SAFETY DATA SHEET

Date of creation: 22/09/2009

According to Regulation CLP/EC No 1272/2008

GLISS'GRIP POOLS

Date of revision: 30/01/2013

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND THE COMPANY/ UNDERTAKING

1.1. Product name — **GLISS'GRIP POOLS**

Product code — **K-GG POOLS**

1.2. Product Use description — COATING RESIN

1.3. Company

GLISSGRIP SAS
50, avenue de la Bourdonnais
75007 PARIS - FRANCE
Tél. : +33 (0)1.30.25.84.90 - Fax : +33 (0)1.30.25.84.94

E-mail : info@glissgrip.fr

1.4. Emergency telephone number

Multilingual emergency number (24/7):

- Europe/America/Africa : +44 1235 239 (UK)
- Middle East & Africa speaking Arabic: +44 1235 239 671 (UK)
- Asia Pacific : +65 3158 1074 (Singapore)
- China : +86 10 5100 3039 (Beijing)
- France (ORFILA) : +33 (0)1 45 42 59 59

SECTION 2: HAZARDS IDENTIFICATION

Main hazards		SGH07
Information about health and environmental hazards	H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects	
Additional information	Persons with respiratory problems (asthma) or hypersensitivity should avoid contact with this product.	

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical description: Urethane Prepolymer based on aliphatic polyisocyanate (HDI).

Information on hazardous ingredients:

CAS No EINECS No	%	Description	Hazards Pictograms	CLP/SGH	Hazard classification
28182-81-2	>95	Prepolymer based on aliphatic polyisocyanate	SGH07	H317 H411	1 1

Additional information:

Contains less than 0.5% of 1,6-hexamethylene diisocyanate free monomer(HDI).

HDI: EEC-No: 615-011-00-1.

SECTION 4: FIRST AID MEASURES

4.1. General information

Symptoms of poisoning may occur only hours after exposure; therefore provide a medical observation for at least 48 hours after an accident.
Remove immediately all contaminated clothing.

4.2 In case of inhalation:

Bring a lot of fresh air and consult with a doctor for more safety. In case of unconsciousness, place and transport the person in lateral position.

4.3 In case of contact with skin:

Remove immediately all contaminated clothing and keep it away Wash the skin with soap and water at least for 10 minutes.

4.4 In case of contact with eyes:

Immediately flush eye with plenty of water, keeping eyelids open, for several minutes.
If problems persist, consult a doctor.

4.5 In case of ingestion:

Do not induce vomiting. Consult a doctor.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media

Co2, extinguishing powder or water spray.

5.2 Unsuitable extinguishing media

Water jet.

5.3 Special hazards arising from the product, its combustion products or its resulting gases

Toxic gases may be produced in case of incomplete combustion: carbon monoxide (CO), nitric oxide, isocyanate vapours and hydrogen cyanide.
In case of fire wear a self-contained breathing apparatus.

5.4 Special equipment for firefighters

Firefighter should wear a self-contained breathing apparatus,

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions:

Wear safety equipment. Keep unprotected persons away.
Wear appropriate personal protective clothing.
Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Do not allow product to enter into drains, water courses and ground waters

6.3. Methods for cleaning up and containment.

Evacuate the area. Don't inhale the vapours.
The cleaning must be performed only by trained personnel. Personnel handling large spills should wear protective equipment giving a total skin and eye protection and use respiratory protection as well.
Collect spills using sand, soil or any absorbent material (such as kieselguhr, acid binder or universal binder).
Allow to react at least 30 minutes. Do NOT absorb in sawdust or other combustible absorbents.
Collect spillage and place in containers for later decontamination. Wash spill area with water.
Preparation and composition of decontamination liquid:

Decontaminant 1 :	Decontaminant 2 :
- Sodium carbonate : 5 – 10 %	- Ammonia solution concentrated : 3 – 8 %
- Liquid detergent : 0.2 – 2 %	- Liquid detergent: 0.2 – 2 %
- Water: fill container with water to obtain 100%	- Water: fill container with water to obtain 100%

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep containers tightly closed.
Ensure adequate ventilation of the workplace.
Avoid spray releases. Avoid contact with skin. Ensure a good ventilation if product is heated. In case of isocyanates vapours or aerosols, ensure that the releases do not exceed the occupational exposure limit (OEL). Use exhaust ventilation equipment and ensure regular inspection and maintenance of the devices.

