



SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF SUBSTANCE/MIXTURE AND COMPANY/ENTERPRISE 1.1. Product

Identifier

Product Name: PARAFOULING®
Product code: 002

1.2. Relevant identified uses of the substance or mixture and discouraged uses

Resin 2 protective components.

1.3. Information concerning the supplier of the safety data sheet ECO'PRISM - ZA Bayard

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1.4. Emergency number: +33 (0)4 22 52 18 20

Company/Organization: INRS / ORFILA <http://www.centres-antipoison.net>

SECTION 2: IDENTIFICATION OF HAZARDS

2.1. Classification of the substance or mixture

In accordance with Regulation (EC) No 1272/2008 and its adaptations.

Flam. Liq. 3 H226 Based on test data
Skin Irritates. 2 H315 Calculation method
Eye Dam. 1 H318 Calculation method
Skin Sens. 1 H317 Calculation method
STOT SE 3 H336 Calculation method

2.2. Labeling elements

In accordance with Regulation (EC) No 1272/2008 and its adaptations.

Contains Hydrocarbons, C11-C12, isoalkanes, <2% aromatic

Hazard pictograms:



Warning statement:

DANGER

Hazard statements:

H226 Flammable liquid and vapor.
H314 Causes skin burns and serious eye damage.
H317 May cause skin allergy.
H336 May cause drowsiness or dizziness.

Safety advice:

Prevention

P280 Wear protective gloves. Wear protective clothing. Wear eye or face protection equipment.

P210 Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. Do not smoke.

Intervention

P304 + P340 + P310 FOR INHALATION: Carry the person outdoors and keep the person in a position where they can breathe comfortably. Call a POISON CONTROL CENTER or doctor immediately.

P301 + P310 + P331 IF SWALLOWED: Call a POISON CONTROL CENTER or doctor. DO NOT induce vomiting.

P303 + P361 + P353 + P310 IN CASE OF CONTACT WITH SKIN (or hair): Remove immediately all contaminated clothing. Rinse the skin with water. Call a POISON CONTROL CENTER or doctor immediately.

P305 + P310 IN CASE OF CONTACT WITH EYES: Call a CENTER immediately

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ANTIPOISON or a doctor

Storage

P405 - Keep locked.

Disposal

P501 - Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazardous ingredients:

propane-1-ol

3-aminopropyltriethoxysilane

2.3. Other hazards

The product is flammable. Keep away from heat, sparks and flames. During use, possible formation of flammable/explosive vapor-air mixture.

SECTION 3: COMPOSITION/INFORMATION ON COMPONENTS**3.2. Mixtures****Membership:**

Identification	(EC) 1272/2008	Note	%
INDEX: 603-003-00-0 CAS: 71-23-8 EC: 200-746-9 REACH: 01-2119486761-29 propane-1-ol	Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336	[1] [2]	20 <= x % < 40
INDEX: - CAS: 919-30-2 EC: 213-048-4 REACH: 01-2119480479-24 3-aminopropyltriethoxysilanedimethylethyl)-4-	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317	[1]	2 <= x % < 10
INDEX: 014-005-00-0 CAS: 78-10-4 EC: 201-083-8 REACH: 01-2119496195-28 ethyl silicate	Flam. Liq. 3, H226 Acute Tox. 4, H332 Eye Irritates. 2, H319 STOT SE 3, H335	[1] [2]	2 <= x % < 10
INDEX: 607-195-00-7 CAS: 108-65-6 EC: 203-603-9 REACH: 01-2119475791-29 2- methoxy-1-methylethyl acetate	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]	1.5 <= x % < 10

Component Information:

[1] Substance for which there are exposure limit values at the workplace.

[2] Substance with a limit of exposure at the workstation.

SECTION 4: FIRST AID

In general, if in doubt or if symptoms persist, always seek medical attention.

NEVER have an unconscious person ingest anything.

4.1. Description of first aid**General information:**

If any doubt exists, or if symptoms persist, seek medical attention. If fainting occurs, place the person in a lateral safety position and call a doctor immediately. Do not have an unconscious person ingest anything. In any case, present the safety data sheet to the physician.

In case of contact with eyes:

Rinse eyes immediately and thoroughly with running water for at least 15 minutes, keeping the eyelids open. Provide medical treatment.

If swallowed:

If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting unless instructed otherwise by medical personnel. Seek medical attention.

If inhaled:

Transporting affected people out of the danger zone using appropriate breathing safety measures. Carry the injured person in fresh air and have them lie down.

