



Safety Data Sheet

HEMPASIL 77109

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II. - Europe

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

1.1 Product identifier

Product name : HEMPASIL 77109
Product identity : 7710919990
Product type : silicone fouling-release coating (base for multi-component product)

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

Field of application : ships and shipyards.
Ready-for-use mixture : 77100 = 77109 7 vol. / 97080 1 vol.
Identified uses : Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : HEMPEL A/S
Lundtoftevej 150
DK-2800 Kgs. Lyngby
Denmark
Tel.: + 45 45 93 38 00
hempel@hempel.com
Emergency telephone number (with hours of operation)
+45 45 93 38 00 (08.00 - 17.00)
See section 4 First aid measures.

Date of issue : 7 November 2011
Date of previous issue : 3 November 2011.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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
Xn; R20/21
Xi; R38
R43

Physical/chemical hazards : Flammable.

Human health hazards : Harmful by inhalation and in contact with skin. Irritating to skin. May cause sensitization by skin contact.

2.2 Label elements

Hazard symbol or symbols :



Indication of danger : Harmful

Risk phrases : R10- Flammable.
R20/21- Harmful by inhalation and in contact with skin.
R38- Irritating to skin.
R43- May cause sensitization by skin contact.

Safety phrases : S23- Do not breathe vapor or spray.
S36/37- Wear suitable protective clothing and gloves.
S51- Use only in well-ventilated areas.

Hazardous ingredients : xylene
diamide wax mixture

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.
Tactile warning of danger : Not applicable.



SECTION 3: Composition/information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC or assigned an occupational exposure limit or PBT or vPvB.

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
xylene	EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	20-25	R10 Xn; R20/21 Xi; R38	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY: SKIN - Category 4 ACUTE TOXICITY: INHALATION - Category 4 SKIN CORROSION/IRRITATION - Category 2	[1] [2]
ethylbenzene	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	3-7	F; R11 Xn; R20	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY: INHALATION - Category 4	[1] [2]
diamide wax mixture	-	0.25-2.5	R43 N; R51/53 See Section 16 for the full text of the R-phrases declared above.	SKIN SENSITIZATION - Category 1 AQUATIC TOXICITY (CHRONIC) - Category 2	[1]

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 and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit, see section 8.

[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

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.
Eye contact :	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek 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. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.
Skin contact :	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
Protection of first-aiders :	No action shall be taken involving any personal risk or without suitable training. 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

Potential acute health effects

Eye contact :	May cause eye irritation.
Inhalation :	Harmful by inhalation.
Skin contact :	Harmful in contact with skin. Irritating to skin. May cause sensitization by skin contact.
Ingestion :	Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact :	No specific data.
Inhalation :	No specific data.
Skin contact :	Adverse symptoms may include the following: irritation redness
Ingestion :	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	Not applicable.
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SECTION 4: First aid measures

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media : Recommended: alcohol resistant foam, CO₂, powders, water spray.
Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous combustion products : Decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

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

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations for flammable liquids. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.



SECTION 7: Handling and storage

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
xylene	EU OEL (Europe, 12/2009). Absorbed through skin. STEL: 442 mg/m ³ 15 minute(s). STEL: 100 ppm 15 minute(s). TWA: 221 mg/m ³ 8 hour(s). TWA: 50 ppm 8 hour(s).
ethylbenzene	EU OEL (Europe, 12/2009). Absorbed through skin. STEL: 884 mg/m ³ 15 minute(s). STEL: 200 ppm 15 minute(s). TWA: 442 mg/m ³ 8 hour(s). TWA: 100 ppm 8 hour(s).

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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation location.

Individual protection measures

- General : Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.
- Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
- Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Hand protection : Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.
Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:

Recommended: Silver Shield / 4H gloves, polyvinyl alcohol (PVA), Viton®
Not recommended: nitrile rubber, neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl chloride (PVC)
- Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.
Wear suitable protective clothing. Always wear protective clothing when spraying.
- Respiratory protection : If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls



SECTION 8: Exposure controls/personal protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	Testing not relevant or not possible due to nature of the product.
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 29°C (84.2°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Upper/lower flammability or explosive limits :	1 - 7 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1.001 g/cm ³
Solubility(ies) :	Very slightly soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 25 %
Water % by weight :	Weighted average: 0 %
VOC content :	249.7 g/l
VOC content, Ready-for-use mixture :	281.6 g/l
TOC Content :	Weighted average: 226 g/l
Solvent Gas :	Weighted average: 0.056 m ³ /l

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

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials



SECTION 10: Stability and reactivity

Highly reactive or incompatible with the following materials: oxidizing materials.

Reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations 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. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Dermal	5378.3 mg/kg
Inhalation (gases)	22002 ppm
Inhalation (vapors)	245 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains diamide wax mixture. May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses.

Product/ingredient name	Result	Species	Exposure
xylene	Acute LC50 8500 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 8200 - 10032 ug/L Fresh water	Fish - Oncorhynchus mykiss - 0.6 g	96 hours
ethylbenzene	Acute EC50 4600 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 2930 - 4400 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <=24 hours	48 hours
	Acute LC50 >5200 ug/L Marine water	Crustaceans - Americamysis bahia - <24 hours	48 hours
	Acute LC50 11900 ug/L Fresh water	Fish - Pimephales promelas - 30 days - 0.079 g	96 hours

12.2 Persistence and degradability

**SECTION 12: Ecological information**

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	-	>70 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
xylene	3.16	6 - 23.4	low
ethylbenzene	3.1	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data available in our database.

Mobility : No known data available in our database.

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.

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

The generation of waste should be avoided or minimized wherever possible.

Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations.

Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11*




Packaging

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

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

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.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env.*	Additional information
ADR/RID Class	UN1263	PAINT	3 	III	No.	<u>Special provisions</u> 640 (E) <u>Tunnel code</u> (D/E)
IMDG Class	UN1263	PAINT	3 	III	No.	<u>Emergency schedules (EmS)</u> F-E, S-E
IATA Class	UN1263	PAINT	3 	III	No.	-

PG* : Packing group

Env.* : Environmental hazards



SECTION 14: Transport information

14.6 Special precautions for user

Not available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization - 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

Not applicable.

Other EU regulations

Seveso category : 6

International regulations

IMO Anti-fouling System Convention Compliant (AFS/CONF/26)

This product does not contain organotin compounds acting as biocides and complies with the International Convention on the Control of Harmful Anti-fouling Systems on Ships as adopted by IMO October 2001 (IMO document AFS/CONF/26)

Product type : silicone fouling release coating (base for multi-component product)

Manufacturer : Hempel A/S

Product name and/or code : HEMPASIL 77109

7710919990

Colour : Not available.

Note: This name is shown on the product container. All products in HEMPEL's containers carrying this name comply with the IMO Convention (AFS/CONF/26).

Active ingredient(s) :

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]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Full text of abbreviated R phrases : R11- Highly flammable.
R10- Flammable.
R20- Harmful by inhalation.
R20/21- Harmful by inhalation and in contact with skin.
R38- Irritating to skin.
R43- May cause sensitization by skin contact.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD] : F - Highly flammable
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

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

Hazard pictograms :



Signal word : Warning

**SECTION 16: Other information**

Hazard statements : Flammable liquid and vapor.
Causes skin irritation.
May cause an allergic skin reaction.

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

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1	On basis of test data Calculation method Calculation method

Notice to reader

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications.

It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.