7.2 Conditions for safe storage

Keep containers tightly closed in a dry area. Storage temperature: between 0 and 50 °C.
Information about storage in one common storage facility: no information required.
Storage class: hazard class for water (KBwS): 2 – Hazardous to water (KBwS).

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Additional information about technical system:
No further information, see section 15.

Wear suitable protective clothing, gloves and eyes and face protection.
Airborne concentrations must be kept as low as it is practically possible, below exposure limit (VLE/MEL). Isocyanates can only be smelled if the occupational exposure limit has been exceeded. A medical follow-up for personnel handling (or in contact with) respiratory sensitizers is recommended. Individuals with a history of lung or breathing problems (asthma, bronchitis…) or skin sensitisation should not use or be exposed to isocyanates. The Occupational Exposure Limits below do not apply to previously sensitized individuals. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted.

Occupational exposure limits (Threshold limit values):

CAS No	Product	%	Type	Value	Unit
822-06-0	HDI	-	MAK	0.005	ppm

Airborne concentrations limits TRGS 900 (CMA/MAC values):

1,6- Hexamethylene −diisocyanate …….50 ml/m³ (ppm) *corresp. to* 270 mg/m³

CAS No: 822−06−0 (average value after 8 hours)

Ceiling exposure limit – Excess factor 1

Any existing national regulations on the handling of isocyanates must be observed.

8.2 General protective and hygienic measures

Keep away from food, drink and animal feed.

Take off immediately all soiled or contaminated clothing.
Avoid contact with eyes and skin.

8.3 Individual protective measures

Respiratory Protection: Appropriate respiratory protective equipment including positive pressure and air supplied must be used in insufficiently ventilated working areas and during applications of the product. If a filter mask is adapted, select a filter for gases and organic vapours (Boiling Point > 65 °C).

Hand Protection: Wear protective gloves.
The following protection materials are recommended:
-Butyl rubber − IIR (>= 0,5 mm)
- Fluorinated rubber − FKM (>= 0,4 mm)

Eyes Protection: Safety glasses or chemical safety goggles. Use face shield when there is a greater risk of liquid splashes.

Skin and body : Wear protective clothing.

Protective equipment: (Pictograms)

Body protection
-Work clothes worn by personnel should be washed regularly.
-After contact with the product, all parts of the body that have been soiled must be washed.

Respiratory protection
- FFP type of mask: wear a single-use half-mask with a particle filter against sprays, class FFP 2.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Light yellow
Odour:	Light
Temperatures:	Melting Point: <0°C Boiling Point: Not available. Flash Point : >200° C Flammability Temperature: >400°C Autoignition: product don't ignite sponteanously
Solubility in water:	Insoluble, reacts with water
pH	9-10
Relative Density:	1,09 Kg/m^3 (20°C)
Dynamic Viscosity (mPa.s)	2000 20°C)
Vapour Pressure:	< 0.00001 mbar (20°C)

SECTION 10: STABILITY AND REACTIVITY

10.1 Conditions to avoid

Hazardous Polymerisation at approximatively 260°C and CO2 generation.

10.2 Material to avoid

Amines, Alcohols, Water, Bases, Copper, Copper alloys, Zinc, Tin, Aluminium.

10.3 Hazardous reactions

Exothermic reaction occurs with amines and alcohols. Reacts slowly with water forming CO2, risk of bursting in closed containers (owing to increase of pressure).

10.4 Hazardous decomposition products

No decomposition products known under recommended handling and storage conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute toxicity:

Relevant value LD/LC50 for classification:

HDI LD 50, oral rat > 5000 mg/kg

- orally :	LD50 > 5000 mg/kg (species : rat ; component : HDI)

11.2 Primary irritant effects:

- Skin:	Test on rabbit: 24 h exposure - slightly irritant.
-Eyes:	Non-irritant
-Inhalation:	No pulmonary sensitisation observed in animal test: No pulmonary sensitisation potential was observed in the guinea pig model after either intradermal or inhalative induction with polyisocyanate based on hexamethylene disocyanate.
Sensitisation:	Sensitisation may occur by inhalation.