In case of skin contact:

Immediately remove any soiled or splashed clothing. Wash contaminated clothing before reuse. Do not allow the product to dry on the skin. Wash the skin thoroughly with soap and water or use a recognized skin cleanser. In case of persistent irritation of the skin, consult a doctor.

4.2. Main symptoms and effects, acute and delayed

Inhalation or ingestion may, depending on their duration and the amount of product, cause the following symptoms: headache, dizziness, asthenia, nausea, vomiting, cardiac arrhythmia, feeling drunk, loss of consciousness, respiratory arrest, death.

4.3. Indication of any immediate medical care and special treatment required

Note to the treating physician: No special recommendations.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Means of extinguishing

Adapt the extinguishing measures to the surrounding fire.

Appropriate means of extinguishing

In case of fire, use:

- sprayed water or water mist
- Water with AFFF (Floating Film Forming Agent) additive
- moss
- ABC polyvalent powders
- BC powders
- carbon dioxide (CO₂)

Prevent fire-fighting effluents from entering sewers or waterways.

Inappropriate means of extinguishing

In case of fire, do not use:

- water
- water jet

5.2. Particular hazards arising from the substance or mixture

A fire will often produce thick black smoke. Exposure to decomposition products may involve health risks.

Do not breathe fumes.

In the event of fire, the following may occur:

- carbon monoxide (CO)
- carbon dioxide (CO₂)

5.3. Advice to firefighters

During firefighting, wear self-contained breathing apparatus and protective clothing.

Flammable product. Cool the flame-exposed containers with a spray of water. Use appropriate extinguishing agents for surrounding materials. Fire residues and contaminated extinguishing water must be disposed of in accordance with local requirements.

SECTION 6: MEASURES TO BE TAKEN IN THE EVENT OF ACCIDENTAL DISPERSION

6.1. Personal precautions, protective equipment and emergency procedures

Refer to the protective measures listed in Sections 7 and 8.

To avoid fire, remove ignition sources. Ensure a adequate ventilation. Use personal protective clothing.

For non-rescuers

Because of the organic solvents contained in the mixture, remove the sources of ignition and ventilate the premises.

For rescue workers

Responders will be equipped with appropriate personal protective equipment (Refer to Section 8).

6.2. Precautions for environmental protection

Contain and collect leaks with non-combustible absorbent materials, e.g. sand, soil, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any penetration into sewers or waterways.

6.3. Containment and cleaning methods and equipment

Absorb with liquid-retaining material (sand, diatomaceous earth, universal binders, etc.) or use spill control equipment. Containers filled with the absorbed product must be adequately labeled. Disposal of this product, solutions and by-products must always comply with the legal requirements for environmental protection and waste disposal as well as the requirements of all local authorities.

6.4. Reference to other sections

See section 1 for emergency contact details.

See Section 8 for information on suitable personal protective equipment.

See Section 13 for additional information on waste treatment.

SECTION 7: HANDLING AND STORAGE

The requirements for storage rooms shall apply to workshops where the mixture is handled.

7.1. Precautions for safe handling

Keep away from any flames or sparks - Do not smoke. The vapors may form explosive mixtures with air.

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Take the necessary measures against electrostatic discharges. Ensure proper ventilation of the premises, possibly carry out a suction at the workplace. As far as possible, according to the current state of the art, working processes must be prepared in such a way that no dangerous substances are released or contact with the skin is excluded. The risks inherent in the handling of the product should be minimized by implementing protective and preventive measures.

7.2. Conditions necessary to ensure safe storage, taking into account any incompatibilities

No data is available.

Storage

Store in a dry, cool, well-ventilated place. Keep the container tightly closed when not in use. Opened containers should be carefully closed and held upright to prevent leakage. Do not store in unlabeled containers. Use a suitable container to avoid contamination of the surrounding environment. Store in accordance with local regulations. Remove all sources of ignition.

Packaging

Always store in packages of the same material as the original one.

Seveso Directive - Reporting thresholds (tons)**Hazard criteria**

Category	Notification and MAPP (Major Accident Prevention Policy) Threshold	Safety Report Threshold
P5c	5,000	50,000

7.3. Specific end-use(s)

No data is available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Occupational exposure limit values:**

Product/Component Name	Exposure limit values
propane-1-ol	Ministry of Labor (France, 10/2007). Notes: indicative limit values as published in Circulars between 1982 and 1996. VME: 200 ppm 8 hours. MEV: 500 mg/m ³ 8 hours.
ethyl silicate	Ministry of Labor (France, 12/2007). Notes: indicative limit values VME: 10 ppm 8 hours. MEV: 85 mg/m ³ 8 hours.
2-methoxy-1- acetate methylethyl	Ministry of Labor (France, 10/2016). Absorbed by the skin. Notes: Labor Code, Art.4412-149 (Binding Regulatory Limit Values) ELV: 550 mg/m ³ 15 minutes. ELV: 100 ppm 15 minutes. MEV: 275 mg/m ³ 8 hours. VME: 50 ppm 8 hours.

DNEL/DMEL

Product/Component Name	Type	Exhibition	Value	Population	Effects
propane-1-ol	DNEL	Long-term Inhalation	268 mg/m ³	Operators	Systemic
	DNEL	Long-term Inhalation	1723 mg/m ³	Operators	Local
	DNEL	Long term Cutaneous use	136 mg/kg	Operators	Systemic
	DNEL	Long-term Inhalation	80 mg/m ³	Consumers	Systemic
	DNEL	Long-term Inhalation	1036 mg/m ³	Consumers	Local
	DNEL	Long term Cutaneous use	81 mg/kg	Consumers	Systemic
	DNEL	Long-term Oral use	61 mg/kg	Consumers	Systemic
2-methoxy-1- acetate methylethyl	DNEL	Long term Cutaneous use	153.5 mg/kg bw/day	Operators	Systemic
	DNEL	Long-term Inhalation	275 mg/m ³	Operators	Systemic
	DNEL	Long term Cutaneous use	54.8 mg/kg bw/day	Consumers	Systemic
	DNEL	Long-term Inhalation	33 mg/m ³	Consumers	Systemic
	DNEL	Long-term Oral use	1.67 mg/kg bw/day	Consumers	Systemic

PNEC

Product/Component Name	Description of the medium	Value
propane-1-ol	Freshwater	10 mg/l
	Sea water	1 mg/l
	Wastewater Treatment Plant	96 mg/l
	Freshwater sediment	22.8 mg/kg 96 mg/l
	Seawater sediment	2.28 mg/kg
	Soil	2.2 mg/kg
2-methoxy-1-methylethyl acetate	Freshwater	0.635 milligrams per liter
	Freshwater sediment	3.29 mg/kg
	Seawater sediment	0.329 mg/kg
	Soil	0.29 mg/kg
	Wastewater Treatment Plant	100 mg/l
	Sea water	0.0635 mg/l

8.2. Exposure controls

Technical measures: Observe standard precautions for handling chemicals. Do not eat, drink or smoke during use. Protect the skin by applying an ointment. Cleaning the skin very thoroughly after labor (complementary care if necessary).

Personal protection measures

Eye/face protection: Wear safety glasses with side shields. Safety glasses with side shields shall comply with EN 166 or equivalent.

Skin protection: Working clothing customary in chemistry and suitable for the workplace.

Hand protection: In case of possible contact of the product with the skin, the use of gloves, tested according e.g. EN 374, guarantees sufficient protection. Protective gloves must always be tested to ensure that they are suitable for specific use in the workplace (e.g. mechanical strength, product compatibility, antistatic). Follow the gloves manufacturer's instructions and information on the use, storage, maintenance and replacement of gloves. The gloves should be replaced immediately in case of damage or as soon as signs of wear and tear are observed. If possible, prepare the work so as not to have to wear gloves at all times.

	Prolonged exposure	Short-term exposure
Specifications of recommended gloves	Viton®	nitrile
Thickness	>0.7 mm	>0.4 mm
Permeation time	>480 min	>480 min

Respiratory protection: In the event of the limit values being exceeded at the workstation, an appliance must be worn appropriate respiratory protection. Where no limit value is specified for the work station, respiratory protection measures shall be taken in the presence of aerosols and mists. Recommended: organic vapor filter (Type A) , organic vapor filter (Type AX)

Environmental protection exposure controls:

See SECTION 7: Handling and storage and SECTION 13: Considerations for measures to be taken to avoid excessive environmental exposures during the use and disposal of waste.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on essential physical and chemical properties****General Information**

Physical State: Liquid.

Important health, safety and environmental information

pH: Not applicable.
Boiling point/range: 97°C to 126°C
Flash point: 24°C.
Vapor pressure (20°C): 2 kPa.
Density: < 1
Water solubility: Insoluble.
Merge point/interval: Not specified.
Auto-ignition point/interval: > 350°C
Explosivity limit: 2.1 to 13.5%.

9.2. Other information

VOC content of the ready-to-use product

VOC (g/l): < 450

No data is available.

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

No data is available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of dangerous reactions

Exposed to high temperatures, the mixture can give off dangerous decomposition products, such as carbon monoxide and dioxide, fumes, nitrogen oxide.

10.4. Conditions to be avoided

The product is flammable. Keep away from heat, sparks and flames. Keep away from moisture.

10.5. Incompatible materials

Avoid contact with the following: Oxidizing agents.

10.6. Hazardous decomposition products

Thermal disintegration is closely dependent on external conditions. A complex mixture of solids, liquids and gases in air is formed, including carbon dioxide, carbon monoxide and other organic compounds, when burned or broken down thermally or by oxidation.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****General Information**

Prolonged or repeated contact can decrease the skin and cause irritation, chapping, and/or dermatitis. High concentrations of steam can cause headache, dizziness, drowsiness, and nausea, and can cause loss of consciousness. Toxicological data specific to this product are not known. The toxicological data were established by analog conclusion.

Acute toxicity

Product/Component Name	Outcome	Cash	Dosage	Exhibition
propane-1-ol	LD50 Cutaneous use	Rabbit	5040 mg/kg	-
	LD50 Oral use	Rat	1870 mg/kg	-
3-aminopropyltriethoxysilane	LD50 Oral use	Rat	1780 mg/kg	-
ethyl silicate	LD50 Oral use	Rat	6270 mg/kg	-
2-methoxy-1- acetate methylethyl	LD50 Cutaneous use	Rabbit	>5 g/kg	-
	LD50 Oral use	Rat	8532 mg/kg	-

Acute toxicity estimates

Track	ETA Value
Oral use	14,585.1 mg/kg
Inhalation (vapors)	117.8 milligrams per liter

Skin corrosion/skin irritation

Remarks

Skin: Causes severe burns.

Eyes: Causes severe eye damage.

Awareness Raising

Remarks

Skin: May cause skin allergy.

Carcinogenicity

Notes: No evidence of carcinogenic effect.

Teratogenicity

Notes: No evidence of teratogenicity.

Reproductive toxicity

Notes: No evidence of reproductive toxicity.

Mutagenicity

Notes: No evidence of mutagenicity.

Specific target organ toxicity — single exposure

Product/Component Name	Category	Route of exposure	Target organs
propane-1-ol	Category 3	Not applicable.	Narcotic effects
ethyl silicate	Category 3	Not applicable.	Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity - repeated exposure

Remarks: No evidence of systemic toxic effect on target organs (repeated exposure).

Danger by aspiration

Notes: There is no evidence of a risk of absorption by aspiration.

Potential chronic health effects

Notes: Not available.

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity**

General Information

Prevent product from seeping into the soil and leaking into water and sewage. The product is difficult to biodegrade in accordance with the desired stability. The ecotoxicity of the product has not been evaluated. The information shall be that obtained from products having a similar structure or composition. Specific ecotoxicological data for this product are unknown.

Product/Component Name	Outcome	Cash	Exhibition
propane-1-ol	Acute EC50 4480 mg/l	Algae - Selenastrum sp.	96 hours
	Acute LC50 1000 mg/l	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 3800 mg/l	Fish - Alburnus alburnus	96 hours
ethyl silicate	Acute EC50 >1000 mg/l	Daphnia - Daphnia magna	48 hours
2-methoxy-1- acetate methylethyl	Acute EC50 >500 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 134 mg/l	Fish - Oncorhynchus mykiss	96 hours

12.2. Persistence and degradability

Product/Component Name	Outcome
2-methoxy-1-methylethyl acetate	100% - 8 days

Notes: Not available.

12.3. Bioaccumulation potential

Product/Component Name	LogPow	BCF	Potential
propane-1-ol	0.633	-	weak
2-methoxy-1-methylethyl acetate	1.2	-	weak

Unexpected bioaccumulation.

12.4. Mobility in soil

No data is available.

12.5. Results of the PBT and vPvB evaluations

PBT: Not persistent, bioaccumulative and toxic (PBT).

vPvB Not very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

No significant effects or critical hazards known.

SECTION 13: DISPOSAL CONSIDERATIONS

Appropriate management of the waste from the mixture and/or its container shall be determined in accordance with the provisions of Directive 2008/98/EC.

13.1 Methods of waste treatment

It is recommended to avoid or reduce waste generation as much as possible. Empty containers or internal bags may retain product remnants. Dispose of this product and its container only in a safe manner. Disposal of surplus and non-recyclable products by an authorized waste collection company. Incinerate in appropriate facilities. Disposal of this product, solutions and by-products must always comply with the legal requirements for environmental protection and waste disposal as well as the requirements of all local authorities.

Soiled packaging:

It is recommended to avoid or reduce waste generation as much as possible. Recycle packaging waste. Consider incineration or landfill only if recycling is not possible.

Waste codes (Decision 2001/573/EC, Directive 2006/12/EEC, Directive 94/31/EEC on hazardous waste):

08 01 11 * waste paints and varnishes containing organic solvents or other hazardous substances

SECTION 14: TRANSPORT INFORMATION

Transport the product in accordance with the provisions of ADR. for road, RID for rail, IMDG for sea, and ICAO/IATA for air transport (ADR. 2009 - IMDG 2008 - ICAO/IATA 2009).

14.1. UN number

1274

14.2. Official UN Transport Designation

UN1274 : n-PROPANOL solution

14.3. Transport hazard class(es)

Classification:



3

14.4. Packing group

III

14.5. Environmental hazards

14.6. Special precautions for the user

ADR./RID	Class	Code	Group	Label	Ident.	QL	Disposition.	EQ	Cat.	Tunnel
	3	FI	III	3	-	5 L	163,367,650	E1	3	E

Q < 450 L (ADR. 2.2.3.1.4)

IMDG	Class	2°Etiqu	Group	QL	FS	Disposition.	EQ
	3		III	5 L	F-E; S-D	163,367,650	E1

Q < 30 l (IMDG 2.3.2.2)

IATA	Class	2°Etiqu	Group	Passenger	Passenger	Freighter	Freight	note	EQ
	3		III	355	60 L	366	220 L	A3 A72 A192	E1
	3		III	Y344	10 L	-	-	A3 A72 A192	E1

Q < 30 L / Q < 100 L (IATA 3.3.3.1.1)

For limited quantities of dangerous goods, see ADR. and IMDG Chapter 3.4 and IATA Part 2.7.

For excepted quantities of dangerous goods, see ADR. and IMDG Chapter 3.5 and IATA Part 2.6.

14.7. Bulk transport in accordance with Marpol Annex II and the IBC Code No data are available**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific to the substance or mixture****- EU Regulation (EC) No 1907/2006 (REACH)****Annex XIV - List of substances subject to authorization**

None of the components are listed.

Substances of very high concernThe substances mentioned in the list of substances subject to authorization published by the ECHA are not intentionally added to this product. Thus, it is not assumed that these substances are present at a level $\geq 0.1\%$.**- Labeling of VOCs in varnishes, paints and vehicle refinishing products (2004/42/EC):** The VOC content of this product, ready for use, is a maximum of 450 g/l.

The European limit values for VOCs in the ready-to-use product (category IIAj) are 550 g/l maximum in 2007 and 500 g/l maximum in 2010.

- National regulations Enhanced medical surveillance

Order of 11 July 1977 establishing the list of works requiring enhanced medical surveillance: not concerned

- Special provisions:

No data is available.

15.2. Chemical safety assessment

No data is available.

SECTION 16: OTHER INFORMATION

As the user's working conditions are not known to us, the information given in this safety data sheet is based on the state of our knowledge and on national and Community regulations.

The mixture shall not be used for any purpose other than that specified in section 1 without written instructions for handling.

It is always the responsibility of the user to take all necessary measures to meet the requirements of local laws and regulations.

The information given in this safety data sheet should be considered as a description of the safety requirements for this mixture and not as a guarantee of its properties.

The products mentioned may present unknown risks and should be used with caution. Although some risks are described in this SDS, there is no guarantee that these are the only risks that exist

We expect you to understand all the content of this SDS and advise you to read it in full

The wording of the H, EUH and R phrases mentioned in Section 3:

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H314	Causes skin burns and serious eye damage.
H317	May cause skin allergy.
H318	Causes serious eye damage.
H319	Causes severe eye irritation.
H332	Harmful by inhalation.
H335	May irritate the airways.
H336	May cause drowsiness or dizziness.

Full text of classifications [CLP/GHS]

Acute Tox. 4, H302

ACUTE TOXICITY (oral) - Category 4

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Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irritates. 2, H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Skin Corr. 1B, H314	SKIN CORROSION/SKIN IRRITATION - Category 1B
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Irritation of respiratory tract) - Category 3
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Effects narcotics) - Category 3

Abbreviations:

ADR.: European Agreement concerning the International Carriage of Dangerous Goods by Road.

IMDG: International Maritime Dangerous Goods.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organization.

RID: Regulations concerning the International carriage of dangerous goods by rail.

WGK: Wassergefährdungsklasse (Water Hazard Class).