalation (gases ppm)</b>	4,500.0
<b>ATE inhalation (vapours mg/l)</b>	11.0
<b>ATE inhalation (dusts/mists mg/l)</b>	1.5

<b>Skin corrosion/irritation (animal data)</b>	Irritating
<b>Serious eye damage/irritation</b>	Moderately irritating
<b>Respiratory sensitisation</b>	Sensitising
<b>Carcinogenicity</b>	Suspected carcinogen based on limited evidence
<b>Target organ for carcinogenicity</b>	No specific target organs known
<b>Reproductive toxicity</b>	This substance has no evidence of toxicity to reproduction
<b>Specific target organ toxicity</b>	Repeated exposure
<b>STOT - repeated exposure</b>	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction
<b>Aspiration hazard</b>	Not anticipated to present an aspiration hazard, based on chemical structure
<b>Inhalation</b>	Irritating to respiratory system. May cause sensitisation by inhalation
<b>Ingestion</b>	May cause stomach pain or vomiting
<b>Skin contact</b>	Irritating to skin. May cause sensitisation by skin contact.
<b>Eye contact</b>	Irritation of eyes and mucous membranes.
<b>Acute and chronic health hazards</b>	May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.
<b>Route of entry</b>	Inhalation Skin and/or eye contact
<b>Medical symptoms</b>	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.
<b>Medical considerations</b>	Chronic respiratory and obstructive airway diseases.



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## Toxicological information on ingredients

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Acute toxicity	Oral
Acute toxicity oral (LD <sub>50</sub> mg/kg)	10,000.0
Species	Rat
ATE oral (mg/kg)	10,000.0

Acute toxicity	Dermal
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	9,400.0
Species	Rabbit
ATE dermal (mg/kg)	9,400.0

Acute toxicity	Inhalation
Acute toxicity inhalation (LC <sub>50</sub> vapours mg/l)	0.49
Species	Rat
ATE inhalation (LC <sub>50</sub> vapours mg/l)	0.49

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**SECTION 12: Ecological Information****Ecotoxicity**

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

**12.1. Toxicity**

Ecological information on ingredients

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT; KEROSENE - UNSPECIFIED

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: >1000 mg/l, Freshwater fish

**Acute toxicity – aquatic invertebrates** EC<sub>50</sub>, 48 hours: >500 mg/l, Daphnia magna

**Acute toxicity – aquatic plants** EC<sub>50</sub>, 72 hours: >1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients

	<b>DIPHENYLMETHANE-4,4'-DI-ISOCYANATE</b>
<b>Acute toxicity</b>	fish LC <sub>50</sub> , 96 hours: >1000 mg/l, Fish
<b>Acute toxicity – aquatic invertebrates</b>	EC <sub>50</sub> , 24 hours: >1000 mg/l, Daphnia magna
<b>Chronic toxicity – aquatic invertebrates</b>	NOEC, 21 days: >10 mg/l, Daphnia magna

**12.2. Persistence and degradability**

**Persistence and degradability** - The product is not readily biodegradable.

**Stability (hydrolysis)** - Reacts with water

**Biological oxygen demand** - < 10 g O<sub>2</sub>/g substance

**12.3. Bioaccumulative potential**

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

**Partition coefficient** - Not available.

Ecological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

**Partition coefficient** - log Pow: 4.51

**12.4. Mobility in soil**

**Mobility** - The product is non-volatile.

**12.5. Results of PBT and vPvB assessment**

Ecological information on ingredients

This product does not contain any substances classified as PBT or vPvB.

**12.6. Other adverse effects**

None known.

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

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

**Disposal methods** - Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Waste class** - 070208

**SECTION 14: Transport information**

**General** - The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

**14.1. UN number**

Not applicable.

**14.2. UN proper shipping name**

Not applicable.

**14.3. Transport hazard class(es)**

No transport warning sign required.

**14.4. Packing group**

Not applicable.

**14.5. Environmental hazards**

**Environmentally hazardous substance/marine pollutant** - No.

**14.6. Special precautions for user**

Not applicable.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

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

**National regulations** - Health and Safety at Work etc. Act 1974 (as amended).

**EU legislation** - Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

**Guidance** - Isocyanates: Health hazards and precautionary measures EH16.

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out.

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## SECTION 16: Other information

<b>Issued by</b>	Compliance
<b>Revision date</b>	15/02/2016
<b>Revision</b>	21
<b>Risk phrases in full</b>	R20 Harmful by inhalation.
	R36/37/38 Irritating to eyes, respiratory system and skin.
	R40 Limited evidence of a carcinogenic effect.
	R42/43 May cause sensitisation by inhalation and skin contact.
	R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
<b>Hazard statements in full</b>	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.
<b>Store Between</b>	5°C - 25°C
<b>Contains SVHC</b>	NO