11.3 Additional toxicological information:

Toxicological studies of a comparable product.
Special properties/effects:

Over-exposure, especially during spraying operations without the necessary precautions, entails the risk of concentration-dependant irritating effects on eyes, nose, throat, and respiratory tract. Risk of delayed malaises and development of hypersensitivity (difficult breathing, coughing, asthma).
Hypersensitive persons may suffer from these effects even at very low isocyanate concentrations (below exposure limits).

Prolonged contact with the skin may cause tanning and irritating effects.

SECTION 12: ECOLOGICAL INFORMATION

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Ecotoxicological effects:

General Information:

According to ecotoxicological data, this substance must be classified as toxic to aquatic organisms.
As the compound is not readily biodegradable, long retention times in water are to be expected. This applies only in cases where no other elimination mechanisms (photodegradation, hydrolysis, adsorption) are active.

In case of discharge into surface waters where emissions of longer duration result in maximum concentrations at the outflow, damage to the ecosystem cannot be excluded.

Do not allow product to escape into waters, waste water or soil.

Product reacts with water and release carbonic anhydride to produce an insoluble reaction product, with high melting point (polyurea). This reaction is facilitated by surface-active agents (liquid soaps) or solvents soluble in water.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Product:
This product should not be disposed of with household garbage. Do not allow product to reach drains or sewers.
Waste: send to an approved incineration facility according to official regulations.
Waste disposal key number: 55512

13.2 Soiled packaging:
Empty containers must be decontaminated (see section 6) before returning to recycling or must be destroyed after decontamination.
Waste: send to an approved incineration facility according to official regulations.
Empty containers: empty containers carefully and don't leave any product residue. Product residues in container liners must be converted into inert, water-insoluble polyurea (harmless). Remove the labels and recycle.

SECTION 14: TRANSPORT INFORMATION

Road transport ADR/RID and GGVS/GGVE

Class ADR/RID:	-
Hazard number:	-
UN number:	-
Code classification :	-
Packing group:	-
Hazard label:	-
Product description:	-

Sea Transport IMDG/GGVSea :

Class:	-
UN number:	-
Packing group:	-
Hazard label:	-
Product description:	-

Air transport ICAO-TI and IATA-DGR :

Class:	-
UN number:	-
Packing group:	-
Hazard label:	-
Product description:	-

Remarks: Non-hazardous for transport. Avoid humidity and heat (max. 50 °C).
Keep away from food and beverages.

SECTION 15: REGULATORY INFORMATION

15.1 Labelling according to European directives:
This product is classified and identified in the Annex I of Directive 67/548/EEC (with its amendments and adaptations).

Symbol:

Hazard identification and characterization: SGH07.

Hazardous components for labelling:

Contains: 1,6- Hexamethylene diisocyanate .

15.2 Hazard statements:

H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects

15.3 Precautionary statements:

P262	Do not get in eyes, on skin, or on clothing.
P305+P338+P313+P351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical advice/attention.
P302+P352	IF ON SKIN: Wash immediately with soap and water
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273+P201	Avoid release to the environment. Obtain and read special instructions before use.

Specific identification for some preparations:
Contains isocyanates. Follow the instructions for use issued by the producer.

National instructions (France):
Classification VbF (French ruling on flammable liquids): not applicable

Technical Directives concerning air:
Water pollution class:
Others prescriptions, restrictions and prohibiting regulations

MAK value (CMA) (TRGS 900)
1,6- Hexamethylene diisocyanate 0,005 ml/m3 (ppm) soit 0,035 mg/m3 (8 hours average value)
Ceiling exposure limit – Excess factor 1

1,6- Hexamethylene diisocyanate (HDI)
VLE = 0,15 mg/m3 (0,02 ppm)-(France)
VME = 0,075 mg/m3 (0,01 ppm)-(France)

Risk of respiratory allergy (France)

For other information please refer to national regulation (environmental code, labour code….).

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SECTION 16: OTHER INFORMATION

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal and is not to be considered a warranty or quality specification.

The